MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

1846:

UNDER THE DIRECTION OF

GEORGE BIDDELL AIRY, ESQ. M.A.

ASTRONOMER ROYAL.

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ERRATA.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1840 AND 1841.

PAGE

lx *Add* to the last sentence, "but, in the Abstracts the numbers are all reduced to 0° of Fahrenheit, by the application of 0·00017 × T, T being the mean temperature applicable to the mean of the times of the observations thus reduced."

lxxii In continuation of the 16th line from the top, *insert* "but, in the Abstracts the numbers are all reduced to 0° of Fahrenheit, by the application of 0·000264 × T, T being the mean temperature applicable to the mean of the times of the observations thus reduced."

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1842.

xxviii In continuation of the 3rd line from the top, *insert* "by the application of 0·00017 × T, T being the mean temperature applicable to the mean of the times of the observations. The numbers are thus reduced to the temperature of 0° of Fahrenheit."

xxxiv To the 14th line from the top, *add* "by the application of 0·000264 × T, T being the mean temperature applicable to the mean of the times of the observations. The numbers are thus reduced to 0° of Fahrenheit."

(171) Lines 13 and 14 from bottom, *for* Dry Wet Bulb Thermometers, *read* Dry and Wet Bulb Thermometers.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1843.

xxiv To the 16th line from the top, *insert* "of 0° of Fahrenheit, by the application of 0·00017 × T, T being the temperature at the time of observation."

xxxi To the 5th line from the top, *add* "of 0° of Fahrenheit, by the application of 0·000264 × T, T being the temperature at the time of observation."

(248) In the sixth column, in the line ranging with

Sep. 13d. 1h. 27m. 21s, *for* + 7·8, *read* − 7·8.
1h. 33m. 21s, *for* + 8·5, *read* − 8·5.
1h. 36m. 21s, *for* + 8·5, *read* − 8·5.

Index, Meteorological Abstracts, Tables XCVI and XCVII, *for* the Instrument did not record Pressure, *read* the Instrument did or did not record Pressure.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1844.

xxxiv Line 2 from top, *after* temperature, *insert* of 0° of Fahrenheit.

xlii Line 5 from bottom, *after* temperature, *insert* of 0° of Fahrenheit.

PAGE

lvi Number ranging with 36° ·3, *for* ·332, *read* ·232.

lvi Number ranging with 45° ·3, *for* ·368, *read* ·318.

(252) to (260) Under the headings Volta (1) and Volta (2), *for* ° °, *read* div. div.

Index, Meteorological Abstracts, Tables XCVI and XCVII, *for* the Instrument did not record Pressure, *read* the instrument did or did not record Pressure.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1845.

xxxvi Line 5 from top, *for* 55°, *read* 0°.

xliii Lines 5 and 17 from bottom, *for* 55°, *read* 0°.

(82) Line 3 from bottom, *for* Reduction, *read* Radiation.

(280) Under the headings Volta (1) and Volta (2), *for* ° °, *read* div. div.

20 In remarks following Table XXVI, *for* 1h. 52m. 30s, 1h. 57m. 30s, *read* 1h. 57m. 30s, 2h. 7m. 30s.

56 In the heading to Table L., *after* Cubic Foot of Air, *insert* "at every Even Hour of Göttingen Mean Time."

64 Lines 2 and 4 from bottom, *for* 4974, *read* 4864.

64 Line 3 from bottom, *for* 4h. 11m, *read* 4h. 6m.

64 Line 2 from bottom, *for* 1h. 22m, *read* 1h. 21m.

70 Table LXV. Under Resolved Parts in the Direction of E, and ranging with E. in first column, *for* 40·03, *read* 41·03.

70 Table LXV. Sums of the Pressures under E, *for* 165·72, *read* 166·72.

Index, Magnetical Abstracts, line 1 above Table XVIII., *for* Mean Diurnal Inequality, *read* Diurnal Inequality.

Index, Meteorological Abstracts, line 1 above Table XXXVII., *for* Elastic Force, *read* Mean Elastic Force.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1846.

lv Line 15 from bottom, *for* white, *read* blackened.

lvi Line 18 from bottom, *after* was used, *insert* with a transparent bulb.

[42] Reading of Vertical Force Magnet ranging with Oct. 8d. 6h, *for* ·039171, *read* ·031971.

[49] Reading of the Thermometer of the Vertical Force Magnet, Nov. 26d. 18h, *for* 54·0, *read* 52·0.

[162] Heading of 12th column, *for* Poles, *read* Positions.

[163] Heading of 12th column, *for* Poles, *read* Positions.

[164] Heading of 12th column, *for* Poles, *read* Positions.

[165] Heading of 12th column, *for* Poles, *read* Positions.

[166] Heading of 12th column, *for* Poles, *read* Positions.

(150) Foot-note. Dew Point Thermometer. Sep. 17d. 16h, *for* lower, *read* higher.

107 Line 2 from bottom, *for* 0·0040885, *read* 0·040885.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1846.

INTRODUCTION.

In consequence of a representation of the Board of Visitors of the Royal Observatory to the Lords Commissioners of the Admiralty, an additional space of ground on the south-east side of the existing boundary of the Observatory grounds was inclosed from Greenwich Park for the site of a Magnetic Observatory, in the summer of 1837. In the spring of 1838 the Magnetic Observatory was erected. Its nearest angle is about 230 feet from the nearest part of the Astronomical Observatory, and about 170 feet from the nearest out-house. It is built of wood: iron is carefully excluded Its form is that of a cross with four equal arms, nearly in the direction of the cardinal magnetic points: the length within the walls, from the extremity of one arm of the cross to the extremity of the opposite arm, is forty feet: the breadth of each arm is twelve feet. The height of the walls inside is ten feet, and the ceiling of the room is about two feet higher. The northern arm of the cross is separated from the central square by a partition, so as to form an ante-room. The meridional magnet (placed in its position in 1838) is mounted in the southern arm; the bifilar-magnet, for variations of horizontal force (erected at the end of 1840), is mounted in the eastern arm; and the balance-magnetometer, for variations of vertical force (erected in 1841), in the western arm. The mean-time clock is in the southern arm, near its union with the western arm; the standard barometer is near it, in the western arm; the sidereal-time clock is fixed to the wall which divides the central square from the ante-room, and is nearer to the balance-magnetometer than to the bifilar; the "check-clock," or "watch-man's clock," is in the ante-room affixed to the dividing wall nearer to the bifilar-magnet than to the balance-magnet; the alarum-clock is in the north-east corner of the ante-room; and the fire-grate near the middle of its west side. These are all the fixtures which contain iron; but as the ante-room is used as a computing-room in the day, and as a room for occa-

sional repose at night, it is impossible to avoid introducing into it iron in small quantities. On the outside near the north-east corner of the ante-room, a pole 79 feet in height is fixed, for the support of the conducting wires to the electrometers; the electrometers, &c., are planted in the window-seat at the north end of the ante-room; and, in the re-entering angle, between the north and east arms, the stand for carrying the thermometers was fixed till 1846, July 20. On July 22 the stand was removed to a position situated 23 feet south of the south-west angle of the south arm of the Magnetic Observatory.

I shall now proceed to describe the instruments, their adjustments and constants of calculation, and the modes of using them.

§ 1. *Declination Magnet, and Apparatus for Observing it.*

The theodolite with which the meridional magnet is observed is by Simms: the radius of its horizontal circle is 8·3 inches: it is divided into 5′, and read to 5″ by three verniers, carried by the revolving frame of the theodolite. The fixed frame stands upon three foot-screws, which rest in brass channels let into a stone pier, that is firmly fixed in the ground and unconnected with the floor. The revolving frame carries the Y's (with vertical adjustment at one end) for a telescope with transit-axis: the length of the axis is ten inches and a half: the length of the telescope twenty-one inches: the aperture of the object-glass two inches. The Y's are not carried immediately by the T head which crosses the vertical axis of the revolving frame, but by pieces supported by the ends of that T head, and projecting horizontally from it: the use of this construction is to allow the telescope to be pointed sufficiently high to see δ Ursæ Minoris above the pole. The eye-piece of the telescope carries only one fixed horizontal wire, and one vertical wire moved by a micrometer-screw. The stone pier is fixed nearly in the line which divides the southern arm of the cross from the central square: in the roof of the building an opening is made (closed by shutters), in the direction of the Astronomical meridian passing through the pier, through which circumpolar stars can be observed as high as δ Ursæ Minoris above the pole, and as low as β Cephei below the pole.

For supporting the magnet, a braced wooden tripod-stand is provided, resting on the ground and unconnected with the floor. Upon the cross-bars of the stand rests a double rectangular box (one box completely inclosed within another), both boxes being covered with gilt paper, on their exterior and interior sides. On the southern side of the principal upright piece of the stand, is a moveable upright bar, turning in the vertical E. and W. plane, upon a pin in its center, which is fixed in the principal upright, and which carries at its top the pulleys for suspension of the magnet; this construction is adopted in order to give an E. and W. movement to the point of suspension, by giving a motion to the lower end of the

bar. The top of the upright piece carries a brass frame with two pulleys: one of these pulleys projects beyond the north side of the principal upright, and from it depends the suspension skein: the other pulley projects on the south side: the suspension skein being brought from the magnet up to the north pulley is carried over it and over the south pulley, and is then attached to a leathern strap, which passes downwards to a small windlass, carried by the lower part of the moveable upright. The intention of this construction is, to make it easy to alter the height of the magnet without the trouble of climbing to the top of the frame. The height of the two pulleys above the floor is about eleven feet nine inches, and the height of the magnet is about three feet: so that the length of the free suspending skein is about eight feet nine inches.

The magnet was made by Meyerstein, of Göttingen: it is a bar two feet long, one inch and a half broad, and about a quarter of an inch thick: it is of hard steel throughout. The suspension-piece was also made by Meyerstein, but it has since been altered under my direction by Simms. The magnet is not now inserted endways in its support, but sideways, a double square hook being provided for sustaining it; and the upper part of the suspension-piece is simply hooked into the skein.

The suspending skein is of silk fibre, in the state in which it is first prepared by silk manufacturers for further operations; namely, when seven or more fibres from the cocoon are united by juxtaposition only (without twist) to form a single thread. It was reeled for this purpose at my request by Mr. Vernon Royle, of Manchester. The skein is strong enough to support perhaps six times the weight of the magnet, &c. I judged this strength to be necessary, having found that a weaker skein (furnished by Mr. Meyerstein) broke ultimately even with a smaller weight.

Upon the magnet there slide two small brass frames, firmly fixed in their places by means of pinching-screws. One of these contains, between two plane glasses, a cross of delicate cobwebs: the other holds a lens, of thirteen inches focal length and nearly two inches aperture. This combination, therefore, serves as a collimator without a tube: the cross of cobwebs is seen very well with the theodolite-telescope, when the suspension bar of the magnet is so adjusted as to place the object-glass of the collimator in front of the object-glass of the theodolite, their axes coinciding. The wires are illuminated by a lamp and lens in the night, and by a reflector in the day.

In order to diminish the extent of vibrations of the magnet, a copper bar, about one inch square, is bent into a long oval form, intended to contain within itself the magnet (the plane of the oval curve being vertical). A lateral bend is made in the upper half of the oval, to avoid interference with the suspension-piece of the magnet. The effect of this copper bar is very striking. It appears, from rough experiments, that every second vibration of the magnet (that is, when a direct and reverse swing have been finished) is reduced in the proportion of 5 : 2 nearly.

Marked Side of the Glass	Micrometer Reading.	Marked Side of the Glass	Micrometer Reading.
Out of the box	100r·776	Out of the box	100r·787
In the box	100 ·555	In the box	100 ·592
Out of the box	100 ·787	Out of the box	100 ·814
In the box	100 ·578	In the box	100 ·564
Out of the box	100 ·812	Out of the box	100 ·788
In the box	100 ·578	In the box	100 ·577
Out of the box	100 ·786	Out of the box	100 ·806
In the box	100 ·597	In the box	100 ·593
Out of the box	100 ·806	Out of the box	100 ·837
In the box	100 ·576	In the box	100 ·583

The mean of all the readings when the marked side of the glass was outside of the box is 100r·800, and the mean of all the readings when the marked side of the glass was inside of the box is 100r·579. Half of the difference of these numbers is 0r·111, which when converted into arc is 10″·3; and this value was used as the error caused by the plane glass throughout the year 1846. As the micrometer-head of the telescope is always kept East, and the glass is always kept in its "usual position," previously explained, the correction for the error is subtractive; and 10″·3 has consequently been subtracted from all readings for the bisections of the magnet-cross during the year 1846.

7. Determination of the error of collimation of the magnet-collimator, with reference to the magnetic axis of the magnet.

1845, December 31, and 1846, January 1. A magnet of the same size was suspended in the shed erected for Deflexion Experiments: a reflector was attached to its center: and a telescope with a wire in its focus was directed to the reflector. A scale of numbers was fixed just above the object-glass of the telescope. The time of vibration of the magnet was 26s. The distance of the scale from the reflector was 4 feet 7 inches: one foot of the scale corresponded to 30div·9 exactly: and, consequently, the value of one division of the scale was 12′.8″·21. One observer, Mr. Lovelace, observed this magnet at intervals of 26s; while another, Mr. Glaisher, observed the declination magnet, at such pre-arranged times that the mean of the times for both sets of observations was the same, then reversed it in its stirrup, and again observed it, and so on. The illuminated end of the axis of the theodolite-telescope was, as usual, East.

The results are contained in the following table:—

Year, Month, and Day.	Position of Cross of Collimator.	Mean Micrometer Reading for Declination Magnet.	Mean Reading of Scale of Temporary Magnet.	Micrometer Reading for Declination Magnet reduced to Arc.	Scale Reading for Temporary Magnet reduced to Arc.	Excess of Micrometer Reading reduced to Arc, increased by 5°, over Scale Reading reduced to Arc.	Excess with Collimator East diminished by Excess with Collimator West.	Half Difference or Error of Collimation.
1845.		r	div.	° ′ ″	° ′ ″	° ′ ″	′ ″	′ ″
Dec. 31	W	101·073	26·56	2. 38. 28	5. 22. 20	2. 16. 8	7. 45	3. 53
	E	106·021	26·56	2. 46. 13	5. 22. 20	2. 23. 53		
	W	101·770	26·56	2. 39. 34	5. 22. 20	2. 17. 14	9. 25	4. 42
	E	106·711	26·42	2. 47. 18	5. 20. 40	2. 26. 38		
	W	100·942	26·28	2. 38. 16	5. 19. 0	2. 19. 16	6. 57	3. 28
	E	106·985	26·49	2. 47. 44	5. 21. 32	2. 26. 12		
	W	102·581	26·00	2. 40. 50	5. 15. 33	2. 25. 17	6. 7	3. 3
	E	106·481	26·00	2. 46. 57	5. 15. 33	2. 31. 24		
1846.								
Jan. 1	W	102·890	27·36	2. 41. 19	5. 32. 3	2. 9. 16	7. 41	3. 50
	E	107·789	27·36	2. 49. 0	5. 32. 3	2. 16. 57		
	W	99·211	27·27	2. 35. 33	5. 30. 59	2. 4. 34	10. 50	5. 25
	E	104·591	27·07	2. 43. 59	5. 28. 35	2. 15. 24		
	W	103·045	26·97	2. 41. 34	5. 27. 20	2. 14. 14	4. 11	2. 6
	E	106·331	27·05	2. 46. 43	5. 28. 18	2. 18. 25		
	W	100·383	27·00	2. 37. 23	5. 27. 42	2. 9. 41	9. 8	4. 34
	E	105·530	26·91	2. 45. 27	5. 26. 38	2. 18. 49		

The mean of the values in the last column is $3'.53''$, and when the collimator is West of the magnet, as it was during the year 1846, the readings are too small by the above amount; therefore $3'.53''$ has been added to all observations during the year 1846.

In the volume for 1841, observations are exhibited shewing that the oval copper bar, or damper, had but little or no effect: the same bar has encircled the magnet throughout the year 1846.

In the volume for 1841, observations are exhibited shewing that the effect of the grate in the ante-room is insensible.

In the volume for 1842, observations are exhibited shewing that the iron attached to the electrometer pole has little or no effect on the magnet.

8. Calculation of the constant used in the reduction of the observations of the declination magnet, the micrometer head of the theodolite-telescope being East.

Micrometer equivalent for reading for line of collimation, 100·365	—	2. 37. 42·4
Correction for the plane glass in front of the box, in its usual position	—	10·3
Correction due to the compound effect of the horizontal force magnet and the vertical force magnet	—	55·2
	—	2. 38. 47·9
Correction for the effect of the mean time clock	+	9·4
	—	2. 38. 38·5
The collimator West of the magnet. Correction for Error of collimation.	+	3. 53·0
	—	2. 34. 45·5

This constant was used from January $0^d.14^h$ to $20^d.0^h$; from January $20^d.4^h$ to March $5^d.22^h$; from March $7^d.6^h$ to April $1^d.22^h$; from May $2^d.0^h$ to August $28^d.2^h.10^m$; and from September $12^d.4^h$ to December $31^d.12^h$.

From January $20^d.1^h.50^m$ to January $20^d.2^h.10^m$; from March $6^d.0^h$ to March $7^d.4^h$; and from August $28^d.4^h$ to September $12^d.2^h.10^m$, the mean-time clock was removed, and the constant was, therefore, $-2°.34'.54''{\cdot}9$, which was used between these times.

After the observation at 22^h on April 1^d, a small magnet was placed near the mean-time clock, and inadvertently left there till after 22^h on May 1^d. Experiments were made to determine its effect in this position upon the declination magnet, and it was found from well accordant results that the effect was to cause the micrometer-reading to be too small by $0^r{\cdot}915$, or to cause the West declination to be too large by $1'.28''{\cdot}3$ The constant was, therefore, $-2°.33'.22''{\cdot}2$, which value was used between April $2^d.0^h$ and May $1^d.22^h$.

9. Fraction expressing the proportion of the torsion force to the earth's magnetic force.

In the previous volumes the results of experiments to determine the value of $\frac{\text{torsion force}}{\text{earth's magnetic force}}$ are exhibited; and in the volume for 1845 the mean of 55 results obtained between 1840, August, and 1847, June, was found to be, that the torsion force $= \frac{1}{187}$ of the earth's magnetic force. The accordance of the results shewed that there was no sensible change in the value of the torsion force of the suspension skein between these times. After June, 1847, the suspension skein was shortened for the purpose of carrying, in addition to the magnet and its apparatus as before, a mirror to be used in the self-registration of the changes of the position of the magnet by a photographic process: from that time, therefore, a new value of the fraction will be required.

Determination of the Readings of the Horizontal Circle of the Theodolite corresponding to the Astronomical Meridian.

The error of the level is determined by application of the spirit-level at the time of observation: due regard being paid, in the reduction, to the inequality of pivots already found. One division of the level is considered $= 1''{\cdot}0526$. The azimuth-reading is then corrected by this quantity;

$$\text{Correction} = \text{Elevation of W. end of axis} \times \text{tan star's altitude.}$$

The readings of the azimuth circle increase as the instrument is turned from N. to E., S., and W.; from which it follows that the correction must have the same sign as the elevation of the W. end.

The correction for the azimuth of the star observed has been computed independently in

every observation, by a peculiar method, of which the principle is fully explained in the volumes for 1840, 1841, 1843, 1844, 1845. The formula and table used are the following.

Let $A_{''}$ = seconds in arc of star's azimuth,

C_s = seconds in time of star's hour-angle,

$a_{''}$ = seconds of stars N,P.D. for the day of observation,

Then log. $A_{''}$ = log. C_s + log. E + log. $(a_{''} + F)$ + log. cos ϕ.

The values of log. E, F, and log. cos ϕ, are given in the following table:—

Tabulated Values of Log. Cos ϕ, for Different Values of C_s, and of the Quantities Log. E and F, for the Stars Polaris and δ Ursæ Minoris.

Hour Angle.	Log. Cos ϕ for			
	Polaris.	δ Ursæ Minoris.	Polaris S. P.	δ Ursæ Min. S.P.
m				
1	9·99999	9·99999	9·99999	9·99999
2	999	999	999	999
3	999	999	999	999
4	998	998	998	998
5	996	996	997	997
6	994	994	996	996
7	992	992	994	995
8	990	989	992	993
9	988	986	990	991
10	985	983	988	989
11	981	979	985	987
12	978	975	982	984
13	974	971	979	981
14	970	966	975	978
15	966	961	972	975
16	961	955	968	971
17	956	950	964	968
18	951	944	959	964
19	945	937	955	960
20	939	930	950	956
21	932	923	945	951
22	926	915	939	946
23	919	908	933	941
24	912	900	928	936
25	904	891	922	930
26	896	882	915	925
27	888	873	909	919
28	880	863	902	913
29	871	853	894	906
30	9·99862	9·99843	9·99887	9·99900
Log. E	6·09721	6·13638	−6·03899	−6·00617
F	−186″·79	−944″·71	+181″·57	+886″·86

The following table contains the whole of the operations for determining the readings for the astronomical meridian in 1846:—

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle, corresponding to the Astronomical Meridian.

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R. A. of Object.	N. P. D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Jan. 5	Polaris	100·588	90. 2.38	10	8	90. 2.18·7	0.45.55	0.45. 9	1. 4.16	1.30.19	−12.29·7	89.49.48·9	89.49.54·5	0·0	0·0	89.49.54·5	T D
			89.53.80	45	50	89.53.58·3	0.58.58	0.58.12			− 3.58·2	89.50. 0·1					
			89.42.30	0	0	89.42.10·0	1.15.26	1.14.40			+ 6.48·2	89.48.58·2					
			89.40.80	45	50	89.40.58·3	1.16.54	1.16. 8			+ 7.45·8	89.48.44·1	89.48.48·9	0·0	0·0	89.48.48·9	L
			89.38.90	55	60	89.39. 8·3	1.19.43	1.18.57			+ 9.36·2	89.48.44·5					
Feb. 9	Polaris S. P...	100·588	89.44.77	35	48	89.44.53·3	12.57.25	12.57.23	1. 3.49	1.30.21	+ 3.56·6	89.48.49·9	89.48.50·1	−1·9	− 2·4	89.48.53·5	H B
			89.46.75	30	40	89.46.48·3	13. 0.41	13. 0.39			+ 1.56·4	89.48.44·8					
			89.48.60	15	20	89.48.31·7	13. 3.41	13. 3.39			+ 0. 6·1	89.48.37·8					
			89.50.45	5	10	89.50.20·0	13. 6. 9	13. 6. 7			− 1.24·6	89.48.55·4					
			89.52.48	15	25	89.52.29·3	13. 9.31	13. 9.29			− 3.28·4	89.49. 1·0					
			89.54.60	13	20	89.54.31·0	13.12.53	13.12.51			− 5.32·1	89.48.58·9					
			89.56.45	0	12	89.56.19·6	13.16. 0	13.15.58			− 7.26·6	89.48.52·4					
			89.57.80	40	48	89.57.56·0	13.18.50	13.18.48			− 9.10·6	89.48.45·4					
			89.59.90	50	60	90. 0. 6·7	13.22.27	13.22.25			−11.23·3	89.48.43·4					
			90. 2.45	5	10	90. 2.20·0	13.25.51	13.25.49			−13.27·9	89.48.52·1					
Feb. 24	δ Ursæ Min. S.P.	100·588	89.14.63	28	33	89.14.41·3	5.55.43	5.55.49	18.21.43	3.24.27	+34.29·8	89.49.11·1	89.48.57·7	−8·9	−10·5	89.48.53·1	H B
			89.18.47	10	15	89.18.24·0	5.58.44	5.58.50			+30.29·4	89.48.53·4					
			89.22.70	33	38	89.22.47·0	6. 2. 4	6. 2.10			+26. 2·8	89.48.49·8					
			89.25.63	32	35	89.25.43·3	6. 4.15	6. 4.21			+23. 9·2	89.48.52·5					
			89.28.60	20	25	89.28.35·0	6. 6.22	6. 6.28			+20.20·1	89.48.55·1					
			89.31.70	38	38	89.31.48·7	6. 8.50	6. 8.56			+17. 2·9	89.48.51·6					
			89.34.90	55	60	89.35. 8·3	6.11. 8	6.11.14			+13.59·0	89.49. 7·3					
			89.38.75	35	40	39.38.50·0	6.13.55	6.14. 1			+10.16·3	89.49. 6·3					
			89.42.55	28	30	89.42.37·7	6.16.48	6.16.54			+ 6.24·9	39.49. 2·6					
			89.46.53	10	15	89.46.26·0	6.19.51	6.19.57			+ 2.21·4	89.48.47·4					
Mar. 2	δ Ursæ Min. S.P.	100·588	89.45.60	30	30	89.45.40·0	6.19. 0	6.19.10	18.21.45	3.24.28	+ 3.26·8	89.49. 6·8	89.49. 2·2	+2·1	+ 2·4	89.49. 4·6	L
			89.51.43	10	15	89.51.22·7	6.23.15	6.23.25			− 2.13·4	89.49. 9·2					
			80.55.100	55	58	89.56.11·0	6.27. 0	6.27.10			− 7.13·6	89.48.57·4					
			90. 1.90	55	60	90. 2. 8·3	6.31.22	6.31.32			−13. 3·0	89.49. 5·3					
			90. 7.75	48	50	90. 7.57·7	6.35.41	6.35.51			−18.48·3	89.49. 9·4					
			90.11.60	30	35	90.11.41·7	6.38.44	6.38.54			−22.52·0	89.48.49·7					
			90.20.85	55	68	90.21. 9·3	6.45.38	6.45.48			−32. 2·6	89.49. 6·7					
			90.25.45	5	10	90.25.20·0	6.49. 7	6.49. 7			−36.26·8	89.48.53·2					
Mar. 5	δ Ursæ Min. S.P.	100·588	89.58.35	0	5	89.58.13·3	6.28.24	6.28.33	18.21.46	3.24.28	− 9. 3·0	89.49.10·3	89.49.13·7	+1·3	+ 1·6	89.49.15·3	L
			90. 0.90	55	60	90. 1. 8·3	6.30.30	6.30.39			−11.51·1	89.49.17·3					
			90. 4.73	30	40	90. 4.47·7	6.33.17	6.33.26			−15.33·7	89.49.14·0					
			90. 7.65	30	35	90. 7.43·3	6.35.35	6.35.44			−18.37·6	89.49. 5·7					
			90.11.70	35	40	90.11.48·3	6.38.30	6.38.39			−22.30·7	89.49.17·7					
			90.14.45	10	20	90.14.25·0	6.40.28	6.40.37			−25. 7·7	89.49.17·3					

January 5d. After the second observation on this day the telescope accidentally received a blow. These observations were taken between January 5d.6h and 8h, therefore the value found from the first two observations has been used in reducing the observations till January 5d.6h, and the value obtained from the remaining observations has been used in reducing the observations from January 5d.8h.

February 9d. The correction to Mr. Breen's vernier readings before these observations was 5″·0 additive, and it was 6″·6 additive afterwards: a correction of 5″·8 additive has been applied to the above observations.

February 24d. The correction to Mr. Breen's vernier readings before these observations was 5″·7 additive, and it was 6″·0 additive afterwards: a correction of 5″·9 additive has been applied to the above observations.

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle, corresponding to the Astronomical Meridian—*continued.*

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R.A. of Object.	N.P.D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Mar. 7	δ Ursæ Min. S.P.	100·588	90.18.83	38	45	90.18.55·3	6.44. 9	6.44.19	18.21.47	3.24.28	−30. 1·7	89.48.53·7					
			90.23.60	13	25	90.23.32·7	6.47.27	6.47.37			−34.25·3	89.49. 7·3					
			90.26.58	13	25	90.26.32·0	6.49.46	6.49.56			−37.29·1	89.49. 2·9	89.49. 1·6	+3·2	+3·7	89.49.15·6	H B
			90.29.72	35	48	90.29.51·7	6.52.23	6.52.33			−40.57·2	89.48.54·5					
			90.34.70	30	45	90.34.48·3	6.56. 1	6.56.11			−45.45·7	89.49. 2·7					
			90.38.90	53	65	90.39. 9·3	6.59.14	6.59.24			−50. 0·7	89.49. 8·7					
Mar.12	Polaris S. P. ..	100·588	89.43.93	50	60	89.44. 7·7	12.55.35	12.55.40	1. 3.32	1.30.28	+ 4.49·6	89.48.57·3					
			89.48.75	35	40	89.48.50·0	13. 2.29	13. 2.34			+ 0.35·6	89.49.25·6					
			89.51.40	10	15	89.51.21·7	13. 8. 5	13. 8.10			− 2.50·6	89.48.31·1	89.49. 7·8	+1·5	+1·9	89.49. 9·7	T D
			89.55.80	45	50	89.55.58·3	13.14.19	13.14.24			− 6.40·0	89.49.18·4					
			90. 0.40	5	10	90. 0.18·3	13.21.20	13.21.25			−10.57·8	89.49.20·5					
			90. 4.85	55	65	90. 5. 8·3	13.29.25	13.29.30			−15.54·2	89.49.14·1					
Mar.20	Polaris S. P...	100·588	89.36.63	23	38	89.36.41·3	12.44.22	12.44.15	1. 3.30	1.30.31	+11.48·1	89.48.29·4					
			89.38.60	23	35	89.38.39·3	12.46.44	12.46.37			+10.21·5	89.49. 0·8					
			89.39.90	45	60	89.40. 5·0	12.49. 2	12.48.55			+ 8.56·9	89.49. 1·9	89.48.52·5	+4·6	+5·7	89.49.11·9	H B
			89.40.98	53	68	89.41.13·0	12.51.21	12.51.14			+ 7.31·7	89.48.44·7					
			89.42.90	43	53	89.43. 2·0	12.54. 6	12.53.59			+ 5.50·5	89.48.52·5					
			89.44.73	20	28	89.44.40·3	12.56.25	12.56.18			+ 4.25·2	89.49. 5·5					
Mar.27	Polaris S. P...	100·588	89.34.100	43	60	89.35. 8·3	12.41. 2	12.40.45	1. 3·29	1.30.33	+13.56·5	89.49. 4·8					
			89.36.70	23	43	89.36.45·3	12.44·24	12.44. 7			+11.52·9	89.48.37·4					
			89.39.88	43	57	89.40. 2·7	12.49. 0	12.48.43			+ 9. 3·8	89.49. 6·5	89.48.46·7	+5·2	+6·5	89.49. 8·2	H B
			89.40.85	38	53	89.40.58·7	12.51.36	12.51.19			+ 7.28·2	89.48.26·9					
			89.42.90	40	53	89.43. 1·0	12.54.30	12.54.13			+ 5.41·4	89.48.42·4					
			89.45.63	30	40	89.45.44·3	12.58.56	12.58.39			+ 2.58·1	89.48.42·4					
Apr. 1	Polaris S. P...	100·588	89.47.65	30	40	89.47.45·0	13. 3.30	13. 3. 6	1. 3.29	1.30.34	+ 0.14·1	89.47.59·1					
			89.50.90	55	70	89.51.11·7	13. 8. 2	13. 7.38			− 2.33·0	89.48.38·7					
			89.55.45	15	25	89.55.28·3	13.14.23	13.13.59			− 6.26·9	89.49. 1·5	89.48.39·8	+3·4	+4·3	89.48.44·1	T D
			89.58.45	15	25	89.58.28·3	13.19.19	13.18.55			− 9.28·5	89.48.59·9					
Apr. 19	Polaris S. P...	100·588	89.58.90	53	68	89.59.10·3	13.21.16	13.20.38	1. 3.31	1.30.40	−10.31·0	89.48.39·3					
			90. 0.63	25	35	90. 0.41·0	13.23.49	13.23.11			−12. 4·8	89.48.36·2					
			90. 2.40	0	15	90. 2.18·3	13.26.11	13.25.33			−13.31·8	89.48.46·5					
			90. 3.48	13	28	90. 3.29·7	13.28.49	13.28.11			−15. 8·5	89.48 21·1	89.48.35·3	+5·0	+6·3	89.48.51·3	H B
			90. 5.60	13	25	90. 5.32·7	13.31. 7	13.30.59			−16.51·3	89.48.41·4					
			90. 6.98	53	68	90. 7.13·0	13.34.39	13.34. 1			−18.42·2	89.48.30·7					
			90. 8.93	50	68	90. 9.10·3	13.37.50	13.37.12			−20.38·7	89.48.31·6					

March 7d. The correction to Mr. Breen's vernier readings before these observations was 9″·0 additive, and it was 11″·6 additive afterwards: a correction of 10″·3 additive has been applied to the above observations.

March 20d. The correction to Mr. Breen's vernier readings before these observations was 13″·7 additive, and it was 2″·3 additive afterwards: a correction of 13″·7 additive has been applied to the above observations.

March 27d. The correction to Mr. Breen's vernier readings before these observations was 1″·4 subtractive, and it was 15″·7 additive afterwards: a correction of 15″·0 additive has been applied to the above observations.

April 19d. The correction to Mr. Breen's vernier readings before these observations was 9″·7 additive, and it was 8″·3 additive afterwards: a correction of 9″·7 additive has been applied to the above observations.

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle, corresponding to the Astronomical Meridian—*continued.*

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R.A. of Object.	N.P.D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
May 15	Polaris S. P...	100·588	89.47.43	5	18	89.47.22·0	13. 3. 9	13. 1.46	1. 3.43	1.30.47	+ 1.12·0	89.48.34·0					
			89.48.98	50	58	89.49. 8·7	13. 5.26	13. 4. 3			— 0.12·3	89.48.56·4					
			89.50.73	28	40	89.50.47·0	13. 8. 5	13. 6.42			— 1.50·2	89.48.56·8					
			89.51.75	33	43	89.51.50·3	13.10.10	13. 8.47			— 3. 7·2	89.48.43·2					
			89.53.60	15	23	89.53.32·7	13.12.56	13.11.33			— 4.49·3	89.48.43·3					
			89.54.73	25	35	89.54.44·3	13.15. 4	13.13.41			— 6. 8·1	89.48.36·2	89.48.42·7	+ 1·0	+ 1·2	89.48.55·9	H B
			89.55.80	43	55	89.55.59·3	13.17. 0	13.15.37			— 7.19·5	89.48.39·9					
			89.56.93	50	65	89.57. 9·3	13.19.16	13.17.53			— 8.43·1	89.48.26·3					
			89.59.45	3	18	89.59.22·0	13.22. 0	13.20.37			—10.23·8	89.48.58·2					
			90. 0.43	3	18	90. 0.21·3	13.24.18	13.22.55			—11.48·6	89.48.32·8					
May 20	Polaris S. P...	100·588	89.44.55	20	27	89.44.34·0	12.57.33	12.55.59	1. 3.46	1.30.48	+ 4.47·5	89.49.21·5					
			89.46.45	10	15	89.46.23·3	13. 0.44	12.59.10			+ 2.50·0	89.49.13·3					
			89.47.85	45	50	89.48. 0·0	13. 3.33	13. 1.59			+ 1. 5·9	89.49. 5·9	89.49.10·8	+ 6·2	+ 7·8	89.49.18·6	T D
			89.49.45	15	25	89.49.28·3	13. 6.11	13. 4.37			— 0.31·4	89.48.56·9					
			89.51.85	50	55	89.52. 3·3	13. 9.51	13. 8.17			— 2.46·9	89.49.16·5					
May 21	Polaris S. P. ..	100·588	89.38.113	55	90	89.39.26·0	12.49.15	12.47.40	1. 3.47	1.30.48	+ 9.55·1	89.49.21·1					
			89.40.45	3	10	89.40.19·3	12.51.23	12.49.48			+ 8.36·4	89.48.55·7					
			89.42.53	20	30	89.42.34·3	12.54.22	12.52.47			+ 6.46·3	89.49.20·6					
			89.43.55	13	25	89.43.31·0	12.56. 6	12.54.31			+ 5.42·3	89.49.13·3	89.49.13·2	+15·1	+18·9	89.49.32·1	L
			89.44.68	35	53	89.44.52·0	12.58.51	12.57.16			+ 4. 0·8	89.48.52·8					
			89.46.55	20	30	89.46.35·0	13. 0.56	12.59.21			+ 2.43·8	89.49.18·8					
			89.47.80	45	60	89.48. 1·7	13. 2.59	13. 1.24			+ 1.28·1	89.49.29·7					
June 12	δ Ursæ Minoris	100·588	90.43.83	48	73	90.44. 8·0	17.49.22	17.46.32	18.22.12	3.24.13	—54.57·2	89.49.10·8					
			90.39.53	20	50	90.39.41·0	17.52.38	17.49.48			—49.57·2	89.49.43·8					
			90.33.88	40	63	90.34. 3·7	17.56.12	17.53.22			—44.29·1	89.49.34·6					
			90.28.78	43	68	90.29. 3·0	17.59.25	17.56.35			—39.33·1	89.49.29·9					
			90.24.38	3	13	90.24.18·0	18. 2.29	17.59.39			—34.50·2	89.49.27·8					
			90.19.93	55	73	90.20.13·7	18. 5. 9	18. 2.19			—30.43·9	89.49.29·8	89.49.31·3	—14·1	—21·1	89.49.19·6	H B
			90.15.92	58	68	90.16.12·7	18. 7.42	18. 4.52			—26.48·0	89.49.24·7					
			90.11.45	15	25	90.11.28·3	18.10.52	18. 8. 2			—21.54·8	89.49.33·6					
			90. 4.80	53	70	90. 5. 7·7	18.15. 0	18.12.10			—15.31·6	89.49.36·1					
			89.59.48	10	18	89.59.25·3	18.18.45	18.15.55			— 9.43·5	89.49.41·8					
June 28	δ Ursæ Minoris	100·588	90.32.43	13	33	90.32.29·7	17.58.23	17.54. 4	18.22.11	3.24. 7	—43.21·9	89.49. 7·8					
			90.27.55	23	45	90.27.41·0	18. 1. 7	17.56.48			—39.10·3	89.48.30·7					
			90.23.70	43	53	90.23.55·3	18. 3.43	17.59.24			—35.10·7	89.48.44·7					
			90.19.55	23	43	90.19.40·3	18. 6.41	18. 2.22			—30.36·7	89.49. 3·6	89.48.59·6	— 6·6	— 9·9	89.49. 3·7	H B
			90.11.50	15	33	90.11.32·7	18.11.48	18. 7.29			—22.43·5	89.48.49·2					
			90. 4.30	10	23	90. 4.21·0	18.16.38	18.12.19			—15.15·6	89.49. 5·4					

May 15d. The correction to Mr. Breen's vernier readings before these observations was 12″·0 additive, and it was 13″·0 additive afterwards: a correction of 12″·0 additive has been applied to the above observations.

June 12d. The correction to Mr. Breen's vernier readings before these observations was 4″·7 additive, and it was 14″·0 additive afterwards: a correction of 9″·4 additive has been applied to the above observations.

June 28d. The correction to Mr. Breen's vernier readings before these observations was 15″·0 additive, and it was 14″·0 additive afterwards: a correction of 14″·0 additive has been applied to the above observations.

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle, corresponding to the Astronomical Meridian—*continued.*

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R. A. of Object.	N. P. D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
June 28	δ Ursæ Minoris	100·588	89. 59. 60	25	43	89. 59. 42·7	18. 19. 46	18. 15. 27	18. 22. 11	3. 24. 7	−10. 25·0	89. 49. 17·7					
			89. 52. 93	58	83	89. 53. 18·0	18. 23. 55	18. 19. 36			− 3. 59·8	89. 49. 18·2					
July 3	δ Ursæ Minoris	100·588	89. 54. 60	15	45	89. 54. 40·0	18. 23. 45	18. 19. 15	18. 22. 11	3. 24. 6	− 4. 32 3	89. 50. 7·7					
			89. 40. 60	25	35	89. 40. 40·0	18. 32. 40	18. 28. 10			+ 9. 15·3	89. 49. 55·3					
			89. 38. 45	15	30	89. 38. 30·0	18. 34. 7	18. 29. 37			+11. 29·8	89. 49. 59·8					
			89. 36. 40	5	15	89. 36. 20·0	18. 35. 27	18. 30. 57			+13. 33·5	89. 49. 53·5	89. 49. 56·9	+ 0·6	+ 0·9	89. 49. 57·8	T D
			89. 33. 40	10	25	89. 33. 25·0	18. 37. 16	18. 32. 46			+16. 22·0	89. 49. 47·0					
			89. 30. 90	55	65	89. 31. 10·0	18. 38. 51	18. 34. 21			+18. 48·7	89. 49. 58·7					
			89. 27. 45	10	25	89. 27. 26·7	18. 41. 14	18. 36. 44			+22. 29·4	89. 49. 56·1					
July 5	δ Ursæ Minoris	100·588	89. 40. 90	58	73	89. 41. 13·7	18. 31. 56	18. 27. 16	18. 22. 10	3. 24. 5	+ 7. 53·3	89. 49. 7·0					
			89. 34. 80	43	65	89. 35. 2·7	18. 36. 1	18. 31. 21			+14. 12·1	89. 49. 14·7					
			89. 29. 83	48	70	89. 30. 7·0	18. 39. 18	18. 34. 38			+19. 16·4	89. 49. 23·4	89. 49. 17·1	− 0·9	− 1·4	89. 49. 30·7	H B
			89. 24. 40	5	30	89. 24. 25·0	18. 43. 1	18. 38. 21			+25. 0·5	89. 49. 25·5					
			89. 17. 90	53	78	89. 18. 13·7	18. 46. 55	18. 42. 15			+31. 1·1	89. 49. 14·7					
Aug. 5	δ Ursæ Minoris	100·588	89. 38. 60	33	45	89. 38. 46·0	18. 35. 1	18. 28. 50	18. 22. 4	3. 23. 56	+10. 27·4	89. 49. 13·4					
			89. 35. 40	5	18	89. 35. 21·0	18. 37. 12	18. 31. 1			+13. 49·8	89. 49. 10·8	89. 49. 12·5	+ 7·4	+11·1	89. 49. 34·3	H B
			89. 30. 70	40	50	89. 30. 53·3	18. 40. 7	18. 33. 56			+18. 19·9	89. 49. 13·3					
Aug. 17	δ Ursæ Minoris	100·588	89. 53. 40	0	15	89. 53. 18·3	18. 25. 22	18. 19. 30	18. 22. 0	3. 23. 54	− 3. 51·8	89. 49. 26·5					
			89. 45. 70	35	45	89. 45. 50·0	18. 30. 15	18. 24. 23			+ 3. 41·0	89. 49. 31·0					
			89. 38. 75	30	40	89. 38. 48·3	18. 34. 46	18. 28. 54			+10. 39·7	89. 49. 28·0					
			89. 27. 55	20	30	89. 27. 35·0	18. 41. 50	18. 35. 58			+21. 34·1	89. 49. 9·1	89. 49. 22·9	+ 0·2	+ 0·2	89. 49. 23·1	T D
			89. 21. 95	50	40	89. 22. 1·7	18. 45. 35	18. 39. 43			+27. 20·7	89. 49. 22·4					
			89. 13. 65	25	35	89. 13. 41·7	18. 50. 59	18. 45. 7			+35. 39·0	89. 49. 20·6					
Aug. 22	δ Ursæ Minoris	100·588	90. 18. 70	45	60	90. 18. 58·3	18. 8. 28	18. 2. 47	18. 21. 58	3. 23. 53	−29. 36·0	89. 49. 22·3					
			90. 12. 45	13	25	90. 12. 27·7	18. 12. 44	18. 7. 3			−23. 1·8	89. 49. 25·9					
			90. 7. 60	30	45	90. 7. 45·0	18. 15. 37	18. 9. 56			−18. 35·1	89. 49. 9·9					
			90. 3. 90	58	80	90. 4. 16·0	18. 17. 44	18. 12. 3			−15. 19·1	89. 48. 56·9					
			89. 59. 83	58	73	90. 0. 11·3	18. 20. 36	18. 14. 55			−10. 53·5	89. 49. 17·8					
			89. 56. 45	10	23	89. 56. 26·0	18. 22. 55	18. 17. 14			− 7. 18·8	89. 49. 7·2	89. 49. 19·1	−10·5	−15·8	89. 49. 11·7	H B
			89. 51. 55	20	30	89. 51. 35·0	18. 26. 14	18. 20. 33			− 2. 11·4	89. 49. 23·7					
			89. 47. 25	0	10	89. 47. 11·7	18. 29. 9	18. 23. 28			+ 2. 19·1	89. 49. 30·7					
			89. 35. 55	28	35	89. 35. 39·3	18. 36. 38	18. 30. 57			+13. 52·7	89. 49. 32·0					
			89. 30. 75	45	55	89. 30. 58·3	18. 39. 35	18. 33. 54			+18. 25·8	89. 49. 24 1					
Sep. 3	Polaris.....	100·588	90. 7. 45	15	20	90. 7. 26·7	0. 42. 46	0. 37. 33	1. 5. 4	1. 30. 39	−18. 1·8	89. 49. 24·9					
			90. 4. 45	10	15	90. 4. 23·3	0. 47. 25	0. 42. 12			−14. 59·7	89. 49. 23·6					
			90. 1. 45	10	15	90. 1. 23·3	0. 51. 57	0. 46. 44			−12. 1·8	89. 49. 21·5					
			89. 57. 55	20	25	89. 57. 33·3	0. 56. 39	0. 51. 26			− 8. 57·0	89. 48. 36·3					
			89. 54. 75	45	50	89. 54. 56·7	1. 1. 30	0. 56. 17			− 5. 46·2	89. 49. 10·5	89. 49. 7·6	+ 0·4	+ 0·6	89. 49. 8·2	T D

July 5. The correction to Mr. Breen's vernier readings before these observations was 16″·4 additive, and it was 15″·0 additive afterwards: a correction of 15″·0 additive has been applied to the above observations.

August 5. The correction to Mr. Breen's vernier readings before these observations was 10″·7 additive, and it was 5″·7 additive afterwards: a correction of 10″·7 additive has been applied to the above observations.

August 22. The correction to Mr. Breen's vernier readings before these observations was 10″·3 additive, and it was 6″·4 additive afterwards: a correction of 8″·4 additive has been applied to the above observations.

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle corresponding to the Astronomical Meridian—*continued.*

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R. A. of Object.	N. P. D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Sep. 3	Polaris.....	100·588	89.51.90	55	60	89.52. 8·3	1. 5.48	1. 0.35	1. 5. 4	1.30.39	− 2.56·7	89.49.11·6					
			89.48.95	55	55	89.49. 8·3	1.10.33	1. 5.20			+ 0.10·5	89.49.18·8					
			89.42.50	15	15	89.42.26·7	1.19.59	1.14.46			+ 6.22·2	89.48.48·9					
			89.38.95	50	55	89.39. 6·7	1.25. 9	1.19.56			+ 9.45·6	89.48.52·2					
Sep. 6	Polaris.....	100·588	89.42.35	5	15	89.42.16·7	1.20.47	1.15.35	1. 5. 6	1.30.37	+ 6.52·9	89.49. 9·6					
			89.39.83	58	73	89.40.11·3	1.23.59	1.18.47			+ 8.58·8	89.49.10·2					
			89.30.85	55	60	89.31. 6·7	1.38. 1	1.32.49			+18. 9·2	89.49.15·9	89.49.10·9	+2·4	+ 3·4	89.49.31·8	H B
			89.28.85	50	60	89.29. 5·0	1.41. 5	1.35.53			+20. 9·0	89.49.14·0					
			89.26.70	40	50	89.26.53·3	1.44.14	1.39. 2			+22.11·8	89.49. 5·1					
Sep. 20	Polaris.....	100·588	90. 9.70	45	55	90. 9.56·7	0.38.17	0.33.38	1. 5.11	1.30.33	−20.37·9	89.49.18·8					
			90. 7.43	15	28	90. 7.28·7	0.42. 8	0.37.29			−18. 7·7	89.49.21·0					
			90. 5.45	15	25	90. 5.28·3	0.45. 9	0.40.30			−16. 9·8	89.49.18·5					
			90. 3.30	0	15	90. 3.15·0	0.48. 1	0.43.22			−14.17·6	89.48.57·5	89.49.12·5	−1·4	− 2·0	89.49.22·2	H B
			90. 1.43	13	23	90. 1.26·3	0.51. 3	0.46.24			−12.18·6	89.49. 7·7					
			89.59.58	30	45	89.59.44·3	0.53.51	0.49.12			−10.28·8	89.49.15·6					
			89.57.40	13	23	89.57.25·3	0.57.20	0.52.41			− 8.11·9	89.49.13·4					
			89.55.45	10	18	89.55.24·3	1. 0.15	0.55.36			− 6.17·2	89.49. 7·1					
Oct. 11	Polaris.....	100·588	90. 6.35	0	10	90. 6.15·0	0.38.28	0.38.55	1. 5.15	1.30.25	−17.12·7	89.49. 2·3					
			90. 3.83	40	55	90. 3.59·3	0.42. 0	0.42.27			−14.54·7	89.49. 4·6					
			90. 1.48	15	15	90. 1.26·0	0.45.48	0.46.15			−12.26·0	89.49. 0·0					
			89.57.85	55	58	89.58. 6·0	0.51.13	0.51.40			− 8.53·7	89.49.12·3	89.49.10·0	+2·9	+ 4·1	89.49.14·1	L
			89.56.38	0	0	89.56.12·7	0.54.58	0.55.25			− 6.26·5	89.49.46·2					
			89.54.60	25	30	89.54.38·3	0.56.51	0.57.18			− 5.12·5	89.49.25·9					
			89.51.65	35	40	89.51.46·7	1. 0. 7	1. 0.34			− 3. 4·1	89.48.42·6					
			89.50.80	45	45	89.50.56·7	1. 2. 0	1. 2.27			− 1.50·1	89.49. 6·6					
Oct. 13	Polaris.....	100·588	89.50.75	35	40	89.50.50·0	1. 1.38	1. 2.11	1. 5.15	1.30.24	− 2. 0·5	89.48.49·5					
			89.47.40	10	25	89.47.25·0	1. 7. 3	1. 7.36			+ 1.32·4	89.48.57·4					
			89.44.40	0	15	89.44.18·3	1.11.37	1.12.10			+ 4.31·8	89.48.50·2	89.48.45·9	+7.6	+10·6	89.48.56·5	T D
			89.39.50	10	20	89.39.26·7	1.18.41	1.19.14			+ 9. 9·3	89.48.35·9					
			89.34.75	50	60	89.35. 1·7	1.25.33	1.26. 6			+13.38·3	89.48.40·0					
			89.33.50	15	25	89.33.30·0	1.27.58	1.28.31			+15.12·8	89.48.42·8					
Nov. 5	Polaris.....	100·588	90. 7.75	45	55	90. 7.58·3	0.34.57	0.36.44	1. 5.12	1.30.16	−18.34·0	89.49.24·3					
			90. 4.60	15	30	90. 4.35·0	0.38.59	0.40.46			−15.56·9	89.48.38·1					
			90. 1.75	45	55	90. 2.58·3	0.42.32	0.44.19			−13.38·3	89.49.20·0					
			89.59.90	50	60	90. 0. 6·7	0.45.23	0.47.10			−11.47·0	89.48.19·7	89.48.45·4	+6·4	+ 8·9	89.48.54·3	T D
			89.58.65	20	30	89.58.38·3	0.48.25	0.50.12			− 9.48·2	89.48.50·1					
			89.53.85	50	65	89.54. 6·7	0.54.31	0.56.18			− 5.49·2	89.48.17·5					
			89.51.35	0	10	89.51.15·0	0.59.10	1. 0.57			− 2.46·8	89.48.28·2					
Nov. 9	Polaris.....	100·588	89.41.90	50	65	89.42. 8·3	1.14.33	1.16.35	1. 5.11	1.30.14	+ 7.27·0	89.49.35·4					
			89.40.50	20	25	89.40.31·7	1.17. 0	1.19. 2			+ 9. 3·0	89.49.34·7					

September 6[d]. The correction to Mr. Breen's vernier readings before these observations was 14″·0 additive, and it was 21″·0 additive afterwards: a correction of 17″·5 additive has been applied to the above observations.

September 20. The correction to Mr. Breen's vernier readings before these observations was 11″·7 additive, and it was 11″·7 additive afterwards: a correction of 11″·7 additive has been applied to the above observations.

October 11. The observations were not satisfactory.

November 5. The observations are very discordant, and they have not been used in deducing the adopted mean for the month.

Observations with the Magnetic Theodolite at the Royal Observatory, Greenwich, for ascertaining the Reading of its Horizontal Circle, corresponding to the Astronomical Meridian—*concluded.*

Day, 1846.	Object.	Reading of Micrometer.	Reading of Circle Verniers. A	B	C	Mean.	Clock Time.	Sidereal Time.	R. A. of Object.	N. P. D. of Object.	Correction to Meridian in Azimuth.	Resulting Reading for North Meridian.	Mean.	W. end of Level High.	Corresponding Correction.	Corrected Reading for North Meridian.	Observer.
		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Nov. 9	Polaris.....	100·588	89. 37. 65	30	40	89. 37. 45·0	1. 20. 41	1. 22. 43	1. 5. 11	1. 30. 14	+11. 27·1	89. 49. 12·1					
			89. 35. 85	40	55	89. 36. 0·0	1. 23. 41	1. 25. 43			+13. 24·3	89. 49. 24·3	89. 49. 24·4	−6·3	−12·4	89. 49. 12·0	G H
			89. 33. 65	25	30	89. 33. 40·0	1. 27. 22	1. 29. 24			+15. 48·1	89. 49. 28·1					
			89. 31. 70	35	45	89. 31. 50·0	1. 30. 8	1. 32. 10			+17. 35·9	89. 49. 25·9					
			89. 29. 90	50	60	89. 30. 6·7	1. 32. 30	1. 34. 32			+19. 7·9	89. 49. 14·6					
			89. 27. 85	35	40	89. 27. 53·3	1. 36. 5	1. 38. 7			+21. 27·1	89. 49. 20·5					
Nov. 11	Polaris.....	100·588	89. 53. 90	45	60	89. 54. 5·0	0. 56. 8	0. 58. 18	1. 5. 10	1. 30. 14	− 4. 29·3	89. 49. 35·7					
			89. 52. 40	5	15	89. 52. 20·0	0. 58. 35	1. 0. 45			− 2. 53·3	89. 49. 26·7					
			89. 50. 45	8	15	89. 50. 22·7	1. 1. 11	1. 3. 21			− 1. 11·3	89. 49. 11·4					
			89. 48. 75	40	50	89. 48. 55·0	1. 3. 46	1. 5. 56			+ 0. 30·1	89. 49. 25·1	89. 49. 22·7	−6·1	− 8·5	89. 49. 17·6	H B
			89. 46. 78	43	50	89. 46. 57·0	1. 6. 41	1. 8. 51			+ 2. 24·5	89. 49. 21·5					
			89. 45. 45	15	20	89. 45. 26·7	1. 8. 54	1. 11. 4			+ 3. 51·4	89. 49. 18·1					
			89. 43. 75	40	50	89. 43. 55·0	1. 11. 17	1. 13. 27			+ 5. 24·9	89. 49. 19·9					
			89. 42. 40	10	20	89. 42. 23·3	1. 13. 42	1. 15. 52			+ 6. 59·6	89. 49. 22·9					
Nov. 20	Polaris.....	100·588	90. 3. 90	45	60	90. 4. 5·0	0. 39. 39	0. 42. 21	1. 5. 7	1. 30. 11	−14. 51·0	89. 49. 14·0					
			90. 1. 88	45	60	90. 2. 4·3	0. 42. 34	0. 45. 16			−12. 57·2	89. 49. 7·1					
			90. 0. 75	30	40	90. 0. 48·3	0. 44. 53	0. 47. 35			−11. 26·7	89. 49. 21·6	89. 49. 21·6	−9·5	−13·3	89. 49. 10·0	H B
			89. 59. 58	15	30	89. 59. 34·3	0. 47. 0	0. 49. 42			−10. 4·0	89. 49. 30·4					
			89. 56. 90	50	65	89. 57. 8·3	0. 50. 55	0. 53. 37			− 7. 30·7	89. 49. 37·6					
			89. 55. 45	0	10	89. 55. 18·3	0. 53. 15	0. 55. 57			− 5. 59·3	89. 49. 19·0					
Dec. 13	δ Ursæ Min. S.P.	100·588	90. 31. 65	35	45	90. 31. 48·3	6. 49. 52	6. 53. 43	18. 21. 18	3. 24. 2	−43. 3·3	89. 48. 45·0					
			90. 34. 70	35	45	90. 34. 50·0	6. 52. 14	6. 56. 5			−46. 11·0	89. 48. 39·0					
			90. 37. 75	40	50	90. 37. 55·0	6. 54. 33	6. 58. 24			−49. 14·2	89. 48. 40·8					
			90. 41. 30	0	5	90. 41. 11·7	6. 56. 55	7. 0. 46			−52. 20·7	89. 48. 51·0	89. 48. 56·0	−1·0	− 1·2	89. 48. 54·8	L
			90. 44. 35	0	5	90. 44. 13·3	6. 58. 50	7. 2. 41			−54. 53·3	89. 49. 20·0					
			90. 46. 60	30	35	90. 46. 41·7	7. 0. 42	7. 4. 33			−57. 21·8	89. 49. 19·9					
Dec. 16	Polaris.....	100·588	89. 41. 75	30	40	89. 41. 48·3	1. 12. 40	1. 16. 35	1. 4. 52	1. 30. 4	+ 7. 37·6	89. 49. 25·9					
			89. 38. 100	55	65	89. 39. 13·3	1. 16. 30	1. 20. 25			+10. 7·2	89. 49. 20·5					
			89. 37. 45	0	10	89. 37. 18·3	1. 19. 17	1. 23. 12			+11. 55·7	89. 49. 14·0					
			89. 34. 90	50	60	89. 35. 6·7	1. 22. 25	1. 26. 20			+13. 57·6	89. 49. 4·3	89. 49. 10·4	−6·0	− 8·4	89. 49. 2·0	H B
			89. 32. 90	45	55	89. 33. 3·3	1. 25. 46	1. 29. 41			+16. 7·7	89. 49. 11·0					
			89. 30. 85	45	55	89. 31. 1·7	1. 28. 33	1. 32. 28			+17. 55·8	89. 48. 57·5					
			89. 28. 83	40	53	89. 28. 58·7	1. 31. 54	1. 35. 49			+20. 5·5	89. 49. 4·2					
			89. 26. 95	50	63	89. 27. 9·3	1. 34. 46	1. 38. 41			+21. 56·4	89. 49. 5·7					
Dec. 26	Polaris.....	100·588	89. 47. 30	0	15	89. 47. 15·0	1. 8. 4	1. 7. 9	1. 4. 44	1. 30. 3	+ 1. 34·6	89. 48. 49·6					
			89. 45. 70	40	50	89. 45. 53·3	1. 10. 56	1. 10. 1			+ 3. 26·8	89. 49. 20·1					
			89. 44. 45	5	15	89. 44. 21·7	1. 13. 20	1. 12. 25			+ 5. 0·7	89. 49. 22·4	89. 49. 9·1	−3·6	− 5·0	89. 49. 4·1	H B
			89. 42. 65	30	40	89. 42. 45·0	1. 15. 41	1. 14. 46			+ 6. 14·0	89. 48. 59·0					
			89. 39. 55	15	25	89. 39. 31·7	1. 20. 24	1. 19. 29			+ 9. 37·0	89. 49. 8·7					
			89. 37. 80	45	60	89. 38. 1·7	1. 22. 52	1. 21. 57			+11. 13·3	89. 49. 15·0					

November 11. The correction to Mr. Breen's vernier readings before these observations was 3″·4 additive, and it was 5″·0 additive afterwards: a correction of 3″·4 additive has been applied to the above observations.

November 20. The correction to Mr. Breen's vernier readings before these observations was 1″·7 additive, and it was 0″·0 additive afterwards: a correction of 1″·7 additive has been applied to the above observations.

The following mean readings were obtained by combining all the results in the month according to the number of observations from which each was deduced.

Adopted Mean Readings for Astronomical South Meridian.

		° ′ ″
1846, Till	January 5^{d}. 6^{h}	269. 49. 55
From	January 5^{d}. 8^{h}	269. 48. 49
	February	269. 48. 53
	March	269. 49. 11
	April	269. 48. 49
	May	269. 49. 13
	June	269. 49. 13
	July	269. 49. 31
	August	269. 49. 19
	September	269. 49. 19
	October	269. 49. 8
	November	269. 49. 14
	December	269. 48. 59

The following is a description of the method of making and reducing the observations :—

A fine horizontal wire is fixed in the field of view of the theodolite telescope and another fine vertical wire is fixed to a wire-plate, moved right and left by a micrometer screw. On looking into the telescope the cross of the magnetometer is seen; and, during the vibration of the magnet, this cross is seen to pass alternately right and left. The observation is made by turning the micrometer till its wire bisects the image of the magnet-cross at the pre-arranged times, and reading the micrometer. The verniers of the horizontal circle are always read in the regular daily observations, and occasionally in the term observations, and in extra observations.

The mean-time clock is kept very nearly to Göttingen mean time (its error being ascertained each day), and the clock-time for each determination is arranged beforehand.

The first observation is made by the observer applying his eye to the telescope about one minute before the pre-arranged time, and if the magnet is in a state of vibration, he bisects the cross of the micrometer-wire at 45^{s}, and again at 15^{s} before that time, also at 15^{s} and 45^{s} after that time. The intervals of these four observations are therefore the same as the time of vibration of the magnet, and the mean of all the times is the same as the Göttingen mean time which is recorded in the printed tables of observations.

The mean of each pair of adjacent readings of the micrometer is taken (giving three means), and the mean of these three is adopted as the result. In practice, this is done by adding the first and fourth readings to the double of the second and third, and dividing the sum by six.

If the magnet be in a state of rest at the time of first looking through the telescope, then

at 15^s before the time recorded in the printed tables of observation, the cross of the magnet is bisected by the micrometer-wire; and at 30^s afterwards, the observer notes whether the cross continues bisected, and if it does, the corresponding reading is adopted as the result. The number of instances in which the magnet was observed in a state of vibration during the year 1846 is very small.

The adopted result is converted into arc, supposing $1^r = 1'.34''.07$ (see page iv), and the quantity thus deduced is added to the mean of the vernier readings, from which is subtracted the constant given in article 8 of the permanent adjustments; the difference between this number and the adopted reading for the Astronomical South Meridian is taken; and thus is deduced the magnetic declination, which is printed in the tabular observations.

In reading the verniers of the theodolite, it was found that Mr. Breen differed from the other observers; this difference was generally in defect, but it was frequently found to be in excess; at times it amounted to 20″ or 30″; its general amount, however, was about 10″. Corrections have been, therefore, deduced to apply to his observations; in the Daily Observations his reading of the verniers has been compared with that of any of the other observers, the telescope not having been moved; in reducing the Term Observations his reading has never been used; and in Extra Observations the correction has been that which under the circumstances, and by consulting the comparisons made both before and after, appeared to be the best. In all cases, wherever Mr. Breen's readings have been used, a correction has been applied.

The Extraordinary Observations have consisted of pairs of readings of the micrometer, separated by the time of vibration of the magnet, at times when the magnet has been vibrating; and of single observations at all other times, the observer satisfying himself, by inspection, that the magnet was at rest.

§ 2. *Horizontal Force Magnet, and Apparatus for Observing it.*

The horizontal force magnet is of the same dimensions as the declination magnet. For its support, a tripod stand is planted in the eastern arm of the magnetic observatory, resting immediately on the ground, and not touching the floor. This tripod supports an upright plank, to the top of which a brass frame is attached, carrying two brass pulleys in front of the plank and two at the back of the plank. A small windlass is attached to the back of the plank at a convenient height. The suspension-frame of the magnet is supported by the two halves of a skein of silk, which, rising from the magnet, pass over the two front pulleys, then over the two back pulleys, and then under a single large pulley, whose axis is attached to a string that passes down to the windlass. The magnet is inserted in a suspension-piece, of which the upper part is a vertical plate, having five pairs of small

pulleys attached to it (those which are nearest together being highest), and the lower part of the silk skein is passed under the two pulleys of one pair; only the upper pair, however, has been used in 1846. The vertical plate is connected with the torsion-circle; it turns with reference to the magnet-cell (being held by stiff friction), and the readings of the circle-graduations are indicated by a pointer carried by the magnet-cell. On the lower side of the magnet-cell is a mirror, whose frame turns with reference to the magnet-cell (being held by stiff friction), but has no graduated circle. The magnet, &c., swings freely in a rectangular box with double sides, covered with gilt paper, similar to that used for the declination magnet, a small portion of one of whose sides is of glass; the vertical plate of the suspension-piece passes through a hole in the top of the box. The height of the upper brass pulleys above the floor is $11^{ft}.5^{in.}$; that of the highest pair of the lower pulleys is $3^{ft}.8^{in.}$; and that of the center of the mirror is about $2^{ft}.11^{in.}$. The distance between the upper portions of the half skeins of silk, where they pass over the upper pulleys, is $1^{in.}48$; at the lower part, for the first pair of rollers, the distance between them is $0^{in.}92$.

The scale, which is observed by means of this mirror, is fixed to the South wall of the East arm of the magnetic observatory. The numbers of the scale increase from East to West, so that, when the magnet is inserted in the magnet-cell with its marked end towards the West, increasing readings of the scale (as seen with a fixed telescope directed to the mirror which the magnet carries) denote an increasing horizontal force. A normal from the magnet-mirror to the scale meets it at the division 40 nearly.

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor without touching it, and are firmly connected with piles driven into the ground. Its position is such that an observer, sitting in a chair at a convenient place for observing the declination magnet with the theodolite, can, by turning his head, look into the telescope which is directed to the mirror of this instrument. The angle between the normal to the scale (which usually coincides nearly with the normal to the magnet) and the axis of the telescope, is about 54°, and the plane of the mirror is therefore inclined to the axis of the magnet about 27°.

Observations relating to the permanent Adjustments of the Horizontal Force Magnet.

1. Determination of the angle of torsion when the magnet is suspended by the first rollers.

1845, December 27^{d}. Observer, Mr. Glaisher.

From the observations for the time of vibration of the magnet (recorded below).

With the marked end of the magnet to the East, and scale-reading	49·43 div.	39. 32 °

(This number is found by interpolation among those actually observed.)

With the marked end of the magnet to the West, and scale-reading	49·43 div.	317. 0 ° ′

The half difference is 41°.16′ for the angle of torsion.

The magnet was inserted in the stirrup, with marked end to the West.

The division of the scale bisected by the vertical wire of the telescope was	51·7 div.	Torsion-circle reading 317. 0 ° ′

The magnet was inserted, with marked end to the East.

The division of the scale bisected by the vertical wire of the telescope was	51·7 div.	Torsion-circle reading 39. 45 ° ′

The brass bar was inserted.

The division bisected by the vertical wire of the telescope was	51·7 div.	Torsion-circle reading 359. 23 ° ′

And the angle of torsion from these experiments is 41°.23′.

The magnet was again inserted with its marked end to the West.

The division bisected by the vertical wire of the telescope was	51·9 div.	Torsion-circle reading 317. 0 ° ′

The magnet was inserted with its marked end to the East.

The division bisected by the vertical wire of the telescope was	51·9 div.	Torsion-circle reading 39·50 ° ′

The brass bar was inserted.

The division bisected by the vertical wire of the telescope was	51·9 div.	Torsion-circle reading 359. 15 ° ′

And the angle of torsion from these experiments was 41°.25′.

Therefore, from the	1st	set of experiments the value was	41. 16 ° ′
,,	2nd	set ,,	41. 23
,,	3rd	set ,,	41. 25

The mean angle of the value of torsion was, therefore, considered to be 41°.21′.

The previous determinations of this element have been as follows:—

	°	′
In 1841, January	41.	3
1842, January	42.	0
1842, April	41.	43
1843, January	41.	29
1843, May	40.	51
1843, December	41.	35
1844, December	41.	31

So that no certain change has taken place in the value of the angle of torsion since the date of the first of these determinations.

2. Determination of the times of vibration and of the different readings of the scale for different readings of the torsion-circle, and deduction of the readings of the torsion-circle when the magnet was transverse to the magnetic meridian.

Observer, Mr. Glaisher.

1845, Day.	Magnet suspended from First Pair of Rollers.							
	Its marked end West.				Its marked end East.			
	Torsion-circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion-circle.	Mean of the Times of Vibration.	Torsion-circle Reading.	Scale Reading	Difference of Scale Readings for 1° of Torsion-circle.	Mean of the Times of Vibration.
	°	div.	div.	s	°	div.	div.	s
Dec. 27	312	2·73	8·79	22·6	35	9·99	9·46	20·1
	313	11·52	10·01	22·0	36	19·45	8·65	19·6
	314+	21·53	10·52	21·9	37	28·10	10·00	19·6
	315	32·05	9·40	21·0	38	38·10	6·09	19·8
	316	41·45	7·98	20·5	39—	44·19	9·73	19·3
	317—	49·43	9·99	21·0	40	53·92	10·02	19·7
	318	59·42	10·01	20·4	41	63·94	9·61	20·3
	319+	69·43	8·23	20·8	42	73·55	9·27	20·3
	320	77·66	9·90	20·6	43	82·82	10·70	20·9
	321	87·56	7·95	20·5	44	93·52		21·8
	322	95·51		19·9				

From this set of experiments it appears that, with a reading of 317° of the torsion-circle when the marked end was West, the scale-reading was greater than $49^{div}\cdot43$; and that, when the marked end was East, with a torsion-circle reading of 40°, the scale-reading was

$53^{div}\cdot92$; so that, with the respective readings of 317° of torsion-circle in one position of the magnet and of 40° on the other, the scale-readings were nearly identical. The time of one vibration, at 40°, was about a quarter of a second less than at 317°. Throughout the year 1846 the marked end of the magnet was towards the West, and the torsion-circle reading was 317°. The time of vibration throughout the year has been considered to be $20^{s}\cdot8$.

The mean difference of the scale-readings for a difference of 1° in the readings of the torsion-circle, from these experiments, was, with the marked end West, $9^{div}\cdot28$; and with the marked end East, it was $9^{div}\cdot28$.

The previous determinations of these elements have been as follows:—

With the marked end of the magnet West, and the torsion-circle reading 317°.

			div.		s
1841, March	14.	The scale-reading was	91·78;	the time of vibration was	20·8
1842, January	2.	The scale-reading was	61·36;	the time of vibration was	20·7
1843, January	3.	The scale-reading was	60·42;	the time of vibration was	20·8
1843, May	1.	The scale-reading was	50·85;	the time of vibration was	20·3
1843, December	26.	The scale-reading was	54·95;	the time of vibration was	21·1
1844, December	27.	The scale-reading was	54·90;	the time of vibration was	20·9

With the marked end of the magnet East on the same days respectively.

	o		div.		s
The torsion-circle reading was	40;	the scale-reading was	91·12;	the time of vibration was	20·2
The torsion-circle reading was	41;	the scale-reading was	61·28;	the time of vibration was	20·4
The torsion-circle reading was	40;	the scale-reading was	59·65;	the time of vibration was	20·5
The torsion-circle reading was	38½;	the scale-reading was	50·51;	the time of vibration was	20·2
The torsion-circle reading was	40;	the scale-reading was	52·20;	the time of vibration was	20·3
The torsion-circle reading was	40;	the scale-reading was	53·51;	the time of vibration was	20·4

The mean differences of the scale-readings for differences of 1° in the readings of the torsion-circle, have been found to be as follows:—

				s
1841, March	14,	with the marked end of the magnet	West it was	9·18
1841, March	24,	,,	,,	9·67
1842, January	2,	,,	,,	9·24
1843, January	2,	,,	,,	9·27
1843, May	1,	,,	,,	9·19
1843, December	26,	,,	,,	9·32
1844, December	27,	,,	,,	8·89
1845, December	27,	,,	,,	9·28

1841, March	14,	with the marked end of the magnet	East it was	8·74
1841, March	24,	,,	,,	8·71
1842, January	2,	,,	,,	9·21
1843, January	2,	,,	,,	9·31
1843, May	1,	,,	,,	9·32
1843, December	26,	,,	,,	8·93
1844, December	27,	,,	,,	8·81
1845, December	27,	,,	,,	9·28

And the mean of the values with the marked end of the magnet West, is $9^{div}\cdot25$; and with the marked end East, it is $9^{div}\cdot04$.

3. Determination of the compound effect of the vertical force magnet and of the declination magnet on the horizontal force magnet, when suspended from the first pair of rollers with its marked end towards the West.

The details of the experiments will be found in the volumes for 1841, 1842, 1843, 1844, 1845. The effect was to increase the readings by $0^{div}\cdot487$. The correction necessary for this disturbance has been taken into account by shifting the scale by the above amount.

4. Computation of the angle corresponding to one division of the scale, and of the variation of the horizontal force (in terms of the whole horizontal force) which moves the magnet through a space corresponding to one division of the scale.

It was found by accurate measurements at the end of the year 1840, that the distance from 40° on the scale to the center of the face of the mirror is $8^{ft}.5^{in}\cdot1$, and that the length of $30^{div}\cdot9$ of the scale was exactly 12 inches; consequently, the angle at the mirror subtended by one division of the scale is $13'.12''\cdot32$, or, for one division of the scale, the magnet is turned through an arc of $6'.36''\cdot16$.

With the first pair of rollers, which was used throughout the year 1846, the adopted angle of torsion was $41°.2'.50''$, being the same as that in the years 1841, 1842, 1843, 1844, and 1845, the experiments in Article 1 of this section shewing that no change was necessary; consequently, the variation of horizontal force in terms of the whole horizontal force for a disturbance through one division of the scale, computed by the formula "Cotan. angle of torsion × value of one division in terms of radius," is 0·002206. The number actually used throughout the year 1846 is 0·002214.

5. Determination of the correction for the effect of temperature on the horizontal force magnet.

The details of the experiments by which this is determined are given in the volumes for 1840—1841, 1844, 1845. The mean result found for the fraction

$$\frac{\text{increase of force for every diminution of temperature by } 1^\circ}{\text{whole force}}$$

is 0·0001686.

The method of observing with the horizontal force magnet is the following:—

A fine vertical wire is fixed in the field of view of the telescope, which is directed to the mirror carried by the magnet. On looking into the telescope, the graduations of the fixed scale are seen; and, during the oscillations of the magnet, the divisions of the scale are seen to pass alternately right and left across the wire. The clock-time, for which the position of the magnet is to be determined (usually $2^m.30^s$ after the time for the determination with the declination magnet), having been calculated, the first observation is made by the observer applying his eye to the telescope 40^s before that time, and, if the magnet is in a state of vibration, he observes the next four extreme points of vibration of the scale, and the mean of these is adopted in the same manner as for the declination observations; but if it is at rest, then at $2^m.20^s$ after the time recorded in the printed tables of observation, he notes the division of the scale bisected by the wire; and 20^s afterwards he notes whether the same division continues bisected, and if it does, that reading is adopted as the result.

The number of instances when the magnet was observed in a state of vibration during the year 1846, is very small.

From the adopted scale-reading $37^{div.}·82$ was subtracted at the end of 1845; at the beginning of 1846 the mirror was cleaned, an operation which occupied a few minutes only, and it was found that a circular motion had been given to the mirror, and that the scale-readings were consequently increased by $1^{div.}·15$, and the number $37^{div.}·82$ was therefore changed to $38^{div.}·97$. The number actually used throughout the year 1846, was $39^{div.}·00$ subtractive.

Within the double box is suspended a thermometer, which is read at every even hour of observation. In Article 5 it appears, that for an increase of temperature of 1° there is a decrease of horizontal force amounting to 0·0001686 parts of the whole horizontal force. The corresponding correction is applied, according to the reading of the inclosed thermometer, to every observation, so that the observations are all reduced to what they would have been if made at the temperature of 0° Fahrenheit.

§ 3. *Vertical Force Magnet, and Apparatus for Observing it.*

The vertical force magnet is of the same dimensions as the other two magnets. It is supported upon a block, connected with a tripod-stand which passes through the floor and

*

rests immediately on the ground in the western arm of the Magnetic Observatory. Its position is as nearly as possible symmetrical with that of the horizontal force magnet in the eastern arm. The magnet is inserted in a brass frame, to which two steel knife-edges are attached, similar to the knife-edges of a balance or pendulum, by which it vibrates upon agate plates. A proper apparatus is provided for raising it a small height above the agate supports. On the upper part of the brass frame is a mirror, whose plane makes with the axis of the magnet an angle of 54° nearly. The height of this mirror above the floor is the same as that of the horizontal force magnet. The axis of the magnet is as nearly as possible transverse to the magnetic meridian. Near the ends of the magnet are two holes in which are inserted brass pieces carrying screws, by which the elevation of the center of gravity and the inclination of the magnet in its position of rest can be altered. The whole is inclosed in a double rectangular box covered with gilt paper, similar to those used for the declination magnet and the horizontal force magnet. This box is based upon the block of wood above mentioned, and in it the magnet can vibrate freely in the vertical plane. A small portion of one of the sides of the box is of glass.

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor without touching it, and are firmly connected with piles driven into the ground. Its position is symmetrical with that of the telescope by which the horizontal force magnet is observed; so that a person seated in a position proper for observing the declination magnet can, by an easy motion of the head right and left, observe the vertical force and horizontal force magnets.

The scale is vertical: it is fixed to the stand which carries the telescope, and is at a very small distance from the object-glass of the telescope. The wire in the field of view of the telescope is horizontal. The telescope being directed towards the mirror, the observer sees in it the divisions of the scale passing upwards and downward over the fixed wire as the magnet vibrates. The numbers of the scale increase from top to bottom; so that, when the magnet is placed with its marked end towards the East, increasing readings (as seen with the fixed telescope) denote an increasing vertical force.

Observations relating to the permanent Adjustments of the Vertical Force Magnet.

1. Determination of the compound effect of the declination magnet, the horizontal force magnet, and the iron affixed to the electrometer pole, on the vertical force magnet.

The experiments applying to the magnets are given in the volumes for 1840—1841 to 1845: and those applying to the electrometer pole in the volume for 1842. It appears that no sensible disturbance is produced.

2. Determination of the time of vibration of the vertical-force-magnet in the vertical plane.

Between January 1^{d} and September 30^{d} the magnet had been in all positions for scale-readings between 25$^{div.}$ and 47$^{div.}$, and the times of vibration, which were observed every day, had been taken at nearly every division between these, and found to be accordant at the same scale-readings throughout the year: each result is the mean of about ten vibrations.

Division of Scale.	Mean of Times of Vibration, in Mean Solar Time.	Number of Mean Results.	Division of Scale.	Mean of Times of Vibration, in Mean Solar Time.	Number of Mean Results.
div.	s		div.	s	
25	25·03	1	36	26·32	9
26	20·09	1	37	26·56	13
27	25·23	1	38	26·41	10
28	25·23	7	39	26·70	13
29	25·50	29	40	26·79	12
30	25·55	20	41	26·97	9
31	25·69	17	42	27·17	5
32	25·64	5	43	27·18	5
33	25·74	1	44	27·55	1
34	25·96	6	45	27·47	4
35	25·98	7	47	27·21	1

As the magnet is horizontal when the scale-reading is 50$^{div.}$, the number adopted as the mean time of vibration was 27^{s}·5, and this value was used till September 30^{d}.

During the months of October, November, and December, the time of vibration was constantly increasing. The following table shews the results for these months:

October.			November.			December.		
Division of Scale.	Mean of Times of Vibration, in Mean Solar Time.	Number of Mean Results.	Division of Scale.	Mean of Times of Vibration, in Mean Solar Time.	Number of Mean Results.	Division of Scale.	Mean of Times of Vibration, in Mean Solar Time.	Number of Mean Results.
div.	s		div.	s		div.	s	
30	26·00	5	30	26·32	3	32	27·59	2
31	26·11	6	31	26·45	2	33	27·80	3
32	26·39	5	32	26·70	4	34	28·08	2
33	26·57	2	33	26·75	5	35	28·34	1
34	26·74	4	34	26·60	5	36	28·13	4
			35	27·13	2	37	27·96	4
			39	28·17	2	38	28·76	2
						39	28·73	2

By comparing these values in the month of October with those of the preceding table at the same scale-values, it appears that the time of vibration in October was increased by

0s·65; by comparing those in November with those in October, and those in December with those in November, it appears that the time of vibration in November was 0s·20 longer than it was in October; and that it was 1s·01 longer in December than it was in November. The adopted time of vibration in October was 28s·15, in November, 28s·35; and in December, 29s·36.

3. Determination of the time of vibration of the vertical force magnet in the horizontal plane.

Observations made for this purpose are detailed in the volumes for 1844 and 1845. The result is, that the time of vibration is 24s·6.

4. Computation of the angle through which the magnet moves for a change of one division of the scale; and calculation of the disturbing force producing a movement through one division, in terms of the whole vertical force.

The distance from the scale to the mirror is 151·2 inches, and each division of the scale $=\frac{12}{30{\cdot}9}$ inches. Hence the angle which one division subtends, as seen from the mirror, is 8′.49″·79; and therefore the angular movement of the normal to the mirror, corresponding to a change of one division of the scale, is half this quantity, or 4′.24″·90.

But the angular movement of the normal to the mirror is not the same as the angular movement of the magnet; but is less, in the proportion of unity to the cosine of the angle which the normal to the mirror makes with the magnet, or in the proportion of unity to the sine of the angle which the plane of the mirror makes with the magnet. This angle has been found to be 54°: therefore, dividing the result just obtained by sine 54°, we have, for the angular motion of the magnet corresponding to a change of one division of the scale, 5′.27″·43.

From this, the value, in terms of the whole vertical force, of the disturbing force producing a change of one division, is to be computed by the formula, "Value of Division in terms of radius × cotan. dip × $\frac{T'^{2s}}{T^2}$, where T′ is the time of vibration in the horizontal plane, and T the time of vibration in the vertical plane.

The dip has been assumed to be 69°.0′ throughout the year.

1846, January 1 to September 30d	T′ is assumed	= 24s·6,	T =	27s·5
During the month of October	T′ ,,	= 24s·6,	T =	28s·15
During the month of November	T′ ,,	= 24s·6,	T =	28s·35
During the month of December	T′ ,,	= 24s·6,	T =	29s·36

consequently, the corresponding values of the changes of vertical force (in terms of the whole vertical force) corresponding to a change of one division, are :—

1846, January 1 to September 30	0·000488
For the month of October	0·000465
For the month of November	0·000459
For the month of December	0·000428

And these are the numbers which have been used in the reduction of the observations.

5. Investigation of the temperature-correction of the vertical force magnet.

The experiments by which this correction is ascertained are detailed in the volumes for 1840—1841, 1844, 1845. It appears, that for an increase of temperature of 1° the decrease of the magnetic force was 0·000264 of the whole force. Every observation therefore, expressed in terms of the whole vertical force, has been reduced to what it would have been if made at the temperature 0° of Fahrenheit, by applying the correction (temperature expressed in degrees of Fahrenheit) × 0·000264.

6. Effect of altering the adjustment-screws at either end of the magnet.

In the volumes for 1843, 1844, and 1845 are given experiments applying to this determination. The results are, that by drawing the West screw (whose position is horizontal) towards the West, through one revolution, the scale-reading is diminished by $6^{div}\cdot7$; and that the time of vibration is scarcely affected: and that by forcing the East screw (whose position is vertical) downwards, through fifty revolutions, the time of vibration is increased $5^{s}\cdot5$, and the scale-reading is apparently unaffected.

Occasional Adjustments of the Vertical Force Magnet.

The scale has not been moved throughout the year; in fact, it has not been moved since it was set up in 1840.

The adopted scale-readings are converted into the number required to express the proportion of the variable force to the mean vertical force, by means of tables containing the multiples of the value of one division of the scale.

On January 0^{d} at 14^{h} the time of one vibration in the vertical plane was considered to be $27^{s}\cdot5$; at the preceding observation it was considered to be $26^{s}\cdot7$; and in consequence the value of one division of the scale was changed from 0·000517 to 0·000488. The scale-reading on January 0^{d} at 14^{h}, was $39^{div}\cdot5$. Had the time of vibration not altered, the measure of the force at January $0^{d}.14^{h}$ deduced from the observation would have been 0·034678; in the printed volume it is 0·033518; the difference between these numbers is 0·001160: therefore, to make the numbers beginning January 0^{d} at 14^{h}, comparable with the series in the year 1845, it is necessary to add 0·001160. This correction applies to all numbers between January 1^{d} and September 30^{d}.

On October $0^{d}.14^{h}$, the scale reading was $29^{div}\cdot72$; the time of vibration in the vertical plane was $28^{s}\cdot15$; at the preceding observation it was considered to be $27^{s}\cdot5$; and, conse-

quently, the value of one division of the scale was changed from 0·000488 to 0·000465. Had the time of vibration not altered, the measure of the force would have been 0·030992; in the printed volume it is 0·030329: the difference between these numbers is 0·000663, which is to be applied additively to the numbers beginning at this time, to reduce them to the preceding series; and it applies to all numbers in the various sections of observations between October $0^d.14^h$ and October $31^d.12^h$: and as the numbers in the preceding series required 0·001160 to make them comparable with the series of 1845, this series will be reduced to that of 1845, by adding 0·001823 to all its numbers.

On November $1^d.14^h$ the scale-reading was $33^{div.}4$; the time of vibration in the vertical plane was $28^{s.}35$; at the previous observation it was considered to be $28^{s.}15$; and, consequently, the value of one division of the scale changed from 0·000465 to 0·000459. Had the change not taken place, the measure of the force would have been 0·029269; in the printed column of observations it is 0·029051; the difference between these numbers is 0·000218, which it is necessary to apply additively to the series of numbers beginning at this time, to reduce them to that ending at the preceding observation: and as that series required 0·001823 to be added to make it comparable with the series in the year 1845, the series of numbers beginning November $1^d.14^h$ and ending November $30^d.12^h$ require the additive correction 0·002041.

On December $0^d.14^h$ the scale-reading was $36^{div.}39$; the time of vibration in the vertical plane was $29^{div.}36$; at the preceding observation it was considered to be $28^{s.}35$; and, consequently the value of one division of the scale changed from 0·000459 to 0·000428. Had the change not taken place, the measure of the force would have been 0·028179; in the printed column of observations it is 0·027052; the difference between these numbers is 0·001127, which it is necessary to apply additively to the series of numbers beginning December $0^d.14^h$ and ending at the end of the year, to reduce them to the series ending November $30^d.12^h$: and as that series required 0·002041 to be added to reduce it to that of the year 1845, the series beginning December $0^d.14^h$ require the additive correction 0·003168.

After this time the knife-edges were sent to Mr. Barrow to be reground.

In the year 1845, on December 26^d, before the observation at 0^h the box of the vertical force magnet was opened and the magnet itself was examined. When the magnet was reinstated, it was found that the scale-readings were smaller than they were before by $8^{div.}7$, and this number was added to the scale-readings to form the adopted scale-reading at every observation from that day to the end of the year 1845. This should have been stated in the Introduction to the volume for 1845, but it was inadvertently omitted. Beginning with 1846, this number was *not* applied to the scale-readings, and it *has not been* taken into account in the reductions of the observations. Therefore, all the numbers in the abstracts of the vertical force magnet in this volume require to be increased by $8·7 \times 0·000517 =$

0·004497, in addition to the corrections which have already been applied, to render them comparable with the series in the year 1845.

The method of observation with the vertical force magnet is precisely similar to that described for the horizontal force magnet, except that the adopted clock-time is $2^m.30^s$ before that for the declination magnet, and that the eye is directed to the telescope at an interval of time, equal to twice the adopted time of one vibration, before that time. If the magnet is in a state of rest, the eye is again directed to the telescope at an interval, equal to half the time of one vibration, before the pre-arranged time, and the division bisected is noted: and at the time of one vibration afterwards the observer notes whether the same division is bisected as before, and, if it is still bisected, the corresponding reading is adopted as the result, and it is converted into a number expressing the proportion of the variable force to the mean vertical force, by the numbers obtained in Article 4 of this section. The numbers in the printed columns are those numbers reduced to the uniform temperature of 0° of Fahrenheit above mentioned.

§ 4. *Dipping Needle and Method of observing the Magnetic Dip.*

The instrument with which all the observations of the Dip have been made was constructed by Robinson, and it is one of the last instruments completed by that artist before his death.

The inner diameter of the vertical circle is 9·59 inches, and the circle is divided to ten minutes; so that every two divisions are $0^{in}·014$ apart at their inner extremities. The divisions appear to be very perfect.

The diameter of the horizontal circle, measured between the points where the extremity of the index meets the graduations, is 5·43 inches. The graduation is to half degrees, and the vernier subdivides to single minutes. There is only one reading.

The vertical circle is graduated upwards and downwards to 90° from the two extremities of the horizontal diameter. The horizontal circle is graduated from 0° to 180°, and then from 0° to 180° again in the same direction; so that had the circle been divided from 0° to 360° (a more natural and convenient method), the readings 180° to 360° would have occupied the part of the circle now occupied by the second set of divisions.

The instrument has two needles marked at one end A 1 and A 2 respectively.

The length of A 1 is 9·56 inches.

The length of A 2 is 9·55 inches.

The lengths of the needles, therefore are respectively only $0^{in}·03$ and $0^{in}·04$ less than the inner diameter of the circle.

The needles usually swing quite round the circle without touching, proving that the circle

is nearly perfect, and that the upper surfaces of the agate planes on which the cylindrical terminations of the axle rest, are so placed as to be below the center of the vertical circle by a distance equal to half the thickness of the axle at its bearing points.

The surfaces of the agate planes are $1^{in}\cdot09$ apart; the whole length of each of the axles of the needles is $1^{in}\cdot20$, of which a length of $0^{in}\cdot88$ is nearly $0^{in}\cdot1$ in diameter; a portion, $0^{in}\cdot02$ in length on each side, is of a less thickness, and this part of each rests in the Y's when the needle is raised from the agate planes; the remainder $0^{in}\cdot14$ on each side is the cylindrical termination of the axles, and its diameter is about $0^{in}\cdot02$: both needles are of the same dimensions in these respects, and no certain difference exists in the diameters of their axles.

The coincidence of planes of the two agates, and the general accuracy of their surfaces, have been occasionally examined by placing on them, sometimes the plane glass of an artificial horizon, and sometimes a small level in different positions; and no reason has been found for doubting the perfect accuracy of their workmanship.

The observations were made in a house built for the purpose entirely of wood, with copper and brass fastenings, at the distance of 64 feet S.S.E. from the nearest part of the Magnetic Observatory.

The observation of the Dip have been made as follows :—

The horizontal circle is levelled, so that the bubble keeps the same position in all positions of the vertical circle. For ascertaining the reading of the horizontal circle when the vertical circle is nearly in the plane of the magnetic meridian, an instrument is occasionally inserted, consisting of a small steel point above, a brass steadying weight below, and two brass arms by means of which this instrument rests upon the Y's; upon the steel point a free horizontal magnet is mounted with an inverted agate cup in the usual manner; and the whole apparatus is turned till the plane of the vertical circle passes through the free needle. This method has several times been combined with that of corresponding inclinations in two positions of the vertical circle nearly perpendicular to the Magnetic Meridian: and also with that of turning the instrument on its axis until the dipping needle has assumed a vertical position, and inferring the reading for meridional position of the vertical circle by applying 90° to the reading corresponding to this position: the differences have been always found of small amount.

The needle is then placed on the Y supports, and lowered gradually on to the agate planes, with its marked side on the same side with the divided circle, both being towards the East, and the divisions of the vertical circle at the two ends of the needle are read. The instrument is then turned 180° in azimuth, and the observation is repeated, the marked side of the needle and the graduated face of the instrument being towards the West. The needle is then reversed on its axle so that its face is to the East, the face of the instrument being still towards the West, and similar observations are made. The instrument is then turned

180° in azimuth, so that its graduated face is towards the East, and the marked side of the needle towards the West, and the observations are repeated. To eliminate the effect of the want of coincidence of the center of gravity of the needle with the axis of rotation, the poles of the needle are then reversed by means of about twenty double strokes of two 9-inch bar magnets on each side of the center of the needle; it is assumed that it is completely saturated by this means, and then step by step the observation is made as before. At some times the observations were made in the meridian in this manner, and at other times the observations were made in planes inclined to the magnetic meridian as follows:—The plane of the instrument was placed at a known inclination to the magnetic meridian; the needle was placed on the Y supports, and lowered as usual on the agate planes, with its marked side on the same side with the divided circle, both being towards the East, and the vertical circle at the two ends of the needle was read. The instrument was then turned round by the South through successive 90° in azimuth; and the observation was repeated with the circle reading in its first position, increased by 90°, by 180°, and by 270° successively; in the last position the marked side of the needle and the graduated face of the instrument being towards the North. The needle was then reversed on its axle, so that its face was towards the South, the face of the instrument being still towards the North, and similar observations were made. The instrument was then turned in azimuth through successive 90° as before; the observation being repeated in every different position of the instrument. The poles of the needle were then reversed in the usual way, and then step by step the observation was repeated in the same order. In a few instances observations have been made in only two different azimuths, the one differing from the other by 90°.

In each position of the needle the axle is raised off the agate planes, lowered, and the readings taken again; and this is repeated two, three, or four times, according to the degree of uncertainty, and the mean of all is adopted.

In the case of the observations being made in the magnetic meridian, the resulting dip is that corresponding to the mean of the eight observed results.

In the case of the observations being made in different azimuths: the mean inclinations, deduced from the different azimuthal angles, are combined to form the Resulting Dip by the formula:—

$$\text{Cot.}^2\theta = \text{Cot.}^2\eta + \text{Cot.}^2\eta'$$

in which θ denotes the resulting dip,

η the inclination to the magnetic meridian at a certain azimuth,

η' the inclination at an azimuth at right angles to that for which the inclination is η.

With the view of ascertaining whether partial results obtained on one day could be combined with other partial results obtained on other days, and also whether a needle left

at rest would shew the diurnal changes, the needle A 1 was left for some time in 1843 on the agate planes, and observations were made at short intervals; which appear in the volume for 1843. From those observations it appeared that partial observations on one day cannot be safely combined with other partial observations taken on another day, nor can the diurnal change be shewn by reading the needle repeatedly on the same day without touching it.

§ 5. *Observations for the Absolute Measure of the Horizontal Force of Terrestrial Magnetism.*

The apparatus with which these observations are made is the same which has been used in the investigation of corrections for temperature. A wooden frame, with four horizontal arms which travel with an azimuthal revolution by rollers upon a wooden framed ring, carries at its center an erection to which the magnet (the subject of deflexion) is suspended by a few fibres of silk; and carries, at the extremity of one of the horizontal arms, a telescope, and also a graduated scale which is viewed with the telescope by reflection in a small mirror attached to the frame which clasps the suspended magnet. The deflecting magnet is placed sometimes upon one arm, sometimes upon another: but upon whichever it is placed, it, as well as the telescope and graduated scale, are turned round by the observer in observation so far that, upon looking into the telescope, the same division of the scale is seen in the center of the field as when the deflecting magnet is removed and the wooden frame is in its ordinary position. When this condition is obtained, the relative positions of the deflected magnet and the wooden frame are the same as before, and the deflecting magnet, if placed at first in a direction accurately transverse to the magnetic meridian, is now in a direction accurately transverse to that of the deflected magnet. The measure of the magnetic effort to deflect the magnet is the sine of the angle through which the frame has been turned.

For the measure of this angle, a graduated circle is attached to the fixed pedestal, and its divisions are viewed by two micrometer-microscopes connected with the revolving frame.

In the exhibition of the results, the details of micrometer-readings, values of runs, &c., are omitted.

The deflections have in all cases been observed with the magnet placed successively on opposite arms of the wooden frame. The intention of this arrangement was, to eliminate all errors arising from a possibly erroneous position of the point of suspension. The whole distance from the place of the center of the deflecting magnet in one position to the center of the same magnet when placed in the opposite position, has been measured with great care. The two distances between the centers of the magnets used in all these observations are 1 foot and 1 foot 6 inches.

It is unnecessary here to enter upon the theoretical considerations which shew that, when the measure of the deflecting effort is expressed by a series

$$\frac{a}{(\text{distance})^3} + \frac{b}{(\text{distance})^5} + \&c.$$

in descending powers of the distance between the centers of the magnets, the coefficient a is that upon which the measure of terrestrial magnetism will depend. It is proper, however, to mention that, in practice, there is always some uncertainty in the determination of b, and therefore I have thought it best to determine b separately from every series, to adopt the mean of all these values of b as one value applicable in every case, and then, substituting this as a known value in the two equations given by each pair of deflections, to add together the two equations, and thus to form one advantageous equation for determining the value of a.

The observations made with the deflecting magnet North or South of the deflected magnet, are intended only as a check on the others. If the law of attractive and repulsive magnetic forces inversely as the square of the distance be correct, and if the observations be accurate, then the value obtained for a' (which corresponds to a as deduced from the other measures) ought to be exactly one-half of that obtained for a. The near agreement of the numbers with this proportion shews that the observations are entirely trustworthy.

The next point is to ascertain the time of vibration of the deflecting magnet when itself subjected to the action of terrestrial magnetism. For this purpose, the deflecting magnet is mounted in the same carrying-piece, and its vibrations are observed by means of the telescope and scale, the times being noted by a solar chronometer whose rate is small. The arc of vibration never exceeds 0°. 30′, so that no correction is necessary for the extent of arc.

Experiments made on 1848, January 10, for the purpose of determining the proportion of the torsion-force of the thread to the terrestrial directive-force, gave the following values:

$$\frac{1}{3157}, \frac{1}{2093}, \text{ and } \frac{1}{2903},$$

and the results previously obtained from unrecorded observations were less than the preceding. On account of the smallness and the discordance of these values, no correction for torsion is applied.

It is important either that the temperature be the same in the observations or that the corrections for temperature be accurately known. Investigations of the correction for 1° of Fahrenheit made at different times from 32° to 99° gave the following results:—

At	32°	the natural sine of deflexion was	0·13452
	50	,, ,,	0·13437
	79	,, ,,	0·13420
	99	,, ,,	0·13403

It is evident that the temperature-correction for this magnet is very small, and its magnitude so uncertain, that I have judged it best to omit it both in these deflexion-observations, and in the vibration-observations unaccompanied with deflexions which follow them.

The next step is, to ascertain the moment of inertia of the magnet and frame as suspended during the observation of vibrations. The weight of the magnet was ascertained by Mr. Barrow to be 507·302 grains: its length, by observations made by Mr. Glaisher, with scales furnished by Mr. Simms, was 3·630 inches, or 0·3025 foot: its diameter 0·300 inch, or 0·025 foot: its moment of inertia therefore (adopting the grain and the foot as the units of weight and linear measure) is 3·88826. The weight of the embracing-frame and mirror was 108·242 grains: and, on examining the distribution of this weight, I thought it probable that its moment of inertia would be nearly the same as if it were uniformly distributed over the mirror, whose horizontal length is 0·79 inch = 0·0658 foot: its moment of inertia is therefore 0·03905. The weight of the suspending-stalk with a pulley was 39·377 grains: I estimated its moment as probably the same as if it had been condensed in the pulley whose diameter = 0·28 inch = 0·0233 foot: this gives for moment of inertia 0·00135. The total moment of inertia is 3·92866. The two smaller terms of this are liable to some uncertainty.

Adopting now the notation in the Report of the Committee of the Royal Society, namely,

m ..... The magnetic moment of the deflecting magnet,
X ..... The absolute measure of horizontal force,
K ..... The moment of inertia of the suspended magnet, stirrup, and pulley,
π ..... The circumference of circle to diameter 1,
T ..... The time of vibration,

the result for the terrestrial horizontal force has been found by the formulæ,

$$\frac{m}{X} = \frac{1}{2}\, a\,; \text{ and } m\,X = \frac{\pi^2\, K}{T^2}$$

and the results are given in the Abstracts.

For the purpose of obtaining a series of absolute measures at intermediate times, without the trouble of complete deflexion-observations, the vibrations of the same magnet have been observed at intermediate times. These vibrations (no correction for temperature being applied, for the reason mentioned above,) will give an absolute measure of horizontal force, provided we know the magnetic moment of the magnet. Now the deflexion-observations give us a series of determinations of the magnetic moment, whose value it appears diminishes slowly. Between these, magnetic moments are interpolated for the times of vibration-observations, and then the absolute measure of horizontal force is immediately obtained, subject to uncertainty of only insignificant amount.

§ 6. *Meteorological Instruments.*

BAROMETER.

The barometer is a standard, by Newman, and is fixed on the South wall of the West cross of the Magnetic Observatory. The graduated scale which measures the height of the mercury, is made of brass, and to it is affixed a brass rod, passing down the inside of one of the upright supports, and terminating in a conical point of ivory; this point in observation is made just to touch the surface of the mercury in the cistern, and the contact is easily seen by the reflected and the actual point appearing *just* to meet each other. The rod and scale are made to slide up and down by means of a slow-motion screw. The scale is divided to $0^{in.}05$.

The vernier subdivides the scale divisions to $0^{in.}002$; it is moved by a slow-motion screw, and in observation is adjusted so that the ray of light passing under the back and front of the semi-cylindrical plate carried by the vernier, is a tangent to the highest part of the convex surface of the mercury in the tube.

The tube is $0^{in.}565$ in diameter; the correction for the effect of capillary attraction is therefore only $+ 0^{in.}002$. The cistern is of glass.

At the bottom of the instrument are three screws, turning in the fixed part of the support, and acting on the piece in which the lower pivot of the barometer-frame turns, for adjustment to verticality: this adjustment is examined weekly.

The height of the cistern above the mean level of the sea is 159 feet. This element is founded upon the determination of Mr. Lloyd, in the Phil. Trans., 1831; the elevation of the cistern above the brass piece inserted in a stone in the transit room (to which Mr. Lloyd refers) being $5^{ft.}\,2^{in.}$.

The readings of this barometer are considered to be coincident with those of the Royal Society's flint-glass standard barometer.

All observations of this barometer have been corrected for the difference of temperature of the mercury in the tube at the time of observation from 32°, by the application of the corrections contained in the table for barometers whose scales are engraved upon a rod of brass reaching from the level of the mercury to the vernier. (See the Report of the Committee of Physics and Meteorology approved by the Royal Society.)

No correction is required for the difference of capacities of the tube and the cistern; for, as the mercury rises or falls in the cistern by the falling or rising of the mercury in the tube, so the termination of the scale is adjusted to the surface of the mercury in the cistern, and the distance between the surfaces of the mercury in the cistern and the tube is at once measured.

DRY-BULB THERMOMETER.

The dry-bulb thermometer, used in conjunction with the wet-bulb thermometer, is mercurial; its scale is divided to 0°·5.

The following are comparisons of the dry-bulb thermometer with the Royal Observatory's standard thermometer.

Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard.	Range of Temperature.	Number of Comparisons.	Mean Temperature.	Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard.	Range of Temperature.	Number of Comparisons.	Mean Temperature.
	°	° °		°		°	° °		°
Jan. 5	0·1	30·3 to 36·0	11	32·5	July 6	0·4	52·0 to 65·5	12	59·5
12	0·1	31·8 to 37·8	11	33·7	13	0·8	54·5 to 81·8	12	68·7
19	0·2	42·3 to 52·6	10	48·0	20	0·4	55·7 to 62·5	5	62·6
26	0·2	46·0 to 50·5	11	48·0	27	0·3	63·8 to 72·8	2	65·5
Feb. 2	0·2	39·8 to 42·2	11	41·8	Aug. 3	0·3	68·5 to 72·2	2	64·1
9	0·0	30·5 to 36·4	8	32·9	10	0·6	58·0 to 67·3	11	62·6
16	0·2	40·3 to 46·4	10	43·6	17	0·3	52·7 to 68·1	11	61·0
23	0·1	49·8 to 54·6	12	51·8	24	0·5	58·3 to 69·0	10	62·2
					31	0·4	53·0 to 76·5	12	63·6
Mar. 2	0·2	47·0 to 55·4	9	49·8					
9	0·1	31·8 to 47·8	12	40·8	Sep. 7	0·2	54·5 to 73·5	7	64·9
16	0·3	40·7 to 53·3	11	47·1	14	0·4	56·5 to 68·3	10	61·3
23	0·3	40·2 to 49·8	4	43·7	21	0·3	52·0 to 63·8	9	58·4
30	0·1	34·7 to 51·0	11	42·5	28	0·3	46·1 to 59·1	10	53·0
April 6	0·0	40·2 to 47·6	11	44·7	Oct. 5	0·2	54·8 to 62·5	10	58·6
13	0·3	46·5 to 58·8	12	52·5	12	0·3	47·5 to 54·8	12	50·7
20	0·3	37·8 to 48·5	9	43·4	19	0·1	47·0 to 62·5	11	53·7
27	0·1	34·5 to 46·4	9	41·5	26	0·2	41·5 to 46·0	11	44·0
May 4	0·2	49·6 to 61·0	12	55·4	Nov. 2	0·0	44·3 to 54·8	10	50·3
11	0·8	44·5 to 65·2	12	53·3	9	0·3	40·7 to 43·0	7	41·7
18	0·2	46·2 to 59·5	10	50·9	16	0·2	39·2 to 43·1	8	40·8
25	0·7	63·1 to 68·3	5	60·1	23	0·1	40·5 to 52·7	12	47·3
					30	0·0	25·0 to 33·4	10	29·9
June 1	0·6	61·6 to 74·0	5	61·6					
8	0·7	58·0 to 74·2	12	66·7	Dec. 7	0·1	35·5 to 41·0	9	38·0
15	0·3	54·5 to 81·7	10	69·4	14	0·0	20·0 to 23·3	5	24·5
22	0·2	56·6 to 85·0	11	72·8	21	0·2	38·8 to 49·5	11	45·8
29	0·5	55·5 to 74·1	12	64·5	28	0·2	23·3 to 34·0	10	29·5

The next table is formed by collecting and arranging the preceding results in the order of temperature.

Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard below 32°.	Mean.	Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard between 32° and 50°.	Mean.	Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard between 50° and 60°.	Mean.	Day, 1846.	The Dry Thermometer reads less than the Greenwich Standard above 60°	Mean.
	°	°		°	°		°	°		°	°
Nov. 30	0·0		Jan. 5	0·1		Feb. 23	0·1		May 25	0·7	
			12	0·1							
Dec. 14	0·0	0·1	19	0·2		Apr. 13	0·3		June 1	0·6	
28	0·2		26	0·2					8	0·7	
						May 4	0·2		15	0·3	
			Feb. 2	0·2		11	0·8		22	0·2	
			9	0·0		18	0·2		29	0·5	
			16	0·2							
						Sep. 21	0·3	0·2	July 13	0·8	
			Mar. 2	0·2		28	0·3		20	0·4	0·5
			9	0·1					27	0·3	
			16	0·3		Oct. 5	0·2				
			23	0·3	0·2	12	0·3		Aug. 3	0·3	
			30	0·1		19	0·1		10	0·6	
									17	0·3	
			Apr. 6	0·0		Nov. 2	0·0		24	0·5	
			20	0·3		23	0·1		31	0·4	
			27	0·1							
									Sep. 7	0·2	
			July 6	0·4					14	0·4	
			Oct. 26	0·2							
			Nov. 9	0·3							
			16	0·2							
			Dec. 7	0·1							
			21	0·2							

Therefore the dry-bulb thermometer reads less than the Royal Observatory standard.

	°	°	°
Below	32	by	0·1
Between	32 and 50	by	0·2
Between	50 and 60	by	0·2
Above	60	by	0·5

Also the correction to be applied to the Royal Observatory standard is 0°·2 subtractive for all readings below 60°, and 0°·3 subtractive above 60°. (See the volume for 1840—1841.)

Applying these therefore to the differences above, the corrections necessary to be applied to the dry thermometer readings are—

Below	32	.....	0·1 subtractive
Between	32 and 60	.....	0·0
Above	60	.....	0·3 additive

to reduce its readings to the readings which would have been given by Mr. Simms' standard thermometer. These *have not* been applied either in the various sections of observations or in the Abstracts.

WET-BULB THERMOMETER.

The wet-bulb thermometer is mercurial; its scale is divided to 0°·5. The readings of this thermometer when under the same circumstances as the dry thermometer, are considered to be 0°·2 lower than those of the dry thermometer. (See the Introduction to the volume for 1840—1841.)

The bulb is covered with a piece of fine muslin; immediately under it is placed a small cistern of rain-water. A piece of cotton lamp-wick is connected with the muslin, and its end dips into the cistern of water; the water ascends the wick by capillary action, and keeps the muslin on the thermometer-bulb constantly wet.

In frosty weather the muslin is moistened for a sufficient length of time before each observation, to allow the water to have become frozen, and the evaporation from the surface of the ice to have commenced, at the time of making the observation.

DEW-POINT APPARATUS.

The dew-point apparatus is that commonly known as Daniell's hygrometer, consisting of a bent tube with two bulbs: in one of these, which is blackened, ether is inclosed, with a small thermometer plunged in it; on the other a piece of muslin is wrapped, by dropping ether on which, the vapour of the inclosed ether passing from the first bulb is condensed, and the ether in the uncovered bulb is cooled until dew is deposited on the bulb, when the reading of the inclosed thermometer is taken. This is generally done at the appearance of the moisture only, but if there be any suspicion on the mind of the observer as to its correctness, it is also done at its disappearance; and if any discordance appears between the results, the observation is repeated. It is found that no certain discordance exists between the results as obtained from the appearance and from the disappearance of the dew.

The following is a comparison of the dew-point thermometer with the Royal Observatory standard thermometer.

The thermometer used in determining the dew-point read—

On Jan.	5d,	from	10	comparisons	between	29°·0	and	36°·0	lower by	1°·5
,,	12,	,,	11	,,	,,	31·8	,,	38·0	,,	0·1
,,	19,	,,	10	,,	,,	42·6	,,	53·0	,,	0·4
,,	26,	,,	11	,,	,,	46·0	,,	50·5	,,	0·2
Feb.	2,	,,	11	,,	,,	39·5	,,	45·8	,,	0·3
,,	9,	,,	8	,,	,,	29·5	,,	36·0	,,	0·5
,,	16,	,,	10	,,	,,	40·2	,,	47·0	,,	0·1
,,	23,	,,	12	,,	,,	49·8	,,	56·0	,,	0·0
Mar.	2,	,,	9	,,	,,	47·2	,,	55·4	higher by	0·3
,,	9,	,,	12	,,	,,	31·0	,,	48·0	lower by	0·5
,,	16,	,,	11	,,	,,	40·0	,,	54·0	,,	0·2
,,	23,	,,	4	,,	,,	40·7	,,	50·4	,,	0·1
,,	30,	,,	10	,,	,,	34·0	,,	54·0	higher by	0·2
April	6,	,,	11	,,	,,	40·0	,,	48·5	lower by	0·3
,,	13,	,,	12	,,	,,	47·0	,,	59·5	higher by	0·1
,,	20,	,,	8	,,	,,	37·5	,,	50·0	lower by	0·1
,,	27,	,,	9	,,	,,	34·7	,,	47·0	higher by	0·4
May	4,	,,	12	,,	,,	49·5	,,	63·0	,,	0·1
,,	11,	,,	11	,,	,,	43·8	,,	66·5	,,	0·1
,,	18,	,,	10	,,	,,	46·0	,,	61·5	,,	0·4
,,	25,	,,	5	,,	,,	65·5	,,	69·4	..	1·1
June	1,	,,	5	,,	,,	61·7	,,	73·6	lower by	0·4
,,	8,	,,	12	,,	,,	58·0	,,	76·5	higher by	0·1
,,	15,	,,	10	,,	,,	54·7	,,	82·0	,,	0·1
,,	22,	,,	11	,,	,,	57·0	,,	86·8	,,	0·5
,,	29,	,,	12	,,	,,	55·5	,,	76·0	,,	0·4
July	6,	,,	12	,,	,,	52·0	,,	67·0	,,	0·5
,,	13,	,,	12	,,	,,	54·5	,,	84·0	,,	0·2
,,	20,	,,	5	,,	,,	56·0	,,	64·5	,,	0·5
,,	26,	,,	2	,,	,,	65·5	,,	75·0	,,	2·9
Aug.	3,	,,	2	,,	,,	69·5	,,	73·0	,,	0·9
,,	10,	,,	10	,,	,,	58·3	,,	66·0	lower by	0·1
,,	17,	,,	11	,,	,,	53·0	,,	70·5	higher by	0·9
,,	24,	,,	10	,,	,,	59·0	,,	71·0	,,	0·6
,,	31,	,,	12	,,	,,	53·0	,,	78·5	,,	0·5
Sep.	7,	,,	7	,,	,,	55·0	,,	75·0	,,	0·6
,,	14,	,,	10	,,	,,	56·7	,,	71·0	,,	0·4
,,	21,	,,	9	,,	,,	52·5	,,	65·0	,,	0·4
,,	28,	,,	9	,,	,,	46·0	,,	59·0	,,	0·5
Oct.	5,	,,	10	,,	,,	55·3	,,	63·5	,,	0·5
,,	12,	,,	12	,,	,,	48·0	,,	56·0	,,	0·4
,,	19,	,,	11	,,	,,	47·2	,,	63·6	,,	0·5
,,	26,	,,	11	,,	,,	41·6	,,	46·9	,,	0·4
Nov.	2,	,,	9	,,	,,	44·0	,,	56·0	,,	0·3
,,	9,	,,	7	,,	,,	41·0	,,	43·7	,,	0·2

	d				°		°		°	
On Nov.	16,	from	8	comparisons between	39·5	and	44·5,	higher by	0·1	
,,	23,	,,	12	,, ,,	41·0	,,	53·2,	,,	0·2	
,,	30,	,,	9	,, ,,	24·5	,,	33·4,	lower by	0·1	
Dec.	6,	,,	9	,, ,,	34·8	,,	40·3,	higher by	0·3	
,,	13,	,,	5	,, ,,	19·0	,,	23·0,	,,	0·7	
,,	21,	,,	11	,, ,,	39·0	,,	50·0,	,,	0·1	
,,	28,	,,	10	,, ,,	23·5	,,	34·2,	,,	0·1	

No correction has been applied on account of these differences.

A determination of the temperature of the dew-point is considered to be doubtful to a quarter of a degree.

The dew-point observation has been made at 4^h, 10^h, 16^h, and 22^h, Göttingen mean time, every day except Sundays, Good Friday, and Christmas Day.

The relation existing between the temperatures of the air, of evaporation, and of the dew-point, has been investigated, as explained in the Abstracts of former years; and the following are the tables, &c., which have been used in the formation of the tables in the Abstracts in this volume.

A Table shewing the Elastic Force of Vapour, in Inches of Mercury, for every Tenth of a Degree, from 0° to 90°, calculated from the Experiments of Dalton (Manchester Memoirs, vol. V.) and Ure (Philosophical Transactions, 1818).

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.
0·0	0·061	2·1	0·066	4·2	0·072	6·3	0·078	8·4	0·084	10·5	0·091	12·6	0·098		
·1	·061	·2	·067	·3	·072	·4	·078	·5	·084	·6	·091	·7	·099		
·2	·062	·3	·067	·4	·072	·5	·078	·6	·085	·7	·092	·8	·099		
·3	·062	·4	·067	·5	·073	·6	·079	·7	·085	·8	·092	12·9	·099		
·4	·062	·5	·067	·6	·073	·7	·079	·8	·085	10·9	·092	13·0	·100		
·5	·062	·6	·068	·7	·073	·8	·079	8·9	·086	11·0	·093	·1	·100		
·6	·063	·7	·068	·8	·073	6·9	·080	9·0	·086	·1	·093	·2	·101		
·7	·063	·8	·068	4·9	·074	7·0	·080	·1	·086	·2	·093	·3	·101		
·8	·063	2·9	·068	5·0	·074	·1	·080	·2	·087	·3	·094	·4	·101		
0·9	·063	3·0	·069	·1	·074	·2	·080	·3	·087	·4	·094	·5	·102		
1·0	·064	·1	·069	·2	·075	·3	·081	·4	·087	·5	·094	·6	·102		
·1	·064	·2	·069	·3	·075	·4	·081	·5	·088	·6	·095	·7	·102		
·2	·064	·3	·069	·4	·075	·5	·081	·6	·088	·7	·095	·8	·103		
·3	·064	·4	·070	·5	·075	·6	·082	·7	·088	·8	·096	13·9	·103		
·4	·065	·5	·070	·6	·076	·7	·082	·8	·089	11·9	·096	14·0	·104		
·5	·065	·6	·070	·7	·076	·8	·082	9·9	·089	12·0	·096	·1	·104		
·6	·065	·7	·071	·8	·076	7·9	·083	10·0	·089	·1	·097	·2	·104		
·7	·065	·8	·071	5·9	·077	8·0	·083	·1	·090	·2	·097	·3	·105		
·8	·066	3·9	·071	6·0	·077	·1	·083	·2	·090	·3	·097	·4	·105		
1·9	·066	4·0	·071	·1	·077	·2	·083	·3	·090	·4	·098	·5	·106		
2·0	0·066	·1	0·072	·2	0·077	·3	0·084	·4	0·091	·5	0·098	·6	0·106		

Table shewing the Elastic Force of Vapour, in Inches of Mercury, &c.—*continued.*

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.
14·7	0·106	20·1	0·130	25·5	0·158	30·9	0·192	36·3	0·232	41·7	0·281	47·1	0·338
·8	·107	·2	·130	·6	·158	31·0	·192	·4	·233	·8	·282	·2	·339
14·9	·107	·3	·131	·7	·159	·1	·193	·5	·234	41·9	·282	·3	·340
15·0	·108	·4	·131	·8	·160	·2	·194	·6	·235	42·0	·283	·4	·342
·1	·108	·5	·132	25·9	·160	·3	·194	·7	·235	·1	·284	·5	·343
·2	·108	·6	·132	26·0	·161	·4	·195	·8	·236	·2	·285	·6	·344
·3	·109	·7	·133	·1	·161	·5	·196	36·9	·237	·3	·286	·7	·345
·4	·109	·8	·133	·2	·162	·6	·197	37·0	·238	·4	·287	·8	·346
·5	·110	20·9	·134	·3	·163	·7	·197	·1	·239	·5	·288	47·9	·348
·6	·110	21·0	·134	·4	·163	·8	·198	·2	·240	·6	·289	48·0	·349
·7	·110	·1	·135	·5	·164	31·9	·198	·3	·240	·7	·290	·1	·350
·8	·111	·2	·135	·6	·164	32·0	·199	·4	·241	·8	·291	·2	·351
15·9	·111	·3	·136	·7	·165	·1	·200	·5	·242	42·9	·292	·3	·352
16·0	·112	·4	·136	·8	·165	·2	·201	·6	·243	43·0	·293	·4	·354
·1	·112	·5	·137	26·9	·166	·3	·201	·7	·244	·1	·295	·5	·355
·2	·112	·6	·137	27·0	·167	·4	·202	·8	·245	·2	·296	·6	·356
·3	·113	·7	·138	·1	·167	·5	·203	37·9	·246	·3	·297	·7	·357
·4	·113	·8	·138	·2	·168	·6	·204	38·0	·246	·4	·298	·8	·358
·5	·114	21·9	·139	·3	·168	·7	·204	·1	·247	·5	·299	48·9	·360
·6	·114	22·0	·139	·4	·169	·8	·205	·2	·248	·6	·300	49·0	·361
·7	·115	·1	·140	·5	·170	32·9	·206	·3	·249	·7	·301	·1	·362
·8	·115	·2	·140	·6	·170	33·0	·207	·4	·250	·8	·302	·2	·363
16·9	·115	·3	·141	·7	·171	·1	·207	·5	·251	43·9	·303	·3	·365
17·0	·116	·4	·141	·8	·172	·2	·208	·6	·252	44·0	·304	·4	·366
·1	·116	·5	·142	27·9	·172	·3	·209	·7	·253	·1	·305	·5	·367
·2	·117	·6	·142	28·0	·173	·4	·210	·8	·253	·2	·306	·6	·368
·3	·117	·7	·143	·1	·173	·5	·210	38·9	·254	·3	·307	·7	·370
·4	·118	·8	·143	·2	·174	·6	·211	39·0	·255	·4	·308	·8	·371
·5	·118	22·9	·144	·3	·175	·7	·212	·1	·256	·5	·309	49·9	·372
·6	·118	23·0	·144	·4	·175	·8	·213	·2	·257	·6	·310	50·0	·373
·7	·119	·1	·145	·5	·176	33·9	·213	·3	·258	·7	·311	·1	·375
·8	·119	·2	·145	·6	·177	34·0	·214	·4	·259	·8	·312	·2	·376
17·9	·120	·3	·146	·7	·177	·1	·215	5	·260	44·9	·313	·3	·377
18·0	·120	·4	·146	·8	·178	·2	·216	·6	·261	45·0	·315	·4	·379
·1	·121	·5	·147	28·9	·178	·3	·216	·7	·262	·1	·316	·5	·380
·2	·121	·6	·147	29·0	·179	·4	·217	·8	·263	·2	·317	·6	·381
·3	·121	·7	·148	·1	·180	·5	·218	39·9	·263	·3	·318	·7	·382
·4	·122	·8	·148	·2	·180	·6	·219	40·0	·264	·4	·319	·8	·383
·5	·122	23·9	·149	·3	·181	·7	·219	·1	·265	·5	·320	50·9	·385
·6	·123	24·0	·150	·4	·182	·8	·220	·2	·266	·6	·321	51·0	·386
·7	·123	·1	·150	·5	·182	34·9	·221	·3	·267	·7	·322	·1	·388
·8	·124	·2	·151	·6	·183	35·0	·222	·4	·268	·8	·323	·2	·389
18·9	·124	·3	·152	·7	·184	·1	·223	·5	·269	45·9	·324	·3	·390
19·0	·125	·4	·152	·8	·184	·2	·223	·6	·270	46·0	·326	·4	·392
·1	·125	·5	·152	29·9	·185	·3	·224	·7	·271	·1	·327	·5	·393
·2	·126	·6	·153	30·0	·186	·4	·225	·8	·272	·2	·328	·6	·394
·3	·126	·7	·153	·1	·186	·5	·226	40·9	·273	·3	·329	·7	·396
·4	·126	·8	·154	·2	·187	·6	·227	41·0	·274	·4	·330	·8	·397
·5	·127	24·9	·155	·3	·188	·7	·227	·1	·275	·5	·331	51·9	·398
·6	·127	25·0	·155	·4	·188	·8	·228	·2	·276	·6	·332	52·0	·400
·7	·128	·1	·156	·5	·189	35·9	229	·3	·277	·7	·333	·1	·401
·8	·128	·2	·156	·6	·190	36·0	·230	·4	·278	·8	·335	·2	·402
19·9	·129	·3	·157	·7	·190	·1	·231	·5	·279	46·9	·336	·3	·404
20·0	0·129	·4	0·157	·8	0·191	·2	0·231	·6	0·280	47·0	0·337	·4	0·405

Table shewing the Elastic Force of Vapour, in Inches of Mercury, &c.—*concluded.*

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.
52·5	0·407	57·9	0·488	63·3	0·584	68·7	0·697	74·1	0·830	79·5	0·986	84·9	1·167
·6	·408	58·0	·489	·4	·586	·8	·699	·2	·832	·6	·989	85·0	·171
·7	·409	·1	·491	·5	·588	68·9	·701	·3	·835	·7	·992	·1	·175
·8	·411	·2	·493	·6	·590	69·0	·704	·4	·838	·8	·995	·2	·178
52·9	·412	·3	·494	·7	·591	·1	·706	·5	·840	79·9	0·998	·3	·182
53·0	·414	·4	·496	·8	·593	·2	·708	·6	·843	80·0	1·001	·4	·186
·1	·415	·5	·498	63·9	·595	·3	·711	·7	·846	·1	·005	·5	·190
·2	·416	·6	·499	64·0	·597	·4	·713	·8	·849	·2	·008	·6	·193
·3	·418	·7	·501	·1	·599	·5	·715	74·9	·851	·3	·011	·7	·197
·4	·419	·8	·503	·2	·601	·6	·717	75·0	·854	·4	·014	·8	·201
·5	·421	58·9	·504	·3	·603	·7	·720	·1	·857	·5	·017	85·9	·205
·6	·422	59·0	·506	·4	·605	·8	·722	·2	·860	·6	·021	86·0	·209
·7	·423	·1	·508	·5	·607	69·9	·725	·3	·862	·7	·024	·1	·212
·8	·425	·2	·509	·6	·609	70·0	·727	·4	·865	·8	·027	·2	·216
53·9	·426	·3	·511	·7	·611	·1	·729	·5	·868	80·9	·030	·3	·220
54·0	·428	·4	·513	·8	·613	·2	·732	·6	·871	81·0	·034	·4	·224
·1	·429	·5	·515	64·9	·615	·3	·734	·7	·873	·1	·037	·5	·228
·2	·431	·6	·516	65·0	·617	·4	·736	·8	·876	·2	·040	·6	·232
·3	·432	·7	·518	·1	·619	·5	·739	75·9	·879	·3	·043	·7	·235
·4	·434	·8	·520	·2	·621	·6	·741	76·0	·882	·4	·047	·8	·239
·5	·435	59·9	·521	·3	·623	·7	·744	·1	·885	·5	·050	86·9	·243
·6	·437	60·0	·523	·4	·626	·8	·746	·2	·887	·6	·053	87·0	·247
·7	·438	·1	·525	·5	·628	70·9	·748	·3	·890	·7	·057	·1	·251
·8	·440	·2	·527	·6	·630	71·0	·751	·4	·893	·8	·060	·2	·255
54·9	·441	·3	·528	·7	·632	·1	·753	·5	·896	81·9	·063	·3	·258
55·0	·442	·4	·530	·8	·634	·2	·756	·6	·899	82·0	·067	·4	·262
·1	·444	·5	·532	65·9	·636	·3	·758	·7	·902	·1	·069	·5	·266
·2	·445	·6	·534	66·0	·638	·4	·761	·8	·905	·2	·073	·6	·270
·3	·447	·7	·536	·1	·640	·5	·763	76·9	·908	·3	·077	·7	·274
·4	·449	·8	·537	·2	·642	·6	·766	77·0	·910	·4	·080	·8	·278
·5	·450	60·9	·539	·3	·644	·7	·768	·1	·913	·5	·083	87·9	·282
·6	·452	61·0	·541	·4	·646	·8	·771	·2	·916	·6	·087	88·0	·286
·7	·453	·1	·543	·5	·648	71·9	·773	·3	·919	·7	·090	·1	·290
·8	·455	·2	·544	·6	·651	72·0	·776	·4	·922	·8	·094	·2	·294
55·9	·456	·3	·546	·7	·653	·1	·778	·5	·925	82·9	·097	·3	·298
56·0	·458	·4	·548	·8	·655	·2	·781	·6	·928	83·0	·101	·4	·302
·1	·459	·5	·550	66·9	·657	·3	·783	·7	·931	·1	·104	·5	·306
·2	·461	·6	·552	67·0	·659	·4	·785	·8	·934	·2	·108	·6	·310
·3	·462	·7	·554	·1	·661	·5	·787	77·9	·937	·3	·111	·7	·314
·4	·464	·8	·555	·2	·664	·6	·790	78·0	·940	·4	·114	·8	·318
·5	·465	61·9	·557	·3	·666	·7	·792	·1	·943	·5	·118	88·9	·322
·6	·467	62·0	·559	·4	·668	·8	·795	·2	·946	·6	·121	89·0	·326
·7	·469	·1	·561	·5	·670	72·9	·797	·3	·949	·7	·125	·1	·330
·8	·470	·2	·563	·6	·672	73·0	·801	·4	·952	·8	·129	·2	·335
56·9	·472	·3	·565	·7	·674	·1	·803	·5	·955	83·9	·132	·3	·339
57·0	·473	·4	·567	·8	·677	·2	·806	·6	·958	84·0	·136	·4	·343
·1	·475	·5	·568	67·9	·679	·3	·809	·7	·961	·1	·139	·5	·347
·2	·476	·6	·570	68·0	·681	·4	·811	·8	·964	·2	·143	·6	·351
·3	·478	·7	·572	·1	·684	·5	·814	78·9	·967	·3	·146	·7	·355
·4	·480	·8	·574	·2	·686	·6	·817	79·0	·970	·4	·150	·8	·359
·5	·481	62·9	·576	·3	·688	·7	·819	·1	·973	·5	·153	89·9	·364
·6	·483	63·0	·578	·4	·690	·8	·822	·2	·976	·6	·157	90·0	1·368
·7	·485	·1	·580	·5	·692	73·9	·824	·3	·979	·7	·160		
·8	0·486	·2	0·582	·6	0·695	74·0	0·827	·4	0·983	·8	1·164		

Previously to deciding upon the use of the above table, many comparisons were made between the observed dew-point and that deduced from the observed temperature of evaporation by means of the formulæ of Dr. Apjohn, using the values of the elastic force of vapour as given in the Report of the Committee of Physics and Meteorology of the Royal Society; and also between it and that deduced from the values of the elastic force of vapour and the formulæ given by Professor Kämtz, in his work on Meteorology: the errors of the inferred dew-points were considerable with both sets of tables. Similar comparisons were made, using the above table, and the errors were found to be nearly always small; and, in consequence, the above table has been adopted for constant use. In the Abstracts contained in previous volumes, it will be seen that Dr. Apjohn's formulæ, combined with this table, give results in close accordance with direct observations of the dew-point; we may, therefore, infer that the above table represents, with considerable accuracy, the relation between the tension and the temperature of steam; and it has been always used in this volume where such values have been required.

Dr. Apjohn's formula for deducing the dew-point for all values of the temperature of evaporation above 32° is,

$$f''=f'-\frac{d}{88}\times\frac{h}{30}.$$ (Proceedings of the Royal Irish Academy, 1840.)

Where f'' represents the force of vapour at the temperature of the dew-point,

f' represents the force of vapour at the temperature of evaporation,

d represents the difference between the readings of the dry and wet thermometers,

h the height of the barometer.

The following table, representing $\frac{d}{88}\times\frac{1}{30}$ has been formed to facilitate the calculations:—

Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$
°		°		°		°		°	
0·1	0·00004	2·0	0·00076	3·9	0·00148	5·8	0·00220	7·7	0·00292
0·2	·00008	2·1	·00080	4·0	·00151	5·9	·00224	7·8	·00295
0·3	·00011	2·2	·00083	4·1	·00155	6·0	·00228	7·9	·00299
0·4	·00015	2·3	·00087	4·2	·00159	6·1	·00231	8·0	·00303
0·5	·00019	2·4	·00091	4·3	·00163	6·2	·00235	8·1	·00307
0·6	·00023	2·5	·00095	4·4	·00167	6·3	·00239	8·2	·00311
0·7	·00027	2·6	·00098	4·5	·00171	6·4	·00242	8·3	·00315
0·8	·00030	2·7	·00102	4·6	·00174	6·5	·00246	8·4	·00318
0·9	·00034	2·8	·00106	4·7	·00178	6·6	·00250	8·5	·00322
1·0	·00038	2·9	·00110	4·8	·00182	6·7	·00254	8·6	·00326
1·1	·00042	3·0	·00114	4·9	·00186	6·8	·00258	8·7	·00330
1·2	·00046	3·1	·00118	5·0	·00189	6·9	·00261	8·8	·00333
1·3	·00049	3.2	·00121	5·1	·00193	7·0	·00265	8·9	·00337
1·4	·00053	3·3	·00125	5·2	·00197	7·1	·00269	9·0	·00341
1·5	·00057	3·4	·00129	5·3	·00201	7·2	·00273	9·1	·00345
1·6	·00061	3·5	·00132	5·4	·00205	7·3	·00277	9·2	·00349
1·7	·00064	3·6	·00137	5·5	·00209	7·4	·00280	9·3	·00352
1·8	·00068	3·7	·00140	5·6	·00212	7·5	·00284	9·4	·00356
1·9	·00072	3·8	·00144	5·7	·00216	7·6	·00288	9·5	·00360

Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$	Values of d.	$\frac{d}{88}\times\frac{1}{30}$
°		°		°		°		°	
9·6	0·00364	11·8	0·00447	14·0	0·00530	16·1	0·00610	18·2	0·00690
9·7	·00368	11·9	·00451	14·1	·00534	16·2	·00614	18·3	·00693
9·8	·00371	12·0	·00454	14·2	·00538	16·3	·00618	18·4	·00697
9·9	·00375	12·1	·00458	14·3	·00541	16·4	·00622	18·5	·00701
10·0	·00379	12·2	·00462	14·4	·00545	16·5	·00625	18·6	·00704
10·1	·00383	12·3	·00466	14·5	·00549	16·6	·00629	18·7	·00708
10·2	·00386	12·4	·00470	14·6	·00553	16·7	·00633	18·8	·00712
10·3	·00390	12·5	·00474	14·7	·00556	16·8	·00636	18·9	·00716
10·4	·00394	12·6	·00477	14·8	·00560	16·9	·00640	19·0	·00720
10·5	·00398	12·7	·00481	14·9	·00564	17·0	·00644	19·1	·00724
10·6	·00401	12·8	·00485	15·0	·00568	17·1	·00648	19·2	·00728
10·7	·00405	12·9	·00489	15·1	·00572	17·2	·00652	19·3	·00731
10·8	·00409	13·0	·00493	15·2	·00576	17·3	·00655	19·4	·00735
10·9	·00412	13·1	·00496	15·3	·00580	17·4	·00659	19·5	·00739
11·0	·00416	13·2	·00500	15·4	·00584	17·5	·00663	19·6	·00742
11·1	·00420	13·3	·00504	15·5	·00587	17·6	·00666	19·7	·00746
11·2	·00424	13·4	·00508	15·6	·00591	17·7	·00670	19·8	·00750
11·3	·00428	13·5	·00511	15·7	·00595	17·8	·00674	19·9	·00754
11·4	·00432	13·6	·00515	15·8	·00598	17·9	·00678	20·0	·00758
11·5	·00436	13·7	·00519	15·9	·00602	18·0	·00682	20·1	·00761
11·6	·00439	13·8	·00522	16·0	·00606	18·1	·00686	20·2	·00765
11·7	·00443	13·9	·00524						

When the reading of the wet thermometer is lower than 32°, the formula becomes—

$$f'' = f' - \frac{d}{96}\times\frac{h}{30}$$ (Proceedings of the Royal Irish Academy, 1840);

and the following table has been formed to facilitate the calculations for such cases:—

Values of d.	$\frac{d}{96}\times\frac{1}{30}$	Values of d.	$\frac{d}{96}\times\frac{1}{30}$	Values of d.	$\frac{d}{96}\times\frac{1}{30}$	Values of d.	$\frac{d}{96}\times\frac{1}{30}$	Values of d.	$\frac{d}{96}\times\frac{1}{30}$
°		°		°		°		°	
0·1	0·00003	2·1	0·00071	4·1	0·00139	6·1	0·00207	8·1	0·00275
0·2	·00007	2·2	·00075	4·2	·00143	6·2	·00211	8·2	·00279
0·3	·00010	2·3	·00078	4·3	·00146	6·3	·00214	8·3	·00282
0·4	·00014	2·4	·00081	4·4	·00150	6·4	·00218	8·4	·00285
0·5	·00017	2·5	·00085	4·5	·00153	6·5	·00221	8·5	·00289
0·6	·00020	2·6	·00088	4·6	·00156	6·6	·00224	8·6	·00292
0·7	·00024	2·7	·00092	4·7	·00160	6·7	·00228	8·7	·00296
0·8	·00027	2·8	·00095	4·8	·00163	6·8	·00231	8·8	·00299
0·9	·00030	2·9	·00099	4·9	·00167	6·9	·00235	8·9	·00302
1·0	·00034	3·0	·00102	5·0	·00170	7·0	·00238	9·0	·00306
1·1	·00037	3·1	·00105	5·1	·00173	7·1	·00241	9·1	·00309
1·2	·00041	3·2	·00109	5·2	·00177	7·2	·00245	9·2	·00313
1·3	·00044	3·3	·00112	5·3	·00180	7·3	·00248	9·3	·00316
1·4	·00047	3·4	·00116	5·4	·00184	7·4	·00252	9·4	·00319
1·5	·00051	3·5	·00119	5·5	·00187	7·5	·00255	9·5	·00323
1·6	·00054	3·6	·00122	5·6	·00190	7·6	·00258	9·6	·00326
1·7	·00058	3·7	·00126	5·7	·00194	7·7	·00262	9·7	·00330
1·8	·00061	3·8	·00129	5·8	·00198	7·8	·00265	9·8	·00333
1·9	·00064	3·9	·00133	5·9	·00201	7·9	·00269	9·9	·00337
2·0	·00068	4·0	·00136	6·0	·00204	8·0	·00272	10·0	·00340

Using this table or that preceding, accordingly as the reading of the wet thermometer is lower or higher than 32°, the inferred dew-points may be found as follows. The number in the tables, on page xliv, ranging with the difference of the readings of the dry and wet thermometers being multiplied into the height of the barometer at the time of the observation, the difference between this product and the elastic force of vapour at the temperature of evaporation will be the elastic force of vapour at the temperature of the dew-point, and then from the table in pages xl to xlii the dew-point may be found.

M. Gay Lussac has determined by experiment that air expands $\frac{1}{480}$ part for every addition of 1° of heat, or, that it expands three-eighths of its bulk from the freezing point to the boiling point, and that the expansion is uniform between these points as referred to the temperature indicated by a mercurial thermometer. (Annales de Chimie, vol. 43.) The following table has been calculated upon this assumption, considering a volume of air under the pressure of 30 inches of mercury and at the temperature of 32° to be the unit of comparison.

A Table shewing the volume of a Mass of Dry Air after Expansion from Heat, under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	The Volume after Expansion by Heat.	Temp. Fahr.	The Volume after Expansion by Heat.	Temp. Fahr.	The Volume after Expansion by Heat.	Temp. Fahr.	The Volume after Expansion by Heat.	Temp. Fahr.	The Volume after Expansion by Heat.
°		°		°		°		°	
0	0·93334	19	0·97292	37	1·01041	55	1·04791	73	1·08541
1	·93542	20	·97500	38	·01249	56	·04999	74	·08749
2	·93751	21	·97709	39	·01458	57	·05208	75	·08957
3	·93959	22	·97917	40	·01666	58	·05416	76	·09166
4	·94167	23	·98126	41	·01874	59	·05624	77	·09374
5	·94376	24	·98334	42	·02083	60	·05833	78	·09583
6	·94584	25	·98542	43	·02291	61	·06041	79	·09791
7	·94792	26	·98751	44	·02500	62	·06249	80	·09999
8	·95001	27	·98959	45	·02708	63	·06458	81	·10208
9	·95209	28	·99167	46	·02916	64	·06666	82	·10416
10	·95417	29	·99376	47	·03124	65	·06874	83	·10624
11	·95626	30	·99584	48	·03333	66	·07083	84	·10833
12	·95834	31	0·99792	49	·03541	67	·07291	85	·11041
13	·96042	32	1·00000	50	·03749	68	·07499	86	·11249
14	·96251	33	·00208	51	·03958	69	·07708	87	·11458
15	·96459	34	·00416	52	·04166	70	·07916	88	·11666
16	·96667	35	·00624	53	·04374	71	·08124	89	·11874
17	·96876	36	1·00833	54	1·04583	72	1·08333	90	1·12083
18	0·97084								

Sir George Shuckburgh determined that a bulk of 1000 cubic inches of dry air under the pressure of 30 inches of mercury and at the temperature of 60°, weighs 305 grains. Biot

and Thénard determined the weight of the same volume under the same circumstances to be 311 grains. (Penny Cyclopædia, article Air.) Using Shuckburgh's value we have,

Cubic Inches Grains Inches Grains
as 1000 : 305 : : 1728 : 527·040; being the weight of a cubic foot of dry air at the temperature of 60°.

Now, from the above table it appears that the volume of a mass of dry air at 60°, whose volume at 32° is represented by unity, is 1·05833.

Therefore, the weight of a cubic foot of dry air at 32° is equal to the weight at 60° × 1·05833, or to 557·7295 grains.

Using Biot and Thénard's determination, the value would be 568·7013 grains.

The mean of these two values is 563·2154 grains.

In calculating the following table, 563 grains has been adopted as the weight of a cubic foot of dry air at 32°. This number has been divided by the number expressing the volume of dry air after expansion from heat, as contained in the table above; and thus the following table has been formed:—

A Table shewing the Weight in Grains of a Cubic Foot of Dry Air, under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.
°	gr.	°	gr.	°	gr.	°	gr.	°	gr.
0	603·21	19	578·67	37	557·21	55	537·27	73	518·70
1	601·87	20	577·44	38	556·05	56	536·19	74	517·70
2	600·52	21	576·21	39	554·91	57	535·12	75	516·71
3	599·20	22	574·98	40	553·77	58	534·07	76	515·73
4	597·87	23	573·76	41	552·65	59	533·03	77	514·74
5	596·55	24	572·55	42	551·52	60	531·97	78	513·77
6	595·24	25	571·33	43	550·39	61	530·93	79	512·80
7	593·94	26	570·13	44	549·27	62	529·88	80	511·82
8	592·63	27	568·92	45	548·16	63	528·84	81	510·87
9	591·33	28	567·73	46	547·05	64	527·81	82	509·89
10	590·04	29	566·54	47	545·97	65	526·78	83	508·93
11	588·75	30	565·35	48	544·85	66	525·76	84	507·97
12	587·48	31	564·17	49	543·75	67	524·75	85	507·03
13	586·21	32	563·00	50	542·65	68	523·72	86	506·07
14	584·93	33	561·84	51	541·55	69	522·70	87	505·11
15	583·67	34	560·67	52	540·48	70	521·70	88	504·19
16	582·41	35	559·51	53	539·41	71	520·70	89	503·25
17	581·15	36	558·35	54	538·33	72	519·69	90	502·32
18	579·91								

If a volume of dry air, of known elasticity, be mixed with an equal volume of vapour, also of known elasticity; and if the mixture be so compressed as to occupy a space only equal to one of these volumes; then (by Dalton's law) the elasticity of the mixture will be the sum of the two elasticities of the air and the vapour: or, if the mixture be allowed to expand till its elasticity is equal to that of the unmixed air, it will occupy a larger volume in the proportion of the sum of the two elasticities to the elasticity of the air alone. Now we know the elastic force of vapour for every degree of temperature (see table on page xl, and following pages),

let also p = the atmospheric pressure as measured by the inches of mercury in the barometer.

E_t = the elasticity of vapour at temperature t (measured in the same way).

n = the bulk of a certain quantity of air, when dry, at the temperature t, and under the pressure p.

n' = the bulk of the same quantity of air when saturated with vapour, at the same temperature t, and under the same pressure p.

Then, since the elasticity varies inversely as the volume, the temperature remaining the same, that portion of the elastic force p which depends on the air only which occupies the space n' is $p \times \frac{n}{n'}$.

And this, together with E_t, must make up the atmospheric pressure,

$$\text{or } p = p \times \frac{n}{n'} + E_t$$

$$\text{or } \frac{n}{n'} = \frac{p - E_t}{p} = \left(1 - \frac{E_t}{p}\right)$$

$$\text{or } n' = \frac{n}{1 - \frac{E_t}{p}}.$$

And from this formula the following table has been computed:—

A Table shewing the Enlargement which a Volume of Dry Air receives when saturated with Vapour under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	Increased Volume owing to the presence of Vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased Volume owing to the presence of Vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased Volume owing to the presence of Vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased Volume owing to the presence of Vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased Volume owing to the presence of Vapour, the original bulk being considered as unity.
°		°		°		°		°	
0	1·0021	19	1·0042	37	1·0080	55	1·0148	73	1·0268
1	1·0022	20	1·0043	38	1·0081	56	1·0154	74	1·0277
2	1·0022	21	1·0045	39	1·0086	57	1·0159	75	1·0286
3	1·0023	22	1·0046	40	1·0089	58	1·0164	76	1·0295
4	1·0024	23	1·0048	41	1·0092	59	1·0170	77	1·0304
5	1·0025	24	1·0050	42	1·0095	60	1·0175	78	1·0314
6	1·0026	25	1·0052	43	1·0099	61	1·0186	79	1·0324
7	1·0027	26	1·0054	44	1·0102	62	1·0187	80	1·0335
8	1·0028	27	1·0056	45	1·0106	63	1·0194	81	1·0346
9	1·0029	28	1·0058	46	1·0110	64	1·0200	82	1·0357
10	1·0030	29	1·0060	47	1·0113	65	1·0207	83	1·0368
11	1·0031	30	1·0062	48	1·0117	66	1·0214	84	1·0380
12	1·0032	31	1·0064	49	1·0121	67	1·0221	85	1·0392
13	1·0033	32	1·0066	50	1·0125	68	1·0228	86	1·0405
14	1·0035	33	1·0070	51	1·0130	69	1·0236	87	1·0418
15	1·0036	34	1·0072	52	1·0134	70	1·0243	88	1·0431
16	1·0037	35	1·0074	53	1·0139	71	1·0251	89	1·0444
17	1·0039	36	1·0078	54	1·0144	72	1·0260	90	1·0458
18	1·0040								

Gay Lussac has determined by experiment, that vapours, so long as they remain in an aëriform state, expand by the increase of temperature, precisely as permanently elastic fluids, and that they suffer changes of volume proportional to the changes of pressure; and he has, as previously stated, determined that air expands three-eighths of its bulk from 32° to 212°, and that its expansion is uniform between these points. (Annales de Chimie, vol. 43.)

Therefore, if the weight of a cubic foot of vapour, under the pressure of 30 inches of mercury, and at the temperature of 212°, be called W; and the weight, expressed in the same denomination, of an equal volume of vapour, at the temperature t and under the same pressure of 30 inches, be called W′; and if E_t be the elasticity of vapour at the temperature t; then (the expansion of dry air from 32° to 212° being 0·375, or being $\frac{1}{2\cdot6\cdot6}$ part = 0·002083 for each degree of temperature),

$$W' = \frac{1\cdot375 \times W \times E_t}{30\,(1+\cdot002083\,.\,t^\circ - 32^\circ)}$$

Now, Gay Lussac has also determined, that a cubic inch of vapour at 212° weighs

0·149176 grains under the pressure of 29·92196 inches of mercury (Edinburgh Encyclopædia, article Hygrometry); and, consequently, a cubic foot of vapour, under the same circumstances, weighs 0·149176 × 1728 = 257·776 grains; and under a pressure of 30 inches it weighs

$$\frac{30}{29\cdot92196} \times 257\cdot776^{\text{gr.}} = 258\cdot448^{\text{gr.}}.$$

Therefore, substituting this value of a cubic foot of vapour at 212°, and under a pressure of 30 inches, the formula above becomes

$$W' = \frac{1\cdot375 \times 258\cdot448^{\text{gr.}} \times E_t}{30\,(1 + \cdot002083 \times t^{\circ} - 32^{\circ})}$$

And from this formula the next table is formed, shewing

The Weight in Grains of a Cubic Foot of Vapour, under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	Weight in Grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in Grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in Grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in Grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in Grains of a Cubic Foot of Vapour.
°	gr.	°	gr.	°	gr.	°	gr.	°	gr.
0	0·78	19	1·52	37	2·80	55	5·02	73	8·76
1	0·81	20	1·58	38	2·89	56	5·18	74	9·04
2	0·84	21	1·63	39	2·99	57	5·34	75	9·31
3	0·87	22	1·69	40	3·09	58	5·51	76	9·60
4	0·90	23	1·75	41	3·19	59	5·69	77	9·89
5	0·93	24	1·81	42	3·30	60	5·87	78	10·19
6	0·97	25	1·87	43	3·41	61	6·06	79	10·50
7	1·00	26	1·93	44	3·52	62	6·25	80	10·81
8	1·04	27	2·00	45	3·64	63	6·45	81	11·14
9	1·07	28	2·07	46	3·76	64	6·65	82	11·47
10	1·11	29	2·14	47	3·88	65	6·87	83	11·82
11	1·15	30	2·21	48	4·01	66	7·08	84	12·17
12	1·19	31	2·29	49	4·14	67	7·30	85	12·53
13	1·24	32	2·37	50	4·28	68	7·53	86	12·91
14	1·28	33	2·45	51	4·42	69	7·76	87	13·29
15	1·32	34	2·53	52	4·56	70	8·00	88	13·68
16	1·37	35	2·62	53	4·71	71	8·25	89	14·08
17	1·41	36	2·71	54	4·86	72	8·50	90	14·50
18	1·47								

This table is to be used as follows: if the temperatures of the air and of the dew-point be the same, then the air is quite saturated with moisture, and the number ranging with the temperature will be the weight required; but if the temperature of the air should be higher than the temperature of the dew-point, then the quantity of vapour at the temperature of the dew-point will be expanded in the same proportion as the air is expanded: therefore from the table on page xlv take out the volume after expansion at both temperatures, and then say,

As volume at temp. of air : volume at temp. of dew-point :: {weight of a cubic foot of vapour at temp. of dew-point} : {weight of a cubic foot of vapour required.}

As, for instance, suppose that the temperature of the air was 70°, and that of the dew-point 50°:

Then, the expansion of dry air at 70° is 1·079, and at 50° it is 1·037; also, the weight of a cubic foot of aqueous vapour at 50° is 4·28 grains, from the table on page xlix.

Then 1·079 : 1·037 :: 4·28 gr. : 4·12 gr. the weight of a cubic foot of vapour.

In any state of the atmosphere when the temperatures of the air and of the dew-point are different, no moisture can be precipitated. Before precipitation can take place, either the temperature of the air must fall below that of the dew-point; or the aqueous vapour must increase to a quantity greater than that which can be held in solution at the temperature of the air; or the temperature of the air must fall, and that of the dew-point must rise at the same time, till they are at the same temperature. In the assumed example, the temperature of the air must fall below 50°; or the quantity of aqueous vapour must increase to 8gr·00, that being the greatest quantity of moisture that can be held in solution at 70°; or the temperature of the dew-point must rise above 50°, whilst that of the air must fall below 70°, till they are at the same temperature, before any of the moisture in the air can fall.

The following is a table of factors to be multiplied into the weight of a cubic foot of vapour at temperature of the dew-point, to deduce the weight of cubic foot of vapour in the existing state of the atmosphere.

Difference between the Readings of the Dry and Dew-point Thermometers.	Factor.	Difference between the Readings of the Dry and Dew-point Thermometers.	Factor.	Difference between the Readings of the Dry and Dew-point Thermometers.	Factor.	Difference between the Readings of the Dry and Dew-point Thermometers.	Factor.
°		°		°		°	
1	0·999	11	0·978	21	0·958	31	0·939
2	·996	12	·976	22	·956	32	·937
3	·994	13	·974	23	·954	33	·935
4	·992	14	·972	24	·952	34	·934
5	·990	15	·970	25	·951	35	·932
6	·988	16	·968	26	·949	36	·930
7	·986	17	·966	27	·947	37	·929
8	·984	18	·964	28	·945	38	·927
9	·982	19	·962	29	·943	39	·925
10	·980	20	·960	30	·942	40	·923

This table is to be used as follows: taking the same example as above, the difference between the temperatures of the air and of the dew-point is 20°; the factor ranging with 20° is 0·960, which multiplied into 4gr·28 gives 4·11 grains. In this way the tables in the Abstracts were formed, exhibiting the weight of a cubic foot of vapour. Also as the weight of moisture in the assumed example was 4gr·11, and at 70° complete satu-

ration takes place, when 8gr·00 of moisture are held in solution, the difference between these numbers, 3gr·89, represents the weight required for complete saturation; and in this way the tables in the Abstracts, representing the quantities required for complete saturation, were formed. The tables shewing the degree of humidity were formed by dividing the actual weight of a cubic foot of vapour at the time, by the greatest weight that could be held in solution at the temperature of the air, complete saturation being represented by unity.

From the table on page xlix it would appear, that air has its capacity for moisture doubled at each rise of 21° nearly. By comparing the weights of a cubic foot of vapour for the various temperatures at which the quantity is doubled, it will be seen that the intervals of temperature increase slowly with the temperatures. Thus, it will be seen from the following table, that if the quantities of water held in solution be taken in a geometrical progression, the temperatures increase in a quicker ratio than the terms of an arithmetical progression.

Quantity of Water in Solution.	Successive Temperatures at which the Solving Power is doubled.	Differences between the successive Temperatures.
gr.	°	°
0·78	0·0	
		19·8
1·56	19·8	
		20·5
3·12	40·3	
		21·7
6·24	62·0	
		22·8
12·48	84·8	

A Table shewing the Weight of a Cubic Foot of Dry Air added to the Weight of a Cubic Foot of Vapour, under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	Sum of the Weights of a Cubic Foot of Dry Air and a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the Weights of a Cubic Foot of Dry Air and a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the Weights of a Cubic Foot of Dry Air and a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the Weights of a Cubic Foot of Dry Air and a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the Weights of a Cubic Foot of Dry Air and a Cubic Foot of Vapour.
°	gr.	°	gr.	°	gr.	°	gr.	°	gr.
0	603·99	19	580·19	37	560·01	55	542·29	73	527·46
1	602·68	20	579·02	38	558·94	56	541·37	74	526·74
2	601·36	21	577·84	39	557·90	57	540·46	75	526·02
3	600·07	22	576·67	40	556·87	58	539·58	76	525·33
4	598·77	23	575·51	41	555·84	59	538·72	77	524·63
5	597·48	24	574·36	42	554·82	60	537·84	78	523·96
6	596·21	25	573·20	43	553·80	61	536·99	79	523·30
7	594·94	26	572·06	44	552·79	62	536·13	80	522·63
8	593·67	27	570·92	45	551·80	63	535·29	81	522·01
9	592·40	28	569·80	46	550·81	64	534·46	82	521·36
10	591·15	29	568·68	47	549·85	65	533·65	83	520·75
11	589·90	30	567·56	48	548·86	66	532·84	84	520·14
12	588·67	31	566·46	49	547·89	67	532·05	85	519·56
13	587·45	32	565·37	50	546·93	68	531·25	86	518·98
14	586·21	33	564·29	51	545·97	69	530·46	87	518·40
15	584·99	34	563·20	52	545·04	70	529·70	88	517·87
16	583·78	35	562·13	53	544·12	71	528·95	89	517·33
17	582·56	36	561·06	54	543·19	72	528·19	90	516·82
18	581·38								

Having the weight of a cubic foot of air added to the weight of a cubic foot of vapour, from the above table, and having the increase of volume of a cubic foot of dry air in consequence of its saturation with moisture, from the table on page xlviii, the weight of a cubic foot of air saturated with moisture has been computed and tabulated from the following proportion :—

As the whole volume : one cubic foot of the mixture : : the whole weight : the weight of a cubic foot of saturated air.

A Table shewing the Weight of a Cubic Foot of Air saturated with Moisture, under the Pressure of 30 Inches of Mercury, at all Temperatures between 0° and 90°; and the Difference between the Weight of a Cubic Foot of Dry Air, under the Pressure of 30 Inches of Mercury, and a Cubic Foot of Saturated Air, under the same Pressure, for every Degree of Temperature, from 0° to 90°.

Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Moisture.	Excess of the Weight of a Cubic Foot of Dry Air above a Cubic Foot of Air saturated with Moisture.	Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Moisture.	Excess of the Weight of a Cubic Foot of Dry Air above a Cubic Foot of Air saturated with Moisture.	Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Moisture.	Excess of the Weight of a Cubic Foot of Dry Air above a Cubic Foot of Air saturated with Moisture.
°	gr.	gr.	°	gr.	gr.	°	gr.	gr.
0	602·77	0·45	31	562·86	1·31	61	527·48	3·45
1	601·40	0·47	32	561·64	1·36	62	526·32	3·56
2	600·03	0·49	33	560·42	1·42	63	525·17	3·67
3	598·69	0·51	34	559·20	1·47	64	524·03	3·78
4	597·34	0·53	35	558·01	1·50	65	522·90	3·88
5	596·01	0·54	36	556·79	1·56	66	521·75	4·01
6	594·69	0·55	37	555·61	1·60	67	520·61	4·14
7	593·36	0·58	38	554·40	1·65	68	519·46	4·26
8	592·04	0·59	39	553·20	1·71	69	518·29	4·41
9	590·72	0·61	40	552·00	1·77	70	517·17	4·53
10	589·40	0·64	41	550·81	1·84	71	516·02	4·66
11	588·07	0·68	42	549·63	1·89	72	514·87	4·82
12	586·78	0·70	43	548·44	1·95	73	513·75	4·95
13	585·49	0·72	44	547·26	2·01	74	512·61	5·09
14	584·18	0·75	45	546·06	2·10	75	511·46	5·25
15	582·89	0·78	46	544·88	2·17	76	510·32	5·41
16	581·61	0·80	47	543·75	2·22	77	509·18	5·56
17	580·33	0·82	48	542·55	2·30	78	508·04	5·73
18	579·06	0·85	49	541·36	2·39	79	506·91	5·89
19	577·79	0·88	50	540·21	2·44	80	505·74	6·08
20	576·54	0·90	51	539·04	2·51	81	504·61	6·26
21	575·27	0·94	52	537·87	2·61	82	503·45	6·44
22	574·01	0·97	53	536·71	2·70	83	502·32	6·61
23	572·76	1·00	54	535·55	2·78	84	501·16	6·81
24	571·50	1·05	55	534·39	2·88	85	500·05	6·98
25	570·26	1·07	56	533·22	2·97	86	498·87	7·20
26	569·01	1·12	57	532·06	3·06	87	497·71	7·40
27	567·77	1·15	58	530·92	3·15	88	496·58	7·61
28	566·53	1·20	59	529·77	3·26	89	495·44	7·81
29	565·31	1·23	60	528·62	3·35	90	494·28	8·04
30	564·08	1·27						

Then to find the weight of a cubic foot of air in its existing state, we must proceed as follows: if the temperatures of the air and of the dew-point be alike, the quantity ranging with the temperature will be the quantity required; but if the temperature of the air be the higher of the two, take out the excess of the weight of a cubic foot of dry

air above the weight of a cubic foot of air saturated with moisture from the above table, at the temperature of the air; the degree of humidity will have been previously determined, and this, multiplied into the difference of the weight of a cubic foot of dry and wet air, will give the part due to the moisture in the air; and this product, taken from the weight of a cubic foot of dry air, will give the weight of a cubic foot of air of the given temperature and humidity, under a pressure of 30 inches of mercury. The true weight of a cubic foot of air in its then existing state is found by multiplying the last found value by $\frac{\text{Height of the barometer}}{30}$. In this way the tables in the Abstracts may be formed, shewing the weights of a cubic foot of air under different circumstances of temperature, humidity, and pressure.

All the hygrometrical Abstracts have actually been calculated by the use of general hygrometrical tables, prepared by Mr. Glaisher, and deduced from the preceding tables.

It is usually understood that a cubic inch of water, of the temperature 39°·4, produces 1625 cubic inches of vapour, under the pressure of 29·922 inches of mercury, and that at the same temperature the weight of the water is 253 grains.

Therefore, 268 grains of water would produce 1728 cubic inches or a cubic foot of vapour whose elastic force is 30 inches; and the weight of vapour in a cubic foot of space has been computed as follows:

As 30 inches : elastic force of vapour : : 268 grains : the weight of a cubic foot of vapour.

A Table shewing the Weight of Vapour in a Cubic Foot of Space (upon the supposition of a Cubic Inch of Water producing 1625 Inches of Vapour), under the Pressure of 30 Inches of Mercury, for every Degree of Temperature from 0° to 90°.

Temp. Fahr.	Weight of Vapour in a Cubic Foot of Space.	Temp. Fahr.	Weight of Vapour in a Cubic Foot of Space.	Temp. Fahr.	Weight of Vapour in a Cubic Foot of Space.	Temp. Fahr.	Weight of Vapour in a Cubic Foot of Space.
°	gr.	°	gr.	°	gr.	°	gr.
0	0·55	23	1·29	46	2·91	69	6·28
1	0·57	24	1·34	47	3·01	70	6·49
2	0·59	25	1·39	48	3·12	71	6·71
3	0·61	26	1·44	49	3·22	72	6·92
4	0·64	27	1·49	50	3·34	73	7·15
5	0·66	28	1·55	51	3·45	74	7·39
6	0·69	29	1·60	52	3·57	75	7·63
7	0·71	30	1·66	53	3·69	76	7·88
8	0·74	31	1·72	54	3·82	77	8·13
9	0·77	32	1·78	55	3·95	78	8·40
10	0·80	33	1·85	56	4·09	79	8·67
11	0·83	34	1·91	57	4·23	80	8·95
12	0·86	35	1·98	58	4·37	81	9·23
13	0·89	36	2·05	59	4·52	82	9·53
14	0·93	37	2·13	60	4·67	83	9·83
15	0·96	38	2·20	61	4·83	84	10·14
16	1·00	39	2·28	62	4·99	85	10·46
17	1·03	40	2·36	63	5·17	86	10·80
18	1·07	41	2·45	64	5·34	87	11·14
19	1·11	42	2·53	65	5·52	88	11·49
20	1·15	43	2·62	66	5·70	89	11·85
21	1·20	44	2·72	67	5·89	90	12·23
22	1·24	45	2·81	68	6·08		

MAXIMUM AND MINIMUM SELF-REGISTERING THERMOMETER.

From January 1^d to August 4^d the maximum and minimum thermometer was one of Six's construction, the fluid being spirits of wine, and the indexes being of blue steel with knobs at each end.

On August 4^d the use of Six's thermometer was discontinued, and two of Rutherford's construction were substituted for it. The self-registering thermometer for maximum temperature of the air is a mercurial thermometer with a transparent bulb: its index is a piece of blue steel wire. The self-registering thermometer for minimum temperature of the air is of alcohol, with a transparent bulb: its index is glass, with a knob at each end. These instruments were read at 22^h on every day.

The following is an investigation of the index-errors of these thermometers.

They were usually compared twice on every day with the Royal Observatory standard thermometer: once at about the time of the maximum temperature, and once at about the time of the minimum temperature. At the end of each month the differences between the readings were taken, and divided into groups according to different temperatures, distinguished by the different amount of the error; the mean of each group was then taken; and in this way the following quantities have been obtained.

During the months of June and July the new thermometers were under preparatory examination, and they were found to be without error, between the points 32° and 90°. No error was observed in the readings of the minimum thermometer to the end of the year. During the months of August, September, and October there was no error in the reading of the maximum thermometer; in the month of November a very slight error was found to exist, and which increased in the month of December to 0°·8.

The temperatures, as inserted in the Tabular Observations at 22^h on every day, are the readings of the instrument corrected by these errors, and as such as would have been given by the Royal Observatory standard thermometer:—

		°				°	°
January.	Subtract	0·2	from	all maximum readings	below	40	
	Subtract	0·7	from	all maximum readings	above	40	
	Add	0·3	to	all minimum readings	below	30	
	Subtract	0·6	from	all minimum readings	above	30	
February.	Subtract	0·7	from	all maximum readings			
	Add	0·5	to	all minimum readings	below	30	
	Subtract	0·5	from	all minimum readings	above	30	
March.	Subtract	0·6	from	all maximum readings	below	50	
	Subtract	0·9	from	all maximum readings	between	50	and 60
	Subtract	2·5	from	the maximum reading taken at		31^d. 22^h	
	Subtract	0·2	from	all minimum readings	between	35	and 40
	Subtract	0·5	from	all minimum readings	above	40	

April.	Subtract 0·2 from that maximum reading taken at	7d. 22h	
	Subtract 1·0 from all other maximum readings		
	Subtract 0·5 from all minimum readings below	45	
	Subtract 0·9 from all minimum readings above	45	
May.	Subtract 1·1 from all maximum readings below	65	
	Subtract 2·5 from all maximum readings above	65	
	Subtract 0·9 from all minimum readings below	55	
	Subtract 1·7 from all minimum readings above	55	
June.	Subtract 1·1 from all maximum readings below	75	
	Subtract 2·2 from all maximum readings between	75 and 85	
	Subtract 2·9 from all maximum readings above	85	
	Subtract 1·4 from all minimum readings below	60	
	Subtract 2·0 from all minimum readings above	60	
July and to Aug. 3d.	Subtract 1·7 from all maximum readings		
	Subtract 1·4 from all minimum readings		
December.	Add 0·8 to all minimum readings.		

RADIATION THERMOMETERS.

The self-registering thermometer for solar radiation is a mercurial thermometer with a blackened bulb: its index is a piece of blue steel wire. It was read every day at 22h.

The self-registering thermometer for radiation to the sky is of alcohol, with a white bulb placed in the focus of a parabolic reflector: its index is glass, with a knob at each end. It is read every day at 22h.

This instrument, as in previous years, had constantly a tendency to read too little, in consequence of a portion of the alcohol passing to the upper part of the tube, and the amount of the error caused by this circumstance was determined daily, till August 3d; at this time the instrument was replaced by a new one, whose readings had been found to be correct, and no correction to the reading was necessary to the end of the year.

The readings, from January 1d to August 3d, as inserted in the Tabular Observations at 22h, on every day, are the readings taken from the instrument, and increased by the following quantities:

From Jan.	1	to Jan.	10. 22	by 1·5	From Feb.	13. 22 to Feb.	24. 22 by 3·5
From Jan.	11. 22	to Jan.	19. 22	by 2·0	From Feb.	25. 22 to Feb.	27. 22 by 4·0
From Jan.	20. 22	to Jan.	30. 22	by 2·5	From Feb.	28. 22 to Mar.	17. 22 by 7·0
From Jan.	31. 22	to Feb.	12. 22	by 3·0			

MAXIMUM AND MINIMUM SELF-REGISTERING THERMOMETER.

From January 1^d to August 4^d the maximum and minimum thermometer was one of Six's construction, the fluid being spirits of wine, and the indexes being of blue steel with knobs at each end.

On August 4^d the use of Six's thermometer was discontinued, and two of Rutherford's construction were substituted for it. The self-registering thermometer for maximum temperature of the air is a mercurial thermometer with a transparent bulb: its index is a piece of blue steel wire. The self-registering thermometer for minimum temperature of the air is of alcohol, with a transparent bulb: its index is glass, with a knob at each end. These instruments were read at 22^h on every day.

The following is an investigation of the index-errors of these thermometers.

They were usually compared twice on every day with the Royal Observatory standard thermometer: once at about the time of the maximum temperature, and once at about the time of the minimum temperature. At the end of each month the differences between the readings were taken, and divided into groups according to different temperatures, distinguished by the different amount of the error; the mean of each group was then taken; and in this way the following quantities have been obtained.

During the months of June and July the new thermometers were under preparatory examination, and they were found to be without error, between the points 32° and 90°. No error was observed in the readings of the minimum thermometer to the end of the year. During the months of August, September, and October there was no error in the reading of the maximum thermometer; in the month of November a very slight error was found to exist, and which increased in the month of December to 0°·8.

The temperatures, as inserted in the Tabular Observations at 22^h on every day, are the readings of the instrument corrected by these errors, and as such as would have been given by the Royal Observatory standard thermometer:—

		°		° °
January.	Subtract	0·2	from all maximum readings below	40
	Subtract	0·7	from all maximum readings above	40
	Add	0·3	to all minimum readings below	30
	Subtract	0·6	from all minimum readings above	30
February.	Subtract	0·7	from all maximum readings	
	Add	0·5	to all minimum readings below	30
	Subtract	0·5	from all minimum readings above	30
March.	Subtract	0·6	from all maximum readings below	50
	Subtract	0·9	from all maximum readings between	50 and 60
	Subtract	2·5	from the maximum reading taken at	31^d. 22^h
	Subtract	0·2	from all minimum readings between	35 and 40
	Subtract	0·5	from all minimum readings above	40

April.	Subtract 0·2 from that maximum reading taken at	7d. 22h	
	Subtract 1·0 from all other maximum readings		
	Subtract 0·5 from all minimum readings below	45°	
	Subtract 0·9 from all minimum readings above	45°	
May.	Subtract 1·1 from all maximum readings below	65°	
	Subtract 2·5 from all maximum readings above	65°	
	Subtract 0·9 from all minimum readings below	55°	
	Subtract 1·7 from all minimum readings above	55°	
June.	Subtract 1·1 from all maximum readings below	75°	
	Subtract 2·2 from all maximum readings between	75° and 85°	
	Subtract 2·9 from all maximum readings above	85°	
	Subtract 1·4 from all minimum readings below	60°	
	Subtract 2·0 from all minimum readings above	60°	
July and to Aug. 3d.	Subtract 1·7 from all maximum readings		
	Subtract 1·4 from all minimum readings		
December.	Add 0·8 to all minimum readings.		

RADIATION THERMOMETERS.

The self-registering thermometer for solar radiation is a mercurial thermometer with a blackened bulb: its index is a piece of blue steel wire. It was read every day at 22h.

The self-registering thermometer for radiation to the sky is of alcohol, with a white bulb placed in the focus of a parabolic reflector: its index is glass, with a knob at each end. It is read every day at 22h.

This instrument, as in previous years, had constantly a tendency to read too little, in consequence of a portion of the alcohol passing to the upper part of the tube, and the amount of the error caused by this circumstance was determined daily, till August 3d; at this time the instrument was replaced by a new one, whose readings had been found to be correct, and no correction to the reading was necessary to the end of the year.

The readings, from January 1d to August 3d, as inserted in the Tabular Observations at 22h, on every day, are the readings taken from the instrument, and increased by the following quantities:

	d	h		d	h	°		d	h	d	h	°
From Jan.	1		to Jan.	10.	22	by 1·5	From Feb.	13.	22	to Feb.	24.	22	by 3·5
From Jan.	11.	22	to Jan.	19.	22	by 2·0	From Feb.	25.	22	to Feb.	27.	22	by 4·0
From Jan.	20.	22	to Jan.	30.	22	by 2·5	From Feb.	28.	22	to Mar.	17.	22	by 7·0
From Jan.	31.	22	to Feb.	12.	22	by 3·0							

On March 18^d an attempt was made to lessen the amount of this error, but with little success. The readings are then increased by the following quantities:

	d	h		d	h	°			
From Mar.	18.	22	to Mar.	30.	12	by 6·0			
From Mar.	31.	22	to April	8.	22	by 6·5			
From April	9.	22	to April	15.	22	by 7·0			
	d	h		d	h	°			
From April	16.	22	to April	19.	22	by 7·5			
From April	20.	22	to April	23.	22	by 8·0			
From April	23.	22	to April	27.	22	by 8·5			

On April 28^d another attempt was made to clear the instrument of the error, and subsequently to this date the readings are increased by the following quantities:

	d	h		d	h	°			
From April	28.	22	to May	2.	22	by 4·0			
From May	3.	22	to May	4.	22	by 5·0			
From May	5.	22	to May	10.	22	by 6·0			
From May	11.	22	to May	13.	22	by 7·0			
	d	h		d	h	°			
From May	14.	22	to May	15.	22	by 8·0			
From May	16.	22	to May	17.	22	by 9·0			
From May	18.	22	to May	21.	22	by 10·5			

On May 22^d the thermometer was broken in the attempt to lessen the error of its readings, and from May 22^d.22^h another thermometer, the property of Mr. Glaisher, was used. This instrument was found not to require correction during the remainder of the month of May, and through the whole month of June; in the month of July its readings were found to be too low by 1°, and a correction to this amount was applied. On August 3^d a new instrument was used, whose readings were found to be correct during the remainder of the year.

POSITION OF THE THERMOMETERS DURING THE YEAR 1846.

A post was planted in the year 1841 in the north-east re-entering angle of the Magnetic Observatory, about six feet from the walls of the building, and upon this a revolving frame was placed for carrying the thermometers. The post remained in this position till 1846, July 20^d, and on July 22^d it was planted in a position 23 feet south of the south-east angle of the south arm of the Magnetic Observatory. The frame consists of a horizontal board as base, of a vertical board projecting upwards from it connected with one edge of the horizontal board, and of two parallel inclined boards (separated about two inches) connected at the top with the vertical board, and at the bottom with the other edge of the horizontal board. The air passes freely between all these boards. The standard thermometer, the dry and wet-bulb thermometer, the dew-point instrument, and the maximum and minimum thermometer, are attached to the outside of the vertical board, with a small projecting roof above them; their bulbs are about four feet above the ground, and those of the three first project below the wood; and the frame is always turned with its inclined side towards the Sun. It is presumed that the thermometers are thus sufficiently protected.

The radiation thermometers are placed in open boxes upon the ground, the sides of the boxes being sufficiently high to prevent lateral wind striking the bulbs. That for sky

radiation (giving the minimum temperature) is placed in a horizontal position, its bulb and reflector being fully exposed to the sky; that for solar radiation is inclined as need requires to receive the full rays of the Sun.

THERMOMETERS SUNK BELOW THE SURFACE OF THE SOIL AT DIFFERENT DEPTHS.

These thermometers were made by Messrs. Adie of Edinburgh, under the immediate superintendance of Professor J. D. Forbes. The graduation was made by Professor Forbes himself.

The thermometers are four in number. They are all placed in one hole in the ground, the diameter of which in its upper half is 1 foot, and in its lower half about 6 inches. Each thermometer is attached in its whole length to a slender piece of wood, which is planted in the hole with it. The place of the hole is 20 feet South of the extremity of the South arm of the Magnetic Observatory, and opposite the center of its South front.

The soil consisted of beds of sand; of flint-gravel with a large proportion of sand; and of flints with a small proportion of sand, cemented almost to the consistency of pudding-stone. Every part of the gravel and sand extracted from the hole was perfectly dry.

The bulbs of the thermometers are cylindrical, 10 or 12 inches long and 2 or 3 inches in diameter. The bore of the principal part of the tubes, from the bulb to the graduated scale, is very small. In that part to which the scale is attached the tube is larger.

The thermometer No. 1 was dropped into the hole to such a depth that the center of its bulb was 24 French feet (25·6 English feet) below the surface: then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the center of its bulb was 12 French feet below the surface; No. 3 and No. 4 till the centers of their bulbs were respectively 6 and 3 French feet below the surface; and the hole was completely filled with dry sand. The upper parts of the tubes, carrying the scales, were left projecting above the surface: No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, the parts 8·5, 10·0, 11·0, and 14·5 inches respectively are tube with narrow bore.

The projecting parts of the tubes are protected by a wooden case or box fixed to the ground whose sides are perforated with numerous holes and which has a double roof. In the North face of this box is a large plate of glass through which the thermometers are read. Within the box are two smaller thermometers, one (No. 5) whose bulb is sunk one inch in the ground, and one (No. 6) whose bulb is in the free air nearly in the center of the box.

The fluid of the four long thermometers is alcohol tinged with a red colour.

The values of 1° on the scales of Nos. 1, 2, 3, and 4, are respectively 2^{in}, $1^{in}\cdot1$, $0^{in}\cdot9$, and $0^{in}\cdot55$; and the ranges of the scales are, 43°·0 to 52°·7, 42°·0 to 56°·8, 39°·0 to 57°·5, and

34°·2 to 64°·5. These ranges are scarcely sufficient, at least in the upper parts of the scales; the highest readings of Nos. 2, 3, and 4, have exceeded the highest graduation on the scale, and that of No. 1 was 52°·64 on December 9, being within 0·1 of the limit of the scale.

There is a small bulb left at the top of each thermometer (as is usual in alcoholic thermometers), and on the alcohol passing into these spaces, the reading was estimated. The times at which the readings were thus taken were as follows:—

Of No. 2. At many readings between September 17^d and October 19^d. The highest estimated readings were on October 1, and they were 56°·95.

Of No. 3. From June 19^d.22^h to October 15^d.6^h the reading was always beyond the scale. The highest reading thus estimated was 59°·50 on August 11^d.

Of No. 4. There were occasional readings exceeding the limit of the scale between June 19^d and August 12^d. The highest estimated reading was 65°·4 on June 22^d.

The mounting of the long thermometers was completed on 1846, March 25, but the observations were not commenced till April 10. They have since that time been taken at every even hour of Göttingen mean time, except on Sundays and Christmas Day.

The numbers as printed in the Abstracts are the arithmetical means of the simple uncorrected readings taken on every civil day, for the daily values, and the arithmetical means of the readings also uncorrected, taken at the same hour throughout the month, for the hourly values. These numbers, therefore, require correction; 1st, for the variable temperature of the several strata through which the stem passes between the center of the bulb and the surface of the soil; and 2ndly, for the effect produced upon that portion of the stem which is above the ground by the temperature of the air within the case at the time of observation. These corrections will probably be insensible. In estimating, from the readings taken at the same hour through a month, the diurnal inequality of each thermometer, it will be necessary to apply a correction depending on the change from day to day, and this correction will be sensible.

THERMOMETERS SUNK IN THE WATER OF THE THAMES.

The self-registering thermometer for determining the maximum temperature of the water of the Thames is a mercurial thermometer, having for its index a piece of steel wire. It is read every day at 22^h. The self-registering thermometer for determining the minimum temperature of the water of the Thames is of coloured alcohol; its index is glass, with a knob at each end. It is read every day at 22^h.

A strong wooden trunk is firmly fixed to the side of the Dreadnought Hospital Ship, about five feet in length, and closed at the bottom; the bottom and the sides, to the height of three feet, are perforated with a great number of holes, so that the water can easily flow through. This trunk is fixed to the ship in such manner that the perforated part of it is

immersed in the water; and the thermometers are suspended within this trunk so as to be about two feet below the surface of the water, and one foot from the bottom of the trunk.

The regular observations were made by Lieutenant Sanders, R.N., superintendent of the ship, or in his absence by Mr. Cooper, one of the officers of the ship.

OSLER'S ANEMOMETER.

This anemometer is self-registering; it was made by Newman, but has received several changes since it was originally constructed. A large vane, which is turned by the wind, and from which a vertical spindle proceeds down nearly to the table in the north-western turret of the ancient part of the Observatory, gives motion by a pinion upon the spindle to a rackwork carrying a pencil. This pencil makes marks upon a paper affixed to a board which is moved uniformly in a direction transverse to the direction of the rack-motion. The movement of the board was formerly effected by means of a chain connected with the barrel of a clock; but the continual failures of this apparatus made it necessary to resort to another construction, and the movement of the board, from the beginning of 1846, has been effected by a rackwork connected with the pinion of a clock. The paper has lines printed upon it corresponding to the positions which the pencil must take when the direction of the vane is N., E., S., or W.; and also has transversal lines corresponding to the positions of the pencil at every hour. The first adjustment for azimuth was obtained by observing from a certain point the time of passage of a star behind the vane-shaft, and computing from that observation the azimuth; then on a calm day drawing the vane by a cord to that position, and adjusting the rack, &c., so that the pencil position on the sheet corresponded to that azimuth.

For the pressure of the wind, the shaft of the vane carries a plate one foot square, which is supported by horizontal rods sliding in grooves, and is urged in opposition to the wind by three springs, so arranged that only one comes into play when the wind is light, and the others necessarily act in conjunction with the first as the plate is driven further and further by the force of the wind. A cord from this plate passes over a pulley, and communicates with a copper wire passing through the center of the spindle, which at the bottom communicates with another cord passing under a pulley and held in tension by a slight spring; and by this a pencil is moved transversely to the direction in which the paper fixed to the board is carried by the clock. Lines are printed upon the paper corresponding to different values of the pressure; the intervals of these lines were adjusted by applying weights of 1 lb., 2 lbs., &c., to move the pressure-plate in the same manner as if the wind pressed it.

A fresh sheet of paper has been applied to this instrument every day at 22^h mean solar time.

WHEWELL'S ANEMOMETER.

This anemometer is self-registering: it was made by Simms. A horizontal brass plate is connected with a vertical spindle, which passes down through the axis of a fixed vertical cylinder, and takes a vertical-bearing upon a horizontal plate at the bottom of the vertical cylinder, and a collar-bearing in a horizontal plate at the top of the cylinder. To one side of the brass plate is attached a vane, and by the action of the wind upon this vane the brass plate is turned. Upon the brass plate is mounted the frame, carrying the fly and the first and second toothed wheels; underneath that part of the brass plate which overpasses the top of the cylinder are attached the bars of a frame, that surrounds without touching the cylinder, and extends nearly as low as the bottom of the cylinder (where it is guided by small horizontal rollers, which it carries, and which run upon the surface of the cylinder); this frame is for the purpose of carrying the large vertical screw, fifteen inches in length. The fly has eight sails, resembling the sails of a windmill, but having their surfaces plane, and inclined to the direction of the wind at an angle of 45°: its axis is horizontal. Upon the axis is an endless screw, which works in a vertical wheel of one hundred teeth, and upon the axis of this wheel is an endless screw, which works in a horizontal wheel of one hundred teeth; and this horizontal wheel is connected with the top of the great vertical screw. Ten thousand revolutions of the fly therefore produce one revolution of the vertical screw. A concave screw (which admits of being opened at pleasure, for detaching it from the vertical screw) is clamped, so as to embrace the vertical screw, and is carried downwards by its circular motion. To this concave screw is attached a pencil, which in its descent touches the fixed vertical cylinder. The surface of the cylinder is divided by vertical lines into sixteen equal parts, corresponding to the sixteenth parts of the circle of azimuth; and the letters indicating the principal points of the compass are painted on it at these lines. Near to the vertical screw, and parallel to it, is fixed a rod, which is one of the bars of the frame before described: a scale upon this rod is divided to tenths of inches, and an index slides upon it. This index turns freely upon the scale, and has a projecting point, which can be brought into contact with that part of the cylinder on which the pencil marks are registered. Bringing this point successively into contact with the extreme upper and lower marks made each day, the difference of the scale-readings would give the descent of the pencil for the day; but the practice has generally been to apply a pair of compasses to the cylinder, and then to ascertain the descent by means of the vertical scale.

The instrument is read off every day at 22^h. The pencil in descending marks a broad path in consequence of the oscillations of the vane; the darkest part of this path is observed, and that direction is recorded to which this dark part is nearest. The descent

in inches, corresponding to each direction of the wind, is taken by applying a pair of compasses to the cylinder, and then ascertaining the amount by means of the vertical scale; the sum of all the descents belonging to each successive change of the wind is checked each day by the total descent of the pencil, as shewn by the space between the position of the index as previously left, and its position at the time of reading. The individual amounts are inserted in the section of Ordinary Observations.

The instrument is fixed on a small wooden erection, of about ten feet in height, placed on the leads above the highest part of the Observatory, in which situation it is nearly free on all sides; an inconsiderable portion only being sheltered by the time ball, whose diameter is five feet, resting on the N.E. turret; the distance between the anemometer and the center of the ball is about twenty feet.

The zero of the instrument was determined by means of Osler's Anemometer. At the time a steady south wind was blowing; the instrument was set nearly in the right direction by hand; there was but little friction, and the pencil was on the line marked S on the cylinder: its zero was considered to be well determined.

The following are measures of the principal parts of the anemometer:—

The length of each sail from axis to end is	$2^{in}\cdot30$
The length of the flat part of each sail is	$1^{in}\cdot92$
The inclination of each sail to the wind is	45°
45 revolutions of the vertical screw correspond to	2 inches
The number of teeth in the vertical wheel is	100
The number of teeth in the horizontal wheel is also	100

Therefore, 10,000 revolutions of the fly cause the pencil to descend through the distance of one thread of the vertical screw, or through a space equal to $\frac{2}{45}$ inches $= 0^{in}\cdot044$.

Assuming that the effective radius of the sail is	$1^{in}\cdot7$
Then the circumference described is $1^{in}\cdot7 \times 2\pi =$	$10\cdot68$
Therefore the motion of the wind in one revolution is	$10\cdot68$
in 10,000 revolutions	106800 inches

corresponding to $0^{in}\cdot044$ of the vertical screw, or to one revolution of the screw.

From this it follows, that the motion of the wind, corresponding to the descent of the pencil through one inch, is 200250 feet, or 37·9 miles.

RAIN GAUGES.

The rain-gauge No. 1 (Osler's) is connected with the anemometer. It is 205 feet 6 inches above the mean level of the sea. It exposes to the rain an area of 200 square inches (its horizontal dimensions being 10 by 20 inches).

The collected water passes through a tube into a vessel suspended in a frame by spiral springs, which lengthen as the water increases, until 0·24 of an inch is collected in the receiver; it then discharges itself by means of the following modification of the syphon. A copper tube, open at both ends, is fixed in the receiver, in a vertical position, with its end projecting below the bottom. Over the top of this tube a larger tube, closed at the top, is placed loosely. The smaller tube thus forms the longer leg, and the larger tube the shorter leg of a syphon. The water, having risen to the top of the inner tube, gradually falls through into the uppermost portion of a tumbling bucket, fixed in a globe under the receiver. When full, the bucket falls over, throwing the water into the pipe at the lower part of the globe: this action causes an imperfect vacuum in the globe, sufficient to cause a draught into the longer leg of the syphon, and the whole contents run off. After leaving the globe, the water is received in a pipe attached to the building which carries it away. The springs then shorten and raise the receiver. The ascent and descent of the water-vessel move a radius-bar which carries a pencil; and this pencil makes a trace upon the paper carried by the sliding-board of the self-registering anemometer.

The scale of the printed paper was adjusted by repeatedly filling the water-vessel until it emptied itself, then weighing the water, and thus ascertaining its bulk, and dividing this bulk by the area of the surface of the rain receiver. The quantity of water registered by this gauge, between 22^h of one day and 22^h of the next, is added every day to the whole quantity previously registered from the beginning of year, and the sum is inserted in the column whose heading is "Stand of Rain-gauge No. 1." The quantities in this column represent the amount of rain in inches collected from January 1.

The rain-gauge No. 2, on the top of the library, is a funnel, whose diameter is 6 inches; its exposed area consequently is 28·3 square inches. The water passes into a cylinder from which it is poured into a circular vessel, the diameter of which is 3·25 inches; and therefore 3·4 inches of this correspond to 1 inch of rain. This gauge is 177 feet 2 inches above the mean level of the sea. The quantity of water collected in this gauge is measured every day at 22^h, and the amount in inches is inserted in the column whose heading is "Reading of Rain-gauge No. 2."

The rain-gauge No. 3 is a self-registering rain-gauge on Crosley's construction, made by Watkins and Hill. The surface exposed to the rain is 100 square inches. The collected water falls into a vibrating bucket, whose receiving concavity is entirely above the center of motion, and which is divided into two equal parts by a partition whose plane passes through the axis of motion. The pipe from the rain receiver terminates immediately above the axis. Thus that part of the concavity which is highest is always in the position for receiving water from the pipe. When a certain quantity of water has fallen into it, it preponderates, and falling, discharges its water into a cistern below; then the other part of the concavity receives the rain, and after a time preponderates. Thus the bucket is kept in a state of

vibration. To its axis is attached an anchor with pallets, which acts upon a toothed wheel by a process exactly the reverse of that of a clock-escapement. This wheel communicates motion to a train of wheels, each of which carries a hand upon a dial-plate; and thus inches, tenths, and hundredths are registered. Sometimes, when the escapement has obviously failed, the water which has descended to the lower cistern has again been passed through the gauge, in order to enable an assistant to observe the indication of the dial-plates without fear of an imperfection in the machinery escaping notice. This gauge is placed on the ground, 21 feet South of the Magnetic Observatory, and 156 feet 6 inches above the mean level of the sea. It is read every day at 22^h, and its readings are inserted in the column whose heading is "Stand of Rain-gauge No. 3." The numbers in this column represent the amount of rain fallen from January 1.

The rain-gauge No. 4 is a simple cylinder-gauge, 8 inches in diameter, and therefore having an exposed area of 50·3 square inches. The height of the cylinder is $18\frac{1}{2}$ inches; at the depth of one inch from the top within the cylinder is fixed a funnel (an inverted cone), of 6 inches perpendicular height; with the point of this funnel is connected a tube, one-fifth of an inch in diameter, and $1\frac{1}{2}$ inch in length; three-quarters of an inch of this tube is straight, and the remaining half-inch is bent upwards, terminating in an aperture of one-eighth of an inch. By this arrangement, the last drop of water remains in the bent part of the tube, and is some hours evaporating; it is usually found that the dew at night fills it, and evening comes before it is again free from water. The upper part of the funnel, or base of the cone, is made to touch the internal part of the cylinder all round; and it is believed that evaporation is almost totally prevented. The cylinder is sunk 8 inches in the ground, leaving $5\frac{1}{2}$ inches above the ground. The height above the mean level of the sea is 155 feet 3 inches; the place of the gauge was 6 feet West of the gauge No. 3 until July 22^d, when it was placed 5 feet North of the gauge No. 3. The quantity of water collected is read at the end of every month; its readings are inserted in the marginal notes to the Observations.

The rain-gauge No. 5 is one of a similar construction to No. 4, and it is placed in the garden of the Reverend George Fisher, at the Greenwich Hospital Schools, with about two-thirds of its depth below the surface of the ground, and beyond the influence of buildings or trees. Its receiving surface is about 35 feet above the mean level of the sea. The quantity of water collected is read at the end of every month; its readings are inserted in the marginal notes to the Observations.

THE ACTINOMETER.

The actinometer consists of a hollow cylinder of glass, 7 inches in length, and 1·22 inch in diameter, fixed at one end to a tube similar to a thermometer tube, 7 inches in length, which is terminated at the upper end by a ball 1·1 inch in diameter, and at its upper part

is drawn out to a fine tube which is stopped by wax: a scale divided into 100 equal parts is attached to the thermometer tube. The other end of the cylinder is closed by a silver plated cap, cemented on it, and furnished with a screw of silver with 23 threads to an inch, passing through a collar of waxed leather. The cylinder is filled with ammonio-sulphate of copper; it is enclosed in a chamber blackened on three sides, and on the fourth by a greenish plate glass, 0·1 inch in thickness, which is removable at pleasure. The action of the screw is to increase or diminish the capacity of the cylinder, and thus draw back from, or to drive into the ball, a portion of liquid; and by this means the cylinder may be just filled, leaving no bubble of air in it. For using the instrument, a stand or table is prepared with a part movable, on which the instrument is placed, and on which it can be very readily exposed perpendicularly to the direct rays of the Sun: a screen is also attached, which can in an instant be so placed as to cut off all the rays of the Sun from the chamber of the instrument, and can be as quickly withdrawn, so as fully to expose the chamber. The method of observation is as follows: when the cylinder is just full, and no bubble of air is in it, the tube also being clear of all broken portions of liquid, the liquid is drawn down by the screw to the zero of the scale; the instrument is then exposed a few minutes to the Sun, and at the beginning of a minute by the chronometer, the scale is read; and at the end of the minute, it is read again: the screen is placed before the instrument: at the following 30^{s} the scale is read for the first shade observation, and at one minute afterward is again read for the second shade observation; the instrument is then again exposed to the Sun, and read as before, and so on successively.

In the section of actinometer-observations will be found some made for the purpose of ascertaining the effect of the glass forming the fourth side of the chamber, and in the Abstracts of former years it will be found that this effect is to stop one-sixth nearly of the heating rays of the Sun. Therefore, one-sixth of the observed radiation ought to be added in order to obtain the true radiation. This correction has *not* been applied either in the section of observations or in the Abstracts.

In the volumes for 1844 and 1845 are given the details of experiments, from which it appears that the fluid is driven up the tube about 259$^{div.}$ by one turn of the screw.

The following measurements of the diameter of the screw, and of the height and depth of its thread, were made on 1844, April 18.

It was found that the height of 23 threads of the screw corresponded exactly to one inch: the distance, therefore, between two contiguous threads is 0$^{in.}$·0435. This determination was by Mr. Glaisher. Again, a fine piece of silk was tied to the bottom of the screw, and carefully passed round the bottom of 34 threads: its length was found to be 50$^{in.}$·4. Therefore, the circumference of the screw at the bottom of the thread was 1$^{in.}$·5 nearly, or its diameter was 0$^{in.}$·477. This determination was by Mr. Glaisher. A piece of very fine gold wire also was passed round eleven threads, and its length was found to be

16^{in}·4; from which the circumference of the bottom of the thread was 1^{in}·5 as before. This determination was by Mr. Main. The diameter of the screw at the outer edge of the threads was found to be 0^{in}·52. The depth of the thread by measurement was less than 0^{in}·05.

ELECTRICAL APPARATUS.

The electrical apparatus consists of two parts, namely, the Moveable Apparatus, which is connected with a pole nearly eighty feet high planted a few feet North of the Magnetic Observatory; and the Fixed Apparatus, which is mounted in a projecting window in the ante-room of the Magnetic Observatory.

On the top of the pole is fixed a projecting cap, to which are fastened the ends of two iron rods, which terminate in a pit sunk in the ground, and are kept in tension by attached weights. These rods are to guide the moveable apparatus in its ascents and descents. Near the bottom of the pole is fixed a windlass; the rope upon which it acts passes over a pulley in the cap, and sustains the moveable apparatus.

The moveable apparatus consists of the following parts:—A plank in a nearly vertical position is attached to perforated iron bars which slide upon the iron rods. On the upper part of this plank is a cubical box with a very strong top; the top carries a stout cone of glass with its base downwards, having a conical hollow in its lower part; upon the upper or smaller end of the cone is fixed a copper tube five feet long, carrying at its lower extremity a small copper umbrella which protects the glass from rain, and supporting at its upper extremity a large lantern whose flame is very freely exposed to the air; by this flame the atmospheric electricity is collected. In the top of the box there is a large hole, through which a cone of copper passes into the conical hollow of the cone of glass; in the box a small lamp is placed, by the flame of which the copper cone and the lower part of the glass cone are kept in a state of warmth; and thus the copper tube and lantern are perfectly insulated. To the copper tube is attached a copper wire 0·1 inch in diameter, and about 73 feet long, at the end of which is a hook; a loaded brass lever connected with the fixed apparatus presses upon this hook, and thus keeps the wire in a state of tension, and at the same time establishes the electrical communication between the lantern and the fixed apparatus.

For the daily trimming of the lamps the travelling apparatus is lowered and raised by means of the windlass: the wire is then coiled upon a self-acting reel which is urged by a weight.

The fixed apparatus consists of these parts:—A glass bar nearly three feet long, and thickest at its middle, is supported in a horizontal position, its ends being fixed in the sides of the projecting window. Near to each end is placed a small lamp whose chimney

encircles the glass, and whose heat keeps the glass in a state of warmth proper for insulation. A brass collar surrounds the center of the glass bar; it carries one brass rod projecting vertically upwards through a hole in the roof of the window-recess, to which rod are attached a small umbrella and the loaded lever above mentioned; and it carries another rod projecting vertically downwards, to which is attached a horizontal brass tube in an East and West direction. On the North and South sides of this tube there project four horizontal rods, through the ends of which there pass vertical rods which can be fixed by screws at any elevation; these are placed in connexion with the electrometers which rest on the window seat.

The electrometers during the year 1846, consisted of a Double Gold Leaf Electrometer of the ordinary construction; two Volta's Electrometers, denoted by Nos. 1 and 2; a Henley's Electrometer; a Ronalds' Spark Measurer; a Dry-pile Apparatus; and a Galvanometer.

Volta 1 and Volta 2 are of the same construction; each is furnished with a pair of straws, two Paris inches in length; those of the latter being much heavier than those of the former: each instrument is furnished with a graduated ivory scale, whose radius is two Paris inches, and it is graduated into half Paris lines. In the original construction of these instruments it was intended that each division of No. 2 should correspond to five of No. 1: the actual relation between them has not yet been determined by observations at the Royal Observatory. The straws are suspended by hooks of fine copper wire to the suspension-piece, and they are at the distance of half a line from each other.

Henley's Electrometer is supported on the West end of the large horizontal tube by means of a vertical rod fixed in it. On each side of the upper part of this rod is affixed a semicircular plate of ivory, whose circumference is graduated; at the centers of these ivory plates two pieces of brass are fixed, which are drilled to receive fine steel pivots, carrying a brass axis, into which the index or pendulum is inserted; the pendulum terminates with a pith ball. The relation between the graduations of this instrument and those of the other electrometers has not yet been determined. This instrument has seldom been affected till Volta 2 has risen to above 100 divisions of its scale.

The spark-measurer is similar in its construction to that at the Observatory at Kew. It consists of a vertical sliding rod terminated by a brass ball, which ball can be brought into contact with one of the vertical rods before referred to, also terminating in a ball; and it can be moved from it or towards it by means of a lever, with a glass handle. During the operation of separating the balls, an index runs along a graduated scale, and exhibits the distance between the balls, and this distance measures the length of the spark.

The electrometers and the spark-measurer were originally constructed under the superintendance of Francis Ronalds, Esq., but have since received small alterations.

The dry-pile apparatus was made by Watkins and Hill; it is placed in connexion with the brass bar by a system of wires and brass rods. The indicator, which vibrates between

the two poles, is a small piece of gold leaf. This instrument is very delicate, and it indicates at once the quality of the electricity. When the inclination of the gold leaf is such that it is directed towards the top of either pile, it remains there as long as the quantity of electricity continues the same or becomes greater: the position is sometimes expressed in the notes by the words "as far as possible." The angle which the gold leaf makes with the vertical at this time is about 40°.

The galvanometer was made by Gourjon of Paris, and consists of an astatic needle, composed of two large sewing needles, suspended by a split silk fibre, one of the needles of the pair vibrating within a ring formed by 2400 coils of fine copper wire. The connexions of the two portions of wire forming these 2400 coils are so arranged that it is possible to use a single system of 1200 coils of single wire, or a system of 1200 coils of double wire, or a system of 2400 coils of single wire: in practice the last has always been used. A small ball communicating by a wire with one end of the coils is placed in contact at pleasure with the electric conductor, and a wire leading from the other end of the coil communicates with the earth. An adjustible circular card, graduated to degrees, is placed immediately below one of the needles; the numeration of its divisions proceeds in both directions from a zero. One of these directions is distinguished by the letter A, and the other by the letter B; and the nature of the indication represented by the deflexion of the needle towards A or towards B, will be ascertained from the following experiment. A voltaic battery being formed by means of a silver coin and a copper coin, with a piece of blotting paper moistened with saliva between them: when the copper touches the small ball, and the wire which usually communicates with the earth is made to touch the silver, the needle turns towards A; when the silver touches the small ball, and the wire is made to touch the copper, the needle turns towards B.

In addition to this apparatus, an Induction-ball has been used in some former years for making experiments upon the inductive effect of electricity at different heights above the earth's surface. By inadvertence no explanation was given of this apparatus in the volumes where it should have been found; and the following brief account of it is added here to supply the deficiency.

A hollow copper ball of 8 inches in diameter is connected at one extremity of a diameter to a copper wire, and at the other extremity to an insulating glass rod by means of a hook's joint. At the other end of the glass rod a copper piece is fastened for connexion with a small wooden frame for the purpose of raising and lowering the ball by connexion with the electrical pole previously described. The glass rod is kept warm by means of a lamp contained in a perforated curved copper box through which it passes. The wire passes round a glass bar $2\frac{1}{2}$ feet in length, attached to the pole at a height of 20 feet, and warmed at each end by a lamp inclosed in a perforated wooden box; and it then, at its other extremity, is put in connexion with the instruments in the same manner as

for the ordinary conducting wire. The wooden frame which supports the glass rod slides upon a rope, which is attached, at its upper end to the top of the pole, and at its lower end to a post in the ground. The ball can be raised to within a few feet of the top of the pole; and the effect upon the instruments within the room is observed at various heights. The effects were so insignificant and uncertain that it was thought better to discontinue the observations.

PERSONAL ESTABLISHMENT.

Four persons were regularly employed in the Magnetical and Meteorological Obervations during the year 1846 till near the end of October. These persons were—

Mr. James Glaisher, Superintendent.
Mr. Hugh Breen.
Mr. Charles Dilkes Lovelace.
Mr. Thomas Downs.

Near the end of October, Mr. George Humphreys was attached, so that from October 26 to the end of the year five persons were employed.

The order of observation is arranged every week, and usually proceeds on the principle of an equal division of observations among the three junior assistants; excepting that at times Mr. Glaisher has taken a complete day's observations. At all times, in cases of illness, or of absence of one person, the observations are equally divided between the three remaining assistants. Denoting the three assistants by A, B, C, the work of three complete days will be thus disposed—

A	from	12^h (midnight)	to	20^h
B	from	22^h	to	2^h
A	from	4^h	to	10^h
B	from	12^h (midnight)	to	20^h
C	from	22^h	to	2^h
B	from	4^h	to	10^h
C	from	12^h (midnight)	to	20^h
A	from	22^h	to	2^h
C	from	4^h	to	10^h

In order to give reasonable security to myself and to the superintendent, that the assistants have really been present at the time at which their observations profess to have been made, there is provided an instrument frequently used in large manufactories, and usually denominated "the watchman's clock." It consists of a pendulum-clock which

has no hands, but of which the dial-plate turns round; this dial-plate has a number of radial pins fixed in its circumference, each of which can be pressed downwards (being held by the friction of a spring only) without disturbing the others. A lever is attached to the clock-frame, in such a position that, by means of a cord which passes from the lever through a hole in the clock-case to its outside, the lever can be made to press down that pin which happens to be uppermost, and no other. The clock-case and clock-face are securely locked up. Thus the only power which an assistant possesses over the clock, is that of pulling the cord, and thereby depressing one pin; the dial-plate then turns away, carrying that pin in its depressed state, and thus retains, for about eleven hours, the register of every time at which the assistant has pulled the cord. About one hour before returning to the same time (semi-diurnal reckoning), the bases of the pins begin to run upon a spiral inclined plane, by which they are forced up to their normal position before coming to that point at which the lever can act on them.

It is the duty of each assistant, on making the prescribed observations, to pull the cord of the watchman's clock; and it is the duty of the first assistant (Mr. Main) to examine the face of the clock every morning, and to enter in a book an account of the pins which he finds depressed. It is presumed that great security is thus given against irregularity, as regards the time of the observations.

ROYAL OBSERVATORY, GREENWICH.

DAILY OBSERVATIONS

OF

MAGNETOMETERS.

1846.

Daily Observations from January 0 to 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
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.....	....	...	..	...	..	..	2. 10	55. 15	038782		032949		T D
.....	....	...	..	...	..	..	4. 0	54. 11	038000	45·5	033154	45·7	H B
.....	....	...	..	...	..	..	6. 0	50. 51	038349	45·6	033232	46·2	
.....	....	...	..	...	..	..	8. 0	50. 22	038244	45·5	032958	45·2	
.....	....	...	..	...	..	..	10. 0	51. 2	037973	44·3	032637	43·5	H B
.....	....	...	..	...	..	..	12. 0	47. 53	037505	44·8	032963	44·7	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s\cdot8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s\cdot6$; in Vertical Plane, $27^s\cdot5$.

The day referred to in the foot-notes is always to be understood as that of Civil Reckoning, unless the time of the observation be mentioned, and then it is referred to Astronomical Reckoning.

Jan. 1^d. Every part of the suspension apparatus of each of the magnets was examined before this time; the magnets were minutely examined, and found to be in perfectly good order, and observations were made for their adjustments.

DECLINATION MAGNET.

Jan. $1^d.\ 0^h$. The observation was taken at $0^h.\ 5^m$: the result has been used in subsequent calculations, as though it had been made at $0^h.\ 0^m$.
Jan. $1^d.\ 1^h.\ 50^m$. The observation was omitted, the instrument being under examination for its adjustments.
Jan. $1^d.\ 2^h.\ 10^m$. The observation was taken at $2^h.\ 11^m$, being one minute too late.

Daily Observations from January 4 to 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Jan. 4. 14. 0	22. 50. 4	0·037575	40·0	0·032502	40·0	L	Jan. 7. 14. 0	22. 47. 5	0·037465	52·5	0·033257	52·5	L
16. 0	50. 57	037626	39·0	032297	39·0		16. 0	49. 0	037622	52·0	033428	52·0	
18. 0	50. 57	037984	38·5	032399	38·5		18. 0	49. 45	037850	51·0	033349	51·0	
20. 0	50. 36	038961	38·0	032452	38·0	L	20. 0	51. 5	038168	50·0	033779	50·0	L
22. 0	50. 14	039371	39·5	032937	39·8	T D	22. 0	54. 1	038072	51·0	033491	50·8	T D
Jan. 5. 0. 0	22. 55. 41	0·039431	40·5	0·032756	40·0	T D	Jan. 8. 0. 0	22. 55. 25	0·038057	53·0	0·033846	52·7	T D
1. 50	55. 56	039593		033417			1. 50	55. 57	037707		034127		
2. 0	55. 37	039549	42·5	033392	43·0		2. 0	55. 19	037707	53·8	034102	54·0	
2. 10	55. 11	039549		033294		T D	2. 10	55. 19	038149		034063		T D
4. 0	52. 41	038476	44·0	033457	43·8	L	4. 0	55. 53	037877	53·5	033785	53·3	L
6. 0	51. 48	038697	44·0	033436	44·0		6. 0	51. 23	038678	53·0	033623	53·0	
8. 0	50. 11	038697	44·0	033486	44·0		8. 0	50. 11	038678	53·0	033668	53·0	L
10. 0	48. 11	037505	43·5	033339	43·5	L	10. 0	49. 10	038390	53·0	033648	53·0	D
12. 0	47. 57	037863	43·0	033420	43·2	T D	12. 0	50. 37	038630	53·5	033805	53·8	T D
14. 0	51. 8	038597	42·5	033079	42·0		14. 0	50. 12	038585	53·5	033819	54·0	
16. 0	48. 45	038585	41·0	032986	41·0		16. 0	50. 54	038456	53·0	033496	53·0	
18. 0	50. 10	038903	40·0	032893	40·0		18. 0	50. 2	038678	53·0	033364	52·5	
20. 0	49. 19	038903	40·0	033039	40·0	T D	20. 0	50. 42	038744	53·0	033465	52·7	T D
22. 0	49. 19	038903	40·0	033064	40·0	L	22. 0	49. 37	038474	51·8	033322	51·6	L
Jan. 6. 0. 0	22. 51. 39	0·038357	42·0	0·033284	42·0	L	Jan. 9. 0. 0	22. 52. 6	0·037493	51·5	0·033313	51·2	L
1. 50	53. 20	039814		033481			1. 50	54. 33	037758		033414		
2. 0	53. 32	039881	43·8	033534	43·8		2. 0	54. 44	037775	51·6	033487	51·3	
2. 10	54. 14	040168		033505		L	2. 10	55. 12	037775		033487		L
4. 0	53. 47	039702	46·0	033694	45·7	T D	4. 0	52. 30	038500	53·0	033887	53·0	T D
6. 0	51. 26	040263	48·0	033820	47·8		6. 0	51. 48	038541	53·5	033754	53·2	
8. 0	50. 24	040256	49·0	033782	49·0		8. 0	48. 50	038456	53·0	033540	52·5	
10. 0	50. 16	040075	50·8	033870	50·5	T D	10. 0	48. 50	038371	52·5	033466	52·0	T D
12. 0	51. 16	040212	52·0	033892	51·8	D	12. 0	50. 3	038344	51·3	033328	51·2	D
14. 0	49. 30	038342	52·2	033631	52·2		14. 0	50. 1	038116	51·0	033364	51·0	
16. 0	50. 12	038586	52·2	033665	52·2		16. 0	49. 53	037864	50·3	033316	50·0	
18. 0	48. 37	039149	52·0	033448	51·3		18. 0	49. 40	038270	48·0	032967	48·0	
20. 0	49. 2	039574	51·5	033416	51·2	D	20. 0	49. 31	038543	47·0	032844	47·0	D
22. 0	51. 49	039836	52·0	033570	51·8	L	22. 0	49. 32	038322	47·0	033083	47·0	L
Jan. 7. 0. 0	22. 52. 52	0·038899	53·0	0·033643	53·0	L	Jan. 10. 0. 0	22. 51. 30	0·038765	47·0	0·033078	46·8	L
1. 50	53. 51	038882		033760			1. 50	52. 19	039377		033357		
2. 0	54. 5	039213	54·2	033858	54·0		2. 0	52. 46	039156	48·0	033357	48·0	
2. 10	53. 45	039324		033809		L	2. 10	52. 52	039554		033347		L
4. 0	53. 19	038932	55·8	034157	56·0	T D	4. 0	52. 44	038396	49·0	033557	49·0	D
6. 0	48. 1	037357	55·0	033903	55·0	L	6. 0	50. 9	038924	49·5	033474	49·0	
8. 0	50. 16	038575	55·0	033903	55·0	L	8. 0	50. 7	038548	48·2	033205	48·0	D
10. 0	49. 41	038449	54·0	033668	54·0	D	10. 0	48. 39	038185	47·5	033102	47·0	T D
12. 0	50. 2	038227	54·0	033639	54·0	L	12. 0	47. 32	038152	46·0	032916	46·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

VERTICAL FORCE MAGNET.
Jan. 5d. Between 0^h and $1^h.50^m$ a large change occurred.

Daily Observations from January 11 to 17.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Jan. 11. 14. 0	22. 51. 4	0·037745	41·0	0·032547	41·0	L	Jan. 14. 14. 0	22. 49. 44	0·038440	49·0	0·033051	49·0	L
16. 0	50. 33	038534	42·0	032860	42·0		16. 0	50. 12	038670	48·4	033062	48·4	
18. 0	50. 2	038766	41·8	032807	41·8		18. 0	51. 19	039377	48·0	033200	48·0	
20. 0	49. 6	039328	41·2	032522	41·0	L	20. 0	51. 1	039624	47·5	033035	47·3	L
22. 0	51. 27	038623	42·0	033095	42·8	T D	22. 0	53. 41	038662	49·0	033377	49·0	T D
Jan. 12. 0. 0	22. 55. 16	0·038874	44·0	0·033366	43·7	T D	Jan. 15. 0. 0	22. 52. 47	0·039402	51·4	0·033884	51·7	T D
1. 50	56. 27	036262		033461			1. 50	54. 9	039076		033936		
2. 0	58. 22	036218	44·0	033451	44·0		2. 0	54. 27	039076	53·0	033936	53·0	
2. 10	56. 51	036705		033607		T D	2. 10	53. 23	038899		033916		T D
4. 0	53. 27	037369	44·0	033446	44·0	L	4. 0	51. 52	039433	53·8	033927	53·8	L
6. 0	51. 43	038212	44·4	033468	44·4		6. 0	50. 6	039467	54·0	033760	54·0	
8. 0	49. 1	037114	43·8	033266	43·8		8. 0	49. 25	039069	54·0	033639	54·0	
10. 0	48. 11	037819	43·0	033060	43·0	L	10. 0	49. 25	039290	54·0	033712	54·0	L
12. 0	50. 0	038280	43·5	033178	43·3	T D	12. 0	49. 6	039135	54·0	033731	54·0	T D
14. 0	50. 57	037967	44·0	033314	44·0		14. 0	49. 20	039120	53·0	033496	53·0	
16. 0	51. 6	038251	44·5	033408	44·5		16. 0	49. 38	039382	53·5	033713	53·6	
18. 0	50. 51	038450	44·5	033290	44·5		18. 0	49. 38	039692	53·5	033654	53·6	
20. 0	50. 12	038391	44·8	033334	45·0	T D	20. 0	49. 14	039079	52·5	033435	52·4	T D
22. 0	49. 54	038118	44·5	033081	44·5	L	22. 0	50. 54	039036	51·2	033164	51·0	L
Jan. 13. 0. 0	22. 52. 55	0·036977	45·6	0·033391	45·4	L	Jan. 16. 0. 0	22. 54. 4	0·038695	51·8	0·033472	51·8	L
1. 50	54. 58	038602		033635			1. 50	55. 39	040330		033525		
2. 0	55. 4	038713	48·0	033538	47·8		2. 0	55. 48	040330	52·3	033525	52·0	
2. 10	55. 4	038536		033499		L	2. 10	55. 48	040330		033535		
4. 0	53. 4	038610	50·0	033948	50·5	T D	4. 0	51. 48	039726	53·7	033872	53·5	L
6. 0	49. 46	039182	51·8	034013	52·0		6. 0	50. 27	039648	54·8	033918	54·6	T D
8. 0	50. 13	038736	51·0	033632	51·0		8. 0	49. 42	039512	54·0	033673	54·0	
10. 0	48. 22	037810	50·5	033544	50·5	T D	10. 0	47. 41	038669	53·6	033610	53·8	T D
12. 0	45. 29	037871	49·3	033217	49·5	H B	12. 0	47. 18	038918	53·5	033490	53·2	H B
14. 0	44. 31	039241	48·5	032540	48·6		14. 0	49. 54	038819	52·4	033521	52·5	
16. 0	46. 11	037693	47·6	032655	47·5		16. 0	50. 8	039419	51·5	033413	51·8	
18. 0	49. 28	038911	46·3	032784	46·5		18. 0	51. 26	040592	51·5	033482	51·8	
20. 0	49. 26	039044	46·3	033073	46·5	H B	20. 0	54. 36	038990	50·8	033284	51·2	H B
22. 0	50. 18	038041	46·0	032990	46·0	L	22. 0	52. 6	038168	50·0	033168	50·0	L
Jan. 14. 0. 0	22. 54. 24	0·036823	46·0	0·033111	46·0	L	Jan. 17. 0. 0	22. 54. 28	0·038559	51·0	0·033456	51·0	L
1. 50	54. 59	038100		033595			1. 50	53. 54	039785		033931		
2. 0	54. 35	038322	47·0	033571	47·0		2. 0	53. 38	039740	53·0	033931	52·8	
2. 10	53. 7	038543		033571		L	2. 10	54. 26	039895		033912		L
4. 0	52. 7	038975	48·5	033849	48·5	H B	4. 0	52. 27	038013	54·3	033487	54·2	H B
6. 0	51. 27	038588	50·0	034297	50·2		6. 0	53. 33	038645	54·5	033815	53·8	
8. 0	45. 41	037915	50·6	033778	50·8		8. 0	47. 23	038401	54·5	033839	53·8	
10. 0	46. 3	038840	50·7	033520	51·0	H B	10. 0	43. 19	038856	54·7	033921	54·5	H B
12. 0	48. 20	038279	50·0	033436	50·0	L	12. 0	49. 56	037741	54·0	033420	54·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
Jan. 17d. Between 6h and 8h and between 10h and 12h considerable changes took place for the times of the day, and they are the greatest within the same interval of time in the month: the magnets during this month were unusually steady.

HORIZONTAL FORCE MAGNET.
Jan. 12d. Between 0h and 1h. 50m a large change took place.

VERTICAL FORCE MAGNET.
Jan. 13d. Between 12h and 14h a large change occurred.

Daily Observations from January 18 to 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Jan. 18. 14. 0	22. 49. 19	0·037818	44·3	0·033070	44·0	L
16. 0	48. 48	038343	44·0	033070	44·0	
18. 0	47. 39	039140	44·0	033012	44·0	
20. 0	51. 59	039320	44·8	033160	44·8	L
22. 0	53. 23	039113	45·8	033336	46·0	H B
Jan. 19. 0. 0	22. 55. 22	0·039684	48·5	0·033677	48·7	H B
1. 50	53. 16	040883		034177		
2. 0	53. 16	040773	51·0	034177	51·0	
2. 10	52. 51	040773		034124		H B
4. 0	51. 17	040475	51·2	033695	51·0	L
6. 0	51. 16	040534	52·2	033672	52·0	
8. 0	50. 53	040534	53·5	033970	53·5	
10. 0	50. 14	040397	54·0	033819	54·0	L
12. 0	50. 31	040217	54·5	033886	54·7	T D
14. 0	50. 31	040548	54·5	033808	54·7	
16. 0	50. 31	040482	54·5	033750	54·7	
18. 0	50. 22	040261	54·5	033743	54·8	
20. 0	49. 43	039478	53·8	033383	53·4	T D
22. 0	51. 21	039146	52·5	033370	52·3	H B
Jan. 20. 0. 0	22. 55. 21	0·038947	52·5	0·033470	52·2	H B
1. 50	54. 33	039588		033707		L
2. 0	54. 21	039522	53·8	033707	53·8	H B
2. 10	54. 2	039522		033693		H B
4. 0	51. 33	039154	54·5	033747	55·0	T D
6. 0	51. 15	038711	54·5	033656	54·8	
8. 0	50. 51	038933	53·2	033385	53·5	
10. 0	50. 13	038593	52·5	033385	52·8	T D
12. 0	49. 14	038179	51·5	033343	52·2	H B
14. 0	49. 54	038317	51·4	033413	51·8	
16. 0	50. 44	038751	50·7	033382	51·2	
18. 0	50. 21	039089	50·6	033310	50·5	
20. 0	53. 18	038515	49·7	033138	49·5	H B
22. 0	51. 52	039053	50·0	033364	50·0	L
Jan. 21. 0. 0	22. 53. 39	0·038559	51·0	0·033456	51·0	L
1. 50	54. 53	039819		033740		
2. 0	54. 53	039641	53·2	033716	53·0	
2. 10	54. 53	039819		033702		L
4. 0	52. 41	039611	55·5	034089	55·8	H B
6. 0	50. 34	039317	56·5	033934	56·3	
8. 0	49. 49	039284	56·7	033873	56·7	H B
10. 0	49. 21	039170	57·2	033880	57·0	G
12. 0	48. 57	038804	57·0	033870	57·0	G
Jan. 21. 14. 0	22. 49. 15	0·038778	57·5	0·033900	57·3	L
16. 0	49. 22	039281	58·5	033973	58·5	T D
18. 0	48. 3	039546	58·5	033861	58·5	T D
20. 0	48. 23	039214	58·5	033676	58·3	H B
22. 0	51. 6	038480	59·0	033861	59·0	G
Jan. 22. 0. 0	22. 54. 29	0·037399	58·5	0·033839	58·4	L
1. 50	56. 7	038659		034015		T D
2. 0	55. 57	038720	59·5	034042	59·5	
2. 10	55. 57	038769		034040		T D
4. 0	52. 51	038846	59·2	033871	59·0	L
6. 0	51. 53	039137	60·0	034111	60·5	T D
8. 0	51. 30	039099	59·0	033685	59·2	H B
10. 0	50. 32	039513	60·0	033847	59·5	G
12. 0	50. 19	039144	59·0	033770	58·8	L
14. 0	50. 19	038428	57·0	034154	57·0	
16. 0	50. 19	038421	55 4	033467	55·6	
18. 0	49. 58	038718	53·5	033288	53·5	
20. 0	49. 39	038744	53·0	033253	53·0	L
22. 0	49. 54	038456	53·0	033302	53·0	T D
Jan. 23. 0. 0	22. 52. 21	0·038098	54·8	0·033726	54·7	T D
1. 50	54. 12	038874		033912		H B
2. 0	54. 13	038830	56·5	033912	56·2	
2. 10	54. 1	038807		033902		H B
4. 0	51. 54	038472	57·0	033846	57·0	L
6. 0	50. 30	039324	56·8	033665	56·5	
8. 0	49. 39	039409	56·0	033533	56·0	
10. 0	48. 15	040159	55·2	033342	55·0	
12. 0	47. 57	039682	55·0	033196	55·0	L
14. 0	47. 22	037601	55·0	033513	55·0	T D
16. 0	50. 22	038081	54·7	033529	54·6	
18. 0	51. 10	038796	55·0	033635	55·0	
20. 0	57. 25	040020	55·3	033318	55·0	T D
22. 0	59. 21	037798	54·6	032918	53·8	H B
Jan. 24. 0. 0	22. 54. 23	0·037059	55·2	0·033489	55·0	L
1. 50	55. 9	036863		033748		
2. 0	55. 25	036907	56·0	033748	55·8	
2. 10	55. 35	037195		033748		L
4. 0	54. 49	036878	57·0	033993	57·0	T D
6. 0	50. 53	037876	57·4	033909	57·0	
8. 0	49. 23	039698	57·7	033953	57·5	
10. 0	45. 24	037092	58·0	033915	58·0	T D
12. 0	47. 59	036997	57·7	033724	57·5	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
Jan. 23d. Between 20^h and 22^h a considerable change took place in the contrary direction to that which usually takes place between these times, and within the following two hours the motion of the magnet was contrary to its usual motion.

HORIZONTAL FORCE MAGNET.
Jan. 24d. Between 8^h and 10^h a considerable change took place.

VERTICAL FORCE MAGNET.
Jan. 22d. Between 14^h and 16^h a large change took place.

Daily Observations from January 25 to 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Jan. 25. 14. 0	22. 49. 28	0·038641	53·7	0·033366	53·5	H B
16. 0	49. 27	039144	53·4	033243	53·0	
18. 0	49. 9	039398	53·2	033334	53·2	
20. 0	48. 55	039197	52·8	033146	52·5	H B
22. 0	51. 6	039231	53·0	033302	53·0	L
Jan. 26. 0. 0	22. 54. 15	0·039341	54·3	0·033517	54·0	L
1. 50	55. 22	039570		033992		
2. 0	55. 15	039570	56·3	033992	55·8	
2. 10	54. 55	039637		033968		L
4. 0	52. 19	039294	57·8	034002	57·5	H B
6. 0	50. 6	039362	58·2	033815	57·7	
8. 0	50. 11	039287	57·5	033583	56·8	
10. 0	49. 46	039184	56·5	033612	56·3	H B
12. 0	49. 35	039254	56·0	033606	56·0	L
14. 0	50. 32	039409	56·0	033680	56·0	
16. 0	50. 3	038575	55·0	033489	55·0	
18. 0	....	...		...		
20. 0	48. 14	039349	52·0	033184	52·0	L
22. 0	50. 14	038176	52·0	033232	52·0	T D
Jan. 27. 0. 0	22. 54. 6	0·038235	53·0	0·033416	52·7	T D
1. 50	55. 15	039264		033964		
2. 0	55. 15	039264	54·5	033930	55·2	
2. 10	55. 59	039154		033930		T D
4. 0	53. 33	038796	55·0	033762	55·0	L
6. 0	49. 45	039077	56·0	033875	56·0	
8. 0	50. 0	039128	56·3	033631	56·0	
10. 0	46. 39	038690	56·2	033606	56·0	L
12. 0	50. 38	039085	56·7	033660	56·5	T D
14. 0	51. 31	039358	57·0	033763	57·0	
16. 0	53. 33	039102	56·8	033693	56·7	
18. 0	48. 2	038567	56·0	033547	56·0	
20. 0	47. 47	038643	55·4	033419	55·2	T D
22. 0	50. 25	037994	53·8	033010	53·5	H B
Jan. 28. 0. 0	22. 54. 7	0·037884	53·8	0·033278	53·5	H B
1. 50	56. 45	037400		033542		
2. 0	56. 45	037289	54·6	033577	54·5	
2. 10	55. 58	037333		033577		H B
4. 0	54. 34	037545	56·5	034158	56·5	T D
6. 0	51. 40	038659	56·8	033988	56·8	
8. 0	49. 54	038830	56·5	033738	56·5	
10. 0	48. 35	038634	56·0	033439	55·7	T D
12. 0	44. 41	037730	55·5	033230	54·8	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Jan. 28. 14. 0	22. 40. 12	0·037618	53·8	0·032899	53·6	H B
16. 0	44. 53	037918	52·7	032692	52·5	
18. 0	45. 46	038125	51·7	032994	52·0	
20. 0	49. 32	038348	50·8	033178	51·0	H B
22. 0	49. 23	037784	51·0	033164	51·0	L
Jan. 29. 0. 0	22. 53. 16	0·038548	52·5	0·033184	52·0	L
1. 50	56. 4	039614		033756		
2. 0	55. 44	039614	54·6	033698	54·5	
2. 10	55. 34	039614		033664		L
4. 0	53. 4	039301	56·8	034014	56·7	H B
6. 0	51. 45	039133	57·5	033863	57·2	
8. 0	50. 28	039320	57·3	033788	57·3	
10. 0	49. 47	039232	56·0	033607	56·3	H B
12. 0	49. 21	038575	55·0	033381	55·0	L
14. 0	50. 14	038183	54·0	033332	54·0	
16. 0	50. 30	037571	53·0	033253	53·0	
18. 0	49. 55	038814	51·2	032920	51·0	
20. 0	49. 55	038610	50·0	032997	50·0	L
22. 0	51. 13	038824	51·0	033408	51·0	T D
Jan. 30. 0. 0	22. 53. 16	0·038865	51·5	0·033487	51·3	T D
1. 50	53. 5	038924		033682		
2. 0	52. 26	038814	52·5	033657	52·5	
2. 10	53. 8	038814		033647		T D
4. 0	51. 22	038899	53·0	033692	53·0	L
6. 0	50. 56	039256	53·8	033659	53·8	G
8. 0	49. 18	038601	54·5	033170	54·5	L
10. 0	43. 53	038319	54·8	033680	54·8	L
12. 0	48. 16	038489	55·8	033743	55·5	T D
14. 0	52. 5	039766	56·8	033953	57·0	
16. 0	49. 19	038693	57·0	033773	57·0	
18. 0	47. 22	039092	57·0	033734	57·0	
20. 0	50. 23	039470	57·4	033768	57·5	T D
22. 0	51. 0	037596	56·8	033496	56·6	H B
Jan. 31. 0. 0	22. 54. 1	0·037288	57·2	0·033522	57·2	H B
1. 50	54. 26	038111		033784		
2. 0	54. 15	038288	58·0	033755	57·4	
2. 10	54. 8	038310		033887		H B
4. 0	50. 55	038192	59·0	033998	59·0	L
6. 0	49. 7	038148	59·0	033959	59·0	G
8. 0	49. 53	038273	57·0	033529	57·0	
10. 0	49. 13	038387	56·5	033460	56·0	G
12. 0	49. 12	038280	55·6	033396	55·5	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.

Jan. $28^d.14^h$. The result at this time is 4′. 29″ less than that at the previous observations, and it is 4′. 41″ greater than that at the following observation: the observation was noted as being correct.

Jan. $26^d.18^h$. The observations were omitted by inadvertence.

Daily Observations from February 1 to 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 1. 14. 0	22. 49. 44	0·037981	47·6	0·032817	47·8	H B
16. 0	49. 29	038195	47·3	032907	47·5	
18. 0	52. 38	038720	47·0	032956	47·3	
20. 0	49. 57	038337	46·7	032981	46·8	H B
22. 0	51. 30	037964	47·5	033215	47·5	L
Feb. 2. 0. 0	22. 57. 42	0·037853	48·8	0·033283	48·5	L
1. 50	56. 54	038201		033881		
2. 0	56. 43	038201	51·5	033832	51·5	
2. 10	56. 31	038113		033832		L
4. 0	52. 21	038369	53·4	033911	53·5	H B
6. 0	49. 9	038229	54·4	033783	54·2	
8. 0	48. 59	038346	53·8	033444	53·5	
10. 0	45. 36	039393	53·3	033331	53·0	H B
12. 0	48. 38	038320	52·2	033038	52·0	L
14. 0	49. 45	038449	51·0	032954	51·0	
16. 0	48. 41	037827	49·3	032636	49·0	
18. 0	48. 41	038051	48·4	032695	48·3	
20. 0	49. 15	038407	47·5	032776	47·5	L
22. 0	51. 13	037635	48·3	033074	48·3	H B
Feb. 3. 0. 0	22. 52. 48	0·036926	49·6	0·033198	49·3	H B
1. 50	54. 34	038008		033717		
2. 0	54. 21	038097	51·8	033707	52·3	
2. 10	54. 13	037942		033682		H B
4. 0	50. 36	037545	53·5	033726	53·5	L
6. 0	49. 44	038626	54·0	033566	54·0	
8. 0	49. 44	038397	55·0	033596	55·0	
10. 0	49. 6	038242	55·0	033489	55·0	L
12. 0	49. 10	038597	55·0	033416	55·0	G
14. 0	49. 23	038697	56·5	033743	56·5	
16. 0	49. 1	038922	56·0	033485	56·0	
18. 0	48. 57	038575	55·0	033220	54·5	
20. 0	50. 11	039084	55·0	033318	54·5	G
22. 0	51. 51	038984	53·5	033208	53·2	T D
Feb. 4. 0. 0	22. 52. 47	0·038190	53·0	0·033389	53·0	T D
1. 50	54. 31	038183		033537		
2. 0	54. 8	038183	54·0	033493	53·8	
2. 10	54. 0	038183		033464		T D
4. 0	51. 45	037906	55·1	033562	54·5	G
6. 0	51. 7	038789	56·0	033669	55·5	
8. 0	49. 26	038327	55·5	033513	55·0	
10. 0	48. 34	038530	55·0	033586	55·0	G
12. 0	46. 58	038456	53·0	033215	53·0	T D
Feb. 4. 14. 0	22. 48. 53	0·038330	52·0	0·033067	51·8	T D
16. 0	48. 53	038474	51·8	033179	51·8	
18. 0	48. 53	038695	51·8	033287	51·8	
20. 0	49. 2	038629	51·8	033375	51·8	T D
22. 0	49. 40	037559	51·5	033429	51·6	H B
Feb. 5. 0. 0	22. 52. 31	0·037377	51·6	0·033423	51·8	H B
1. 50	53. 46	037419		033343		
2. 0	53. 56	037486	52·5	033338	52·2	
2. 10	53. 47	037441		033368		H B
4. 0	51. 58	038183	54·0	034202	54·0	T D
6. 0	48. 45	038405	54·0	033604	54·0	
8. 0	48. 58	038618	54·6	033596	54·3	
10. 0	47. 54	038516	54·0	033469	54·0	T D
12. 0	48. 59	038419	53·3	033121	52·5	H B
14. 0	48. 57	038110	52·4	033143	52·2	
16. 0	48. 40	038450	51·4	033095	51·5	
18. 0	48. 46	038774	49·4	032841	49·5	
20. 0	50. 5	038510	48·5	032702	48·2	H B
22. 0	49. 19	037562	48·0	032836	48·0	L
Feb. 6. 0. 0	22. 54. 4	0·036976	48·2	0·032908	48·0	L
1. 50	55. 36	037936		033290		
2. 0	57. 25	037759	50·2	033290	50·0	
2. 10	57. 6	037870		033241		L
4. 0	52. 18	038545	53·5	033834	53·3	H B
6. 0	49. 37	038462	54·6	033594	54·2	
8. 0	49. 43	038418	54·6	033567	54·8	
10. 0	49. 44	038033	53·9	033308	53·8	H B
12. 0	49. 54	038071	53·6	033264	53·5	L
14. 0	50. 20	037935	52·8	033152	52·8	
16. 0	47. 27	037205	51·5	032906	51·5	
18. 0	46. 17	037452	51·0	032910	51·0	
20. 0	49. 28	037810	50·5	032885	50·5	L
22. 0	52. 22	036924	51·8	033198	51·5	T D
Feb. 7. 0. 0	22. 53. 52	0·037519	54·0	0·033649	53·8	T D
1. 50	55. 22	037381		033602		
2. 0	54. 55	037315	54·1	033572	54·1	
2. 10	54. 26	037536		033572		T D
4. 0	52. 57	037256	54·8	033756	54·5	L
6. 0	51. 24	036795	54·3	033742	54·3	
8. 0	49. 26	037485	53·8	033513	53·8	
10. 0	49. 35	037969	53·0	033326	53·0	L
12. 0	49. 35	037843	52·0	033194	52·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
Feb. 3d. 10h. The observation was taken $3^m.3^s$ too late; it has been used in subsequent calculations as if made at 10h.

HORIZONTAL FORCE MAGNET.
Feb. 3d. 10h. The observation was taken 6^m late; the result has been used in subsequent calculations as though the observation had been taken at the proper time.

VERTICAL FORCE MAGNET.
Feb. 3d. 10h. The observation was taken 1^m late; the result has been used in subsequent calculations as though the observation had been made at the proper time.
Feb. 2d. Between 6h and 8h a large change occurred.
Feb. 5d. Between 2h. 10m and 4h a considerable change occurred.
Feb. 7d. Between 12h and 14h a considerable change took place.

Daily Observations from February 8 to 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Feb. 8. 14. 0	22. 46. 46	0·037575	40·0	0·032239	40·0	T D	Feb. 11. 14. 0	22. 48. 34	0·037369	44·0	0·032808	44·0	T D
16. 0	47. 3	038024	39·0	032039	38·8		16. 0	49. 18	037863	43·0	032680	43·0	
18. 0	47. 32	038994	39·5	032297	39·0		18. 0	49. 13	038136	42·0	032521	41·7	
20. 0	49. 19	038409	39·7	032517	39·5	T D	20. 0	49. 38	037700	41·0	032474	41·0	T D
22. 0	55. 41	037531	41·5	033048	41·2	H B	22. 0	51. 33	037741	41·5	032532	41·8	H B
Feb. 9. 0. 0	22. 53. 33	0·037804	42·0	0·033066	42·3	H B	Feb. 12. 0. 0	22. 55. 54	0·036435	41·5	0·032755	41·7	H B
1. 50	55. 12	037037		033193		L	1. 50	54. 31	038102		033058		
2. 0	57. 0	037148	44·0	033266	44·0		2. 0	55. 9	038146	41·8	033068	42·2	
2. 10	57. 13	037103		033256		L	2. 10	54. 39	038146		033053		H B
4. 0	51. 33	037093	45·5	033779	45·3	T D	4. 0	52. 1	038262	43·0	033200	43·2	T D
6. 0	49. 58	037709	46·0	033351	45·8		6. 0	50. 35	037999	43·8	033110	43·5	
8. 0	50. 13	037488	46·0	033195	45·8		8. 0	48. 46	038425	45·0	033199	45·3	
10. 0	48. 26	037137	45·5	033126	45·5	T D	10. 0	44. 13	038952	45·5	033288	46·3	T D
12. 0	49. 11	037055	44·5	033019	44·6	H B	12. 0	44. 53	037587	45·8	033073	46·0	H B
14. 0	49. 51	037267	43·4	032863	43·2		14. 0	46. 37	037166	45·8	033073	46·0	
16. 0	49. 19	036734	41·7	033228	42·3		16. 0	47. 47	037469	45·5	033013	45·5	
18. 0	48. 7	036358	41·7	032644	41·5		18. 0	48. 9	037366	44·5	032925	44·5	
20. 0	50. 6	035089	41·4	032824	41·7	H B	20. 0	48. 26	037958	44·6	032901	44·5	H B
22. 0	51. 47	037541	39·8	032541	40·0	L	22. 0	49. 51	037418	45·2	032896	45·0	L
Feb. 10. 0. 0	22. 50. 16	0·037132	40·0	0·032449	39·8	L	Feb. 13. 0. 0	22. 52. 23	0·037420	45·6	0·032923	45·6	L
1. 50	52. 53	037855		032913		T D	1. 50	52. 35	037811		033243		
2. 0	52. 18	038143	41·0	032889	41·0		2. 0	52. 42	037811	46·6	033146	46·5	
2. 10	52. 18	038187		032889		T D	2. 10	52. 26	037811		033195		L
4. 0	52. 1	037520	43·2	033190	43·2	H B	4. 0	51. 12	038229	47·5	033340	47·7	H B
6. 0	45. 22	036595	44·4	033364	44·5		6. 0	50. 52	038367	48·7	033303	48·3	
8. 0	49. 55	037193	44·4	033130	44·5		8. 0	51. 20	038102	48·7	033052	48·4	
10. 0	48. 42	036749	44·0	032932	43·7	H B	10. 0	50. 59	037514	48·5	033238	48·7	H B
12. 0	49. 32	036756	43·0	032806	43·0	L	12. 0	47. 32	037044	48·6	033137	48·5	L
14. 0	49. 48	036306	41·0	032401	41·0		14. 0	46. 40	036857	47·5	032723	47·0	
16. 0	49. 48	036434	39·8	032401	39·8		16. 0	46. 55	037164	46·7	032757	46·5	
18. 0	49. 26	037013	38·0	032218	38·0		18. 0	47. 13	037675	45·8	032693	45·8	
20. 0	49. 33	037182	36·4	032062	36·3	L	20. 0	48. 37	038203	45·0	032603	45·0	L
22. 0	50. 35	037490	38·2	032749	38·2	T D	22. 0	52. 38	037675	45·8	032833	45·5	T D
Feb. 11. 0. 0	22. 52. 19	0·037047	39·5	0·032952	39·3	T D	Feb. 14. 0. 0	22. 55. 12	0·037845	45·5	0·032892	45·3	T D
1. 50	53. 54	037932		033171			1. 50	57. 1	038543		033476		
2. 0	52. 59	037711	39·5	033181	39·8		2. 0	56. 43	038654	47·0	033476	47·2	
2. 10	53. 9	037711		033181		T D	2. 10	56. 43	038543		033461		T D
4. 0	51. 24	037557	41·2	033015	41·0	L	4. 0	53. 53	038945	47·8	033106	47·5	L
6. 0	50. 25	037616	43·5	033124	43·5		6. 0	51. 55	038935	48·0	033054	48·0	
8. 0	48. 46	037454	44·5	033032	44·5		8. 0	50. 42	039709	48·0	033030	48·0	
10. 0	49. 0	037395	44·8	033011	44·7	L	10. 0	49. 48	038447	48·0	033093	48·0	L
12. 0	46. 50	037672	45·0	033043	45·0	T D	12. 0	45. 10	036636	47·5	032839	47·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
Feb. 10^d. Between 4^h and 6^h a considerable change took place for the time of the day; the magnet previously had been unusually steady, the usual diurnal change not having taken place.

VERTICAL FORCE MAGNET.
Feb. 10^d. Between 20^h and 22^h a large change occurred.

Daily Observations from February 15 to 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 15. 14. 0	22. 50. 29	0·037812	44·0	0·032813	43·8	T D
16. 0	49. 23	038145	44·4	032831	44·2	
18. 0	50. 34	038357	44·6	032688	44·4	
20. 0	56. 6	039199	45·0	032740	45·0	T D
22. 0	52. 48	037132	45·6	032936	46·0	H B
Feb. 16. 0. 0	22. 57. 46	0·035691	46·5	0·033039	46·3	H B
1. 50	56. 32	036329		033469		
2. 0	54. 49	036661	48·3	033455	47·8	
2. 10	55. 27	037258		033469		H B
4. 0	52. 37	038651	50·5	033909	50·5	T D
6. 0	48. 23	038846	51·0	033797	51·0	
8. 0	40. 13	039972	51·5	033588	51·5	
10. 0	44. 13	037290	52·0	033462	52·0	T D
12. 0	38. 2	037891	52·8	033131	52·5	H B
14. 0	52. 54	037594	53·4	033253	53·0	
16. 0	49. 8	037232	52·7	033127	52·3	
18. 0	49. 42	037938	52·3	033299	52·2	
20. 0	50. 29	037632	51·8	033379	52·0	H B
22. 0	51. 59	037231	51·0	033476	51·0	L
Feb. 17. 0. 0	22. 52. 24	0·037699	50·5	0·033056	50·3	L
1. 50	55. 28	038031		033227		
2. 0	55. 28	037921	50·5	033222	50·5	
2. 10	53. 28	038872		033158		L
4. 0	53. 17	038804	51·4	033496	51·5	H B
6. 0	49. 3	038467	51·5	033597	51·7	
8. 0	50. 39	038451	51·8	033462	51·8	
10. 0	44. 35	038028	52·7	033335	52·5	H B
12. 0	50. 40	037877	53·5	033580	53·5	L
14. 0	49. 49	037346	51·8	033107	51·8	
16. 0	49. 38	037367	50·5	033008	50·5	
18. 0	48. 13	037112	49·0	032841	49·0	
20. 0	49. 22	036577	48·2	032762	48·0	L
22. 0	51. 8	037071	48·5	032945	48·6	H B
Feb. 18. 0. 0	22. 54. 28	0·036761	49·8	0·033186	49·7	H B
1. 50	56. 40	037528		033321		
2. 0	55. 35	036798	50·8	033253	50·6	
2. 10	55. 4	036488		033258		H B
4. 0	53. 36	036924	51·8	033580	51·8	L
6. 0	50. 37	038721	52·6	033657	52·5	
8. 0	48. 51	037315	52·8	033615	52·8	
10. 0	45. 45	037902	53·0	033302	53·0	L
12. 0	47. 52	037383	53·2	033302	53·0	T D

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 18. 14. 0	22. 49. 54	0·037526	53·0	0·033280	52·7	T D
16. 0	49. 32	037637	53·0	033334	52·7	
18. 0	49. 32	037690	52·4	033311	52·3	
20. 0	50. 23	037622	52·0	033271	52·0	T D
22. 0	51. 0	036745	51·4	033349	51·5	H B
Feb. 19. 0. 0	22. 53. 32	0·036633	51·0	0·033335	51·3	H B
1. 50	54. 13	036940		033061		
2. 0	54. 4	037050	50·2	033110	50·0	
2. 10	53. 43	037095		033115		H B
4. 0	51. 41	037639	50·8	033279	50·7	L
6. 0	49. 34	038157	51·5	033388	51·5	H B
8. 0	49. 44	038661	51·6	033413	51·8	T D
10. 0	49. 25	038484	51·6	033333	51·7	T D
12. 0	48. 48	038754	51·5	033283	51·6	H B
14. 0	46. 55	038174	51·6	033351	51·8	
16. 0	47. 50	037263	50·8	033187	51·2	
18. 0	47. 50	037868	49·8	033023	50·1	
20. 0	49. 55	037977	49·4	033002	49·5	H B
22. 0	51. 9	036891	49·0	032928	49·0	L
Feb. 20. 0. 0	22. 53. 25	0·037391	49·6	0·033022	49·5	L
1. 50	53. 8	037418		033324		
2. 0	53. 13	038038	50·8	033227	50·5	
2. 10	53. 2	038082		033227		L
4. 0	51. 41	038329	51·6	033385	51·8	H B
6. 0	50. 15	038712	51·9	033378	52·2	
8. 0	50. 39	038858	52·5	033292	52·3	
10. 0	46. 4	038840	53·3	033389	53·0	H B
12. 0	46. 4	037792	53·0	033302	53·0	L
14. 0	44. 43	036736	52·0	033038	52·0	
16. 0	47. 26	037231	51·0	032968	51·0	
18. 0	48. 19	037537	50·2	032952	50·2	
20. 0	49. 44	038389	50·0	032948	50·0	L
22. 0	51. 6	038286	52·0	033466	52·0	T D
Feb. 21. 0. 0	22. 54. 17	0·037911	55·0	0·034062	54·7	T D
1. 50	55. 2	038376		034276		
2. 0	54. 46	038199	58·0	034179	57·8	
2. 10	54. 17	038199		034106		T D
4. 0	52. 26	038062	59·8	034174	60·0	L
6. 0	50. 49	037934	61·0	034035	60·8	
8. 0	50. 47	037960	60·5	033770	60·5	
10. 0	47. 35	037919	60·0	033687	60·0	L
12. 0	47. 35	037709	58·5	033488	58·6	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

DECLINATION MAGNET.
Feb. 16d. Between 12h and 14h a large change took place, being the largest change within the same interval of time between Jan. 1d and March 31d.
Feb. 17d. 2h. 10m. The change in the previous ten minutes was considerable.

HORIZONTAL FORCE MAGNET.
Feb. 16d. Between 8h and 10h a large change took place.
Feb. 17d. 2h. 10m. The change in the previous ten minutes was remarkable.

VERTICAL FORCE MAGNET.
Feb. 21d. 1h. 50m. The change since the observation at Feb. 20d. 20h was considerable: at the latter time the magnet began to move in the direction opposite to that of its previous motion, and continued to move slowly in this direction till 2h. 27m, when its reduced reading was 0·034032, and after this time the changes were small; the other magnets were not affected.

Daily Observations from February 22 to 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 22. 14. 0	22. 50. 24	0·039179	54·0	0·033273	54·0	T D
16. 0	48. 46	039700	55·5	033431	55·3	
18. 0	48. 9	039579	57·0	033632	56·8	
20. 0	48. 9	039310	57·5	033593	57·3	T D
22. 0	50. 5	038804	57·0	033522	56·7	H B
Feb. 23. 0. 0	22. 51. 32	0·038469	57·5	0·033436	57·0	H B
1. 50	51. 38	039162		033635		
2. 0	51. 10	039140	59·5	033601	58·7	
2. 10	50. 54	039118		033567		H B
4. 0	51. 35	038798	61·0	034064	61·0	T D
6. 0	50. 47	038532	61·0	033878	61·0	
8. 0	49. 16	038931	61·0	033854	61·0	
10. 0	48. 50	038761	60·0	033628	60·0	T D
12. 0	48. 9	038557	58·8	033353	58·7	H B
14. 0	48. 11	038598	58·0	033296	58·0	
16. 0	48. 44	038560	57·0	032990	56·4	
18. 0	48. 28	038935	56·6	033138	56·5	
20. 0	49. 51	038598	56·7	033226	56·5	H B
22. 0	49. 51	038132	56·3	033195	56·2	L
Feb. 24. 0. 0	22. 53. 27	0·038616	57·2	0·033285	57·0	
1. 50	53. 59	039251		033741		
2. 0	53. 59	039251	59·5	033736	59·3	
2. 10	53. 43	039162		033799		L
4. 0	52. 10	039045	61·8	034098	62·0	H B
6. 0	51. 24	038792	62·4	033908	62·5	
8. 0	49. 7	038889	61·8	033662	61·7	
10. 0	48. 26	038520	60·8	033628	61·2	H B
12. 0	48. 26	038462	60·2	033463	60·0	L
14. 0	47. 25	038037	59·0	033374	59·0	
16. 0	47. 34	037933	58·0	033233	58·0	
18. 0	47. 52	037808	57·0	033090	57·0	
20. 0	48. 25	037627	56·2	033073	56·2	L
22. 0	49. 0	037508	56·8	033261	56·6	H B
Feb. 25. 0. 0	22. 53. 46	0·037818	56·8	0·033155	56·6	H B
1. 50	55. 44	039291		033393		
2. 0	54. 55	038936	58·3	033374	57·8	
2. 10	54. 30	038914		033369		H B
4. 0	52. 21	039103	59·8	033783	59·7	L
6. 0	54. 29	039118	60·8	033952	60·8	
8. 0	54. 13	037466	60·2	033677	60·0	
10. 0	52. 23	037671	58·8	033565	58·8	L
12. 0	43. 30	034793	57·5	033807	57·5	T D

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 25. 14. 0	22. 42. 10	0·036088	56·0	0·033069	56·0	T D
16. 0	50. 18	036309	56·0	033557	56·0	
18. 0	48. 53	037032	55·3	033293	55·0	
20. 0	48. 53	036497	54·5	033245	54·3	T D
22. 0	52. 5	036286	53·0	033044	52·8	G
Feb. 26. 0. 0	22. 54. 48	0·037281	54·6	0·033176	54·0	G
1. 50	56. 17	038114		033817		
2. 0	55. 55	038003	57·5	033783	57·5	
2. 10	55. 41	037937		033783		G
4. 0	54. 14	036870	60·6	034257	60·5	T D
6. 0	51. 26	038001	61·0	033947	60·8	
8. 0	49. 40	036632	60·5	034010	60·3	
10. 0	47. 25	036945	60·0	033634	59·8	T D
12. 0	49. 52	036727	59·5	033451	59·2	H B
14. 0	53. 13	037860	59·0	033294	58·7	
16. 0	50. 6	036792	57·8	032999	57·6	
18 0	48. 49	036832	56·6	033190	56·7	
20. 0	52. 6	036677	56·0	033226	56·5	H B
22. 0	54. 21	036275	55·8	032941	55·7	L
Feb. 27. 0. 0	22. 54. 39	0·037476	57·0	0·033285	57·0	L
1. 50	55. 23	037925		033705		
2. 0	54. 32	038035	58·6	033744	58·5	
2. 10	55. 7	038035		033705		L
4. 0	52. 22	037442	59·8	033877	59·3	H B
6. 0	50. 30	037480	60·8	033995	61·0	
8. 0	42. 25	037909	61·5	033944	61·2	H B
10. 0	48. 14	037149	61·2	033996	61·5	G
12. 0	48. 33	037381	61·0	033918	61·3	G
14. 0	51. 22	037057	60·4	033656	60·4	L
16. 0	48. 49	037713	61·0	033873	61·0	T D
18. 0	47. 56	037381	61·0	033854	61·0	T D
20. 0	49. 12	036936	60·6	033740	60·7	H B
22. 0	50. 20	036155	60·3	033590	59·8	G
Feb. 28. 0. 0	22. 54. 34	0·036819	61·6	0·034118	62·0	T D
1. 50	56. 15	037997		034310		H B
2. 0	56. 19	038019	62·8	034312	63·2	
2. 10	56. 14	037898		034334		H B
4. 0	52. 58	037820	64·5	034400	64·7	L
6. 0	50. 1	037773	66·3	034383	66·0	H B
8. 0	50. 4	037796	65·4	033999	65·3	G
10. 0	47. 1	037312	64·5	033900	64·5	T D
12. 0	49. 6	037373	62·0	033434	62·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

DECLINATION MAGNET.
Feb. 25d. 10h to 16h and 27d. 6h to 10h. Considerable changes took place.

HORIZONTAL FORCE MAGNET.
Feb. 25d. Between 10h and 12h a very large change took place.

VERTICAL FORCE MAGNET.
Feb. 25d, between 12h and 14h, and 26d, between 0h and 1h. 50, large changes occurred.

Daily Observations from March 1 to 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Mar. 1. 14. 0	22. 50. 27	0·036352	51·3	0·032560	51·3	L
16. 0	48. 10	036566	51·0	032774	51·0	
18. 0	48. 10	036345	51·0	032920	51·0	
20. 0	49. 43	036839	51·3	033020	51·2	L
22. 0	48. 47	036906	53·0	033278	53·0	T D
Mar. 2. 0. 0	22. 54. 58	0·037127	56·9	0·033715	56·6	T D
1. 50	59. 6	037713		034019		
2. 0	58. 50	037824	59·7	034019	59·6	
2. 10	58. 50	037824		034019		T D
4. 0	54. 58	037184	60·5	033945	60·0	L
6. 0	50. 57	036462	59·5	034028	59·3	
8. 0	50. 24	037450	58·8	033891	58·8	
10. 0	49. 5	037314	58·0	033691	57·8	L
12. 0	49. 5	037144	57·0	033626	57·0	T D
14. 0	49. 44	036974	56·0	033528	56·0	
16. 0	49. 20	037025	55·0	033450	55·0	
18. 0	48. 41	036923	54·4	033598	54·4	
20. 0	48. 25	036855	54·0	033663	54·0	T D
22. 0	49. 22	035459	53·6	033419	53·5	H B
Mar. 3. 0. 0	22. 54. 52	0·035479	54·5	0·033449	54·5	H B
1. 50	57. 33	036608		033600		
2. 0	57. 5	036762	55·8	033600	55·7	
2. 10	57. 20	036718		033619		H B
4. 0	54. 22	037535	58·0	034145	57·8	T D
6. 0	49. 24	036956	58·5	034145	58·3	
8. 0	50. 33	037276	58·3	033875	58·0	
10. 0	49. 5	037092	58·0	033754	58·0	T D
12. 0	49. 18	036839	56·9	033691	56·8	H B
14. 0	49. 37	036849	56·7	033644	56·7	
16. 0	49. 10	036851	55·8	033448	55·7	
18. 0	49. 56	036906	55·6	033585	55·7	
20. 0	48. 59	036989	55·7	033627	55·8	H B
22. 0	49. 7	035645	56·0	033557	56·0	L
Mar. 4. 0. 0	22. 55. 25	0·035369	56·2	0·033401	56·0	L
1. 50	58. 43	035859		033636		
2. 0	59. 1	035926	57·0	033651	57·0	
2. 10	57. 48	035416		033636		L
4. 0	54. 40	037041	57·7	033946	57·4	H B
6. 0	50. 25	037258	57·8	033947	57·7	
8. 0	49. 50	037399	57·2	033705	56·8	
10. 0	46. 1	038271	56·6	033684	56·5	H B
12. 0	50. 18	037350	56·0	033509	56·0	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Mar. 4. 14. 0	22. 49. 21	0·037025	55·0	0·033416	55·0	L
16. 0	49. 38	037323	53·5	033264	53·5	
18. 0	49. 38	037264	52·5	033234	52·6	
20. 0	49. 23	037360	51·5	033100	51·5	L
22. 0	50. 59	036626	52·0	033404	52·0	T D
Mar. 5. 0. 0	22. 56. 23	0·037099	52·7	0·033403	52·5	H B
1. 50	56. 18	037962		033736		T D
2. 0	57. 33	038183	54·0	033760	54·0	
2. 10	57. 33	038183		033760		T D
4. 0	52. 0	037492	54·8	033764	54·7	L
6. 0	51. 24	038081	56·0	033627	55·8	
8. 0	50. 48	037859	56·0	033557	56·0	
10. 0	50. 45	037357	55·0	033362	55·0	L
12. 0	49. 31	037826	54·5	033456	54·4	T D
14. 0	49. 31	038405	54·0	033430	54·0	
16. 0	49. 53	038115	53·6	033411	53·6	
18. 0	48. 26	037571	53·0	033399	53·0	
20. 0	49. 14	037707	52·5	033364	52·5	T D
22. 0	50. 49	036883	51·3	033213	51·5	H B
Mar. 6. 0. 0	22. 55. 58	0·037304	51·3	0·033206	51·7	H B
1. 50	55. 58	037846		033464		
2. 0	55. 58	038045	52·8	033449	52·6	
2. 10	55. 44	038178		033424		H B
4. 0	53. 12	037774	55·5	033860	55·3	T D
6. 0	51. 20	037726	56·0	033670	56·0	
8. 0	50. 4	037726	56·0	033543	55·8	
10. 0	48. 38	037069	55·0	033489	55·0	T D
12. 0	49. 46	036983	52·8	033243	53·0	H B
14. 0	49. 22	036769	51·8	033192	52·2	
16. 0	49. 1	036823	51·6	033238	51·8	
18. 0	48. 24	037326	51·3	033344	51·5	
20. 0	49. 32	037370	51·3	033359	51·5	H B
22. 0	49. 48	036898	52·0	033164	51·0	L
Mar. 7. 0. 0	22. 54. 36	0·037401	52·0	0·032985	51·8	L
1. 50	56. 7	038047		033596		
2. 0	55. 46	037870	54·5	033596	54·3	
2. 10	55. 35	038047		033596		L
4. 0	53. 37	037801	56·7	034232	56·8	H B
6. 0	51. 39	037838	57·7	034024	57·4	
8. 0	51. 20	037752	56·8	033822	56·8	
10. 0	49. 0	037050	55·8	033782	56·0	H B
12. 0	48. 48	037212	54·8	033680	54·8	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

VERTICAL FORCE MAGNET.
March 7d. Between 0^h and $1^h.50^m$ a large change took place.

Daily Observations from March 8 to 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Mar. 8. 14. 0	22. 49. 55	0·036506	47·0	0·033083	47·0	L	Mar. 11. 14. 0	22. 48. 2	0·035748	54·0	0·033225	54·0	L
16. 0	49. 5	035963	45·5	032833	45·5		16. 0	45. 59	034633	52·0	033038	52·0	
18. 0	48. 36	036347	44·5	032764	44·5		18. 0	49. 59	034538	50·4	032848	50·4	
20. 0	49. 15	036637	43·6	032744	43·5	L	20. 0	49. 3	035119	49·0	032684	49·0	L
22. 0	49. 28	036875	45·0	033174	44·8	T D	22. 0	45. 3	035034	49·8	032842	49·8	T D
Mar. 9. 0. 0	22. 54. 54	0·036303	47·5	0·033424	47·0	T D	Mar. 12. 0. 0	22. 56. 9	0·035766	51·5	0·032906	51·5	T D
1. 50	56. 9	037200		033998			1. 50	53. 59	035909		033122		
2. 0	56. 9	037111	51·6	033964	51·3		2. 0	54. 10	036331	53·0	033132	53·0	
2. 10	55. 52	037111		033925		T D	2. 10	54. 35	036464		033127		T D
4. 0	52. 53	037611	53·5	034063	53·3	L	4. 0	50. 15	035748	54·0	033259	54·0	L
6. 0	49. 2	037025	55·0	033927	55·0	L	6. 0	50. 47	035697	55·0	033391	55·0	
8. 0	50. 6	037771	56·0	033875	56·0	T D	8. 0	45. 55	035867	56·0	033460	56·0	
10. 0	49. 49	037416	56·0	033627	55·8	L	10. 0	47. 51	035992	57·0	033529	57·0	L
12. 0	49. 25	037364	55·3	033416	55·0	T D	12. 0	44. 58	035631	56·7	033235	56·5	T D
14. 0	49. 44	037246	55·0	033450	55·0		14. 0	47. 56	035379	56·0	033143	56·0	
16. 0	49. 17	037246	55·0	033489	55·0		16. 0	50. 25	035527	54·0	032932	54·0	
18. 0	48. 59	036641	53·0	033027	52·7		18. 0	47. 36	035444	52·6	032704	52·4	
20. 0	48. 59	036873	51·5	032901	51·3	T D	20. 0	52. 0	035061	51·0	032579	51·0	T D
22. 0	51. 6	037503	50·0	032763	50·0	L	22. 0	51. 8	035289	50·0	032408	49·8	L
Mar. 10. 0. 0	22. 55. 56	0·036828	51·6	0·033423	51·8	L	Mar. 13. 0. 0	22. 56. 8	0·035987	51·5	0·032648	51·3	L
1. 50	58. 42	037042		033688			1. 50	23. 0. 56	033042		033458		
2. 0	58. 52	036954	53·8	033639	54·0		2. 0	1. 43	032998	52·8	033507	52·8	
2. 10	58. 40	036954		033566		L	2. 10	0. 56	033109		033522		L
4. 0	56. 1	037180	56·3	033948	56·0	T D	4. 0	23. 4. 43	035098	55·0	034200	55·0	T D
6. 0	53. 6	036701	57·0	033885	57·0		6. 0	22. 59. 52	034405	56·0	034684	56·0	
8. 0	51. 46	037099	57·0	033595	56·7		8. 0	50. 4	033772	56·7	033933	56·5	
10. 0	51. 22	036974	56·0	033475	56·0	T D	10. 0	53. 20	034430	56·8	033764	56·6	T D
12. 0	51. 5	036996	56·0	033562	56·0	G	12. 0	44. 55	033244	56·2	033387	56·0	G H
14. 0	51. 40	037066	55·5	033435	55·0		14. 0	49. 33	034461	56·2	033216	56·0	
16. 0	50. 54	036402	54·2	033342	54·0		16. 0	52. 1	034427	56·0	032948	56·0	
18. 0	50. 33	036574	53·0	033198	52·7		18. 0	48. 35	034837	55·8	032910	55·4	
20. 0	51. 14	036334	52·5	033194	52·0	G	20. 0	56. 53	033086	55·4	032757	55·0	G H
22. 0	47. 41	034847	50·0	032724	50·0	L	22. 0	52. 17	032222	55·4	032847	55·2	L
Mar. 11. 0. 0	22. 55. 1	0·035425	50·8	0·033198	50·8	L	Mar. 14. 0. 0	22. 58. 23	0·032078	55·2	0·032854	55·0	L
1. 50	54. 45	035765		033643		G H	1. 50	54. 19	032503		034100		
2. 0	54. 54	035987	52·8	033648	53·0		2. 0	53. 52	032215	56·4	034105	56·3	
2. 10	55. 13	036208		033692		G H	2. 10	52. 44	032282		034081		
4. 0	54. 31	036139	55·0	033942	55·0	L	4. 0	50. 55	034727	57·5	034466	57·3	L
6. 0	51. 16	036166	57·5	033017	57·0	G	6. 0	47. 55	033856	58·5	034861	58·5	T D
8. 0	50. 22	036343	57·5	033831	57·0		8. 0	37. 17	034963	58·5	034061	58·0	G
10. 0	46. 4	035195	57·0	033644	56·7	G	10. 0	46. 59	036100	57·5	033685	57·5	G
12. 0	49. 16	036088	56·0	033509	56·0	L	12. 0	42. 1	035253	56·3	033079	56·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

March $9^d.$ $0^h.$ The iron tools for boring the hole for the thermometers sunk in the ground were brought, and remained near the Magnetic Observatory during the remainder of the week.

DECLINATION MAGNET.

March $11^d.$ Between 22^h and 24^h the change was larger than usual at this time of the year.
March $13^d.$ 6^h to 20^h and $14^d.$ 6^h to $10^h.$ Considerable changes took place.

HORIZONTAL FORCE MAGNET.

March $13^d.$ Between 0^h and $1^h.$ 50^m a large change took place.

VERTICAL FORCE MAGNET.

March $13^d.$ Between 0^h and 4^h and between 6^h and 8^h considerable changes took place.
March $14^d.$ Between 10^h and 12^h a large change took place.

Daily Observations from March 15 to 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Hor. Force cor. for Temp. Horizontal Force Reading in parts of the whole	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Mar. 15. 14. 0	22. 46. 39	0·034080	52·0	0·033131	51·8	L
16. 0	45. 22	034216	51·5	033296	51·5	
18. 0	44. 28	034396	51·0	033271	51·0	
20. 0	45. 13	035647	50·8	033276	50·5	L
22. 0	51. 26	035187	52·0	033028	51·8	H B
Mar. 16. 0. 0	22. 55. 46	0·035039	54·0	0·033225	53·8	H B
1. 50	58. 42	036452		033640		
2. 0	58. 52	036541	55·8	033616	56·0	
2. 10	59. 40	036718		033621		H B
4. 0	53. 4	035815	57·0	033563	57·0	L
6. 0	48. 24	035347	57·5	033837	57·3	
8. 0	44. 48	034572	56·2	033557	56·0	
10. 0	44. 37	035959	55·5	033143	55·5	L
12. 0	35. 53	035629	54·6	032176	54·5	H B
14. 0	44. 59	033714	53·5	032329	53·2	
16. 0	45. 24	033643	52·3	032735	52·0	
18. 0	47. 35	034403	51·3	032920	51·5	
20. 0	45. 19	034038	48·5	032284	48·5	H B
22. 0	46. 13	033672	48·3	032367	48·0	T D
Mar. 17. 0. 0	22. 49. 23	0·032001	48·5	0·032840	48·5	T D
1. 50	56. 6	032914		033739		
2. 0	56. 40	032803	51·0	033778	51·0	
2. 10	55. 6	032182		033739		T D
4. 0	52. 29	035833	53·2	033863	53·0	H B
6. 0	43. 11	035068	54·3	033759	53·7	
8. 0	41. 37	034576	54·4	033512	54·0	
10. 0	38. 55	035220	53·5	032586	53·3	H B
12. 0	40. 28	033420	53·0	032956	53·0	T D
14. 0	44. 46	034131	51·0	032443	51·0	
16. 0	42. 52	034123	49·0	032100	49·0	
18. 0	42. 4	034789	46·8	032112	46·5	
20. 0	43. 59	033045	45·0	032073	44·8	T D
22. 0	43. 25	031562	43·7	032193	43·5	L
Mar. 18. 0. 0	22. 50. 21	0·030174	44·0	0·032501	44·0	L
1. 50	56. 4	032908		033195		
2. 0	56. 41	032863	46·8	033171	46·5	
2. 10	56. 21	032575		033102		L
4. 0	50. 4	034887	50·5	033393	50·5	T D
6. 0	44. 18	033084	52·0	033706	52·0	
8. 0	40. 33	032930	52·4	033497	52·3	T D
10. 0	35. 51	035065	52·2	033271	52·0	G
12. 0	36. 18	033526	52·0	033111	52·0	G
Mar. 18. 14. 0	22. 40. 38	0·033858	52·0	0·032970	52·0	L
16. 0	40. 36	032467	51·5	033260	51·7	
18. 0	40. 32	032355	49·8	032902	49·7	
20. 0	40. 32	032244	49·8	033160	49·6	L
22. 0	43. 5	031049	48·5	032445	48·0	G
Mar. 19. 0. 0	22. 44. 48	0·030581	49·0	0·033211	48·8	L
1. 50	55. 54	031875		033556		H B
2. 0	56. 22	032157	51·5	033595	51·6	
2. 10	56. 37	032019		033635		H B
4. 0	59. 26	032198	53·3	033556	53·5	L
6. 0	39. 10	033483	55·0	033971	55·0	T D
8. 0	35. 46	033290	55·3	033781	55·0	H B
10. 0	34. 51	034113	53·5	033161	53·0	G
12. 0	33. 42	033245	52·3	032954	52·2	L
14. 0	34. 4	031968	50·0	032851	50·0	
16. 0	34. 4	032133	46·8	032284	46·8	
18. 0	33. 38	031916	45·0	032311	45·9	
20. 0	35. 4	032464	43·8	032423	43·8	L
22. 0	37. 7	030510	45·2	032474	45·4	H B
Mar. 20. 0. 0	22. 51. 39	0·030433	46·7	0·032302	46·5	H B
1. 50	53. 56	031996		033116		
2. 0	53. 53	032151	48·6	033116	48·2	
2. 10	53. 59	032395		033111		H B
4. 0	55. 4	033075	50·0	033311	49·8	L
6. 0	50. 7	033501	51·2	033822	51·0	
8. 0	48. 14	033194	52·0	033790	51·8	
10. 0	43. 45	033662	51·5	033516	51·5	L
12. 0	44. 8	033567	51·2	033458	51·3	H B
14. 0	43. 45	032684	49·0	032946	48·7	
16. 0	44. 34	032044	46·8	032829	47·0	
18. 0	44. 35	032788	44·4	032639	44·6	
20. 0	45. 0	032800	43·3	032831	43·5	H B
22. 0	45. 3	032021	43·8	032637	43·5	T D
Mar. 21. 0. 0	22. 43. 34	0·032461	46·0	0·032629	45·8	T D
1. 50	54. 45	033444		033381		
2. 0	53. 37	033289	48·0	033283	48·0	
2. 10	53. 37	033178		033243		T D
4. 0	44. 59	032688	49·8	033137	49·7	H B
6. 0	46. 49	032992	51·2	033598	51·0	
8. 0	41. 30	032462	50·3	033443	50·6	
10. 0	42. 1	031866	49·4	033232	49·5	H B
12. 0	40. 21	032565	49·6	033170	49·4	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

March 15^d to 21^d. During this week the iron tools for boring the hole for the ground thermometers were in use.

DECLINATION MAGNET.

March 16^d. 10^h to 14^h and 17^d, 18^d, 19^d, and 21^d. Considerable changes took place.

HORIZONTAL FORCE MAGNET.

March 17^d. Between $2^h.10^m$ and 4^h a considerable change took place.
March 18^d. Between 0^h and $1^h.50^m$ a considerable change took place.

VERTICAL FORCE MAGNET.

March 14^d, between 10^h and 12^h; 17^d, between 0^h and $1^h.50^m$ and between 8^h and 10^h; and 19^d, between 8^h and 10^h, large changes occurred.
March 16^d. Between 10^h and 12^h and between 18^h and 20^h considerable changes occurred.
March 20^d and 21^d. Between 0^h and $1^h.50^m$ a large change took place.

Daily Observations from March 22 to 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Mar. 22. 14. 0	22. 42. 1	0·032831	47·0	0·032537	47·0	T D	Mar. 25. 14. 0	22. 52. 27	0·035843	50·0	0·033134	50·0	T D
16. 0	41. 17	032930	46·8	032512	46·5		16. 0	52. 0	035673	49·0	033065	49·0	
18. 0	40. 22	033577	45·4	032387	45·2		18. 0	50. 51	037112	47·7	032883	47·5	
20. 0	40. 17	033971	45·5	032745	45·5	T D	20. 0	53. 17	036942	48·0	033249	48·0	T D
22. 0	41. 1	032344	47·0	032936	47·0	L	22. 0	22. 50. 7	035562	49·0	033352	48·8	L
Mar. 23. 0. 0	22. 48. 24	0·032599	49·8	0·033060	49·5	L	Mar. 26. 0. 0	23. 0. 12	0·033043	51·5	0·033490	51·0	G
1. 50	51. 44	033332		033497		H B	1. 50	4. 56	036648		033726		
2. 0	51. 45	033243	53·2	033497	52·8	H B	2. 0	5. 29	037157	52·0	033731	51·8	
2. 10	51. 45	033132		033492		L	2. 10	23. 5. 35	037135		033731		G
4. 0	48. 43	034027	58·2	034276	58·0	T D	4. 0	22. 55. 51	036013	54·0	034190	54·0	T D
6. 0	45. 46	034590	58·0	033744	58·0	T D	6. 0	51. 55	036512	55·5	034105	55·4	
8. 0	44. 43	033952	57·5	033392	57·0	G	8. 0	50. 52	035893	55·5	033894	55·3	
10. 0	43. 59	033423	56·6	033223	56·4	H B	10. 0	46. 47	035994	54·8	033630	54·5	T D
12. 0	44. 18	032862	55·0	033123	55·0	L	12. 0	50. 21	035391	53·2	033302	53·0	L
14. 0	43. 11	032478	53·0	032765	53·0		14. 0	53. 38	035298	52·0	033257	52·0	
16. 0	42. 50	032138	51·0	032628	51·0		16. 0	53. 7	034949	50·6	033068	50·6	
18. 0	42. 31	032282	49·5	032485	49·5		18. 0	52. 1	034643	48·8	032875	48·8	
20. 0	39. 46	032514	48·0	032469	48·0	L	20. 0	49. 24	035025	47·8	032877	47·7	L
22. 0	36. 5	030838	48·3	032230	48·0	H B	22. 0	50. 24	033781	49·2	033279	49·0	H B
Mar. 24. 0. 0	22. 43. 25	0·031384	50·6	0·032739	50·5	H B	Mar. 27. 0. 0	22. 56. 13	0·034179	51·8	0·033597	51·7	H B
1. 50	50. 17	032887		033035			1. 50	23. 0. 10	035485		034006		
2. 0	50. 35	032688	52·8	032981	52·6		2. 0	0. 14	035818	54·8	033937	54·3	
2. 10	52. 29	033551		033011		H B	2. 10	23. 0. 4	035796		033923		H B
4. 0	51. 23	033227	54·8	033443	55·2	L	4. 0	22. 55. 18	035338	56·8	034343	56·5	L
6. 0	45. 36	034010	56·8	034173	57·0		6. 0	51. 51	036318	58·0	034459	58·2	
8. 0	40. 45	033355	56·2	033878	56·2		8. 0	49. 20	035849	57·2	033993	57·0	
10. 0	39. 33	033523	55·5	033681	55·4	L	10. 0	52. 19	035679	56·2	033631	56·0	L
12. 0	39. 36	033075	52·6	033058	52·3	H B	12. 0	52. 1	036645	55·5	033632	55·6	H B
14. 0	38. 27	032949	51·6	033301	52·0		14. 0	54. 18	035005	53·8	033306	53·7	
16. 0	38. 37	033221	50·6	033295	51·0		16. 0	51. 51	034468	52·2	033204	52·3	
18. 0	37. 34	032975	48·5	032889	48·5		18. 0	50. 41	044538	50·4	033116	50·6	
20. 0	34. 59	033178	48·0	032884	47·8	H B	20. 0	48. 12	034481	48·5	032953	48·3	H B
22. 0	46. 3	033381	48·8	033099	48·5	T D	22. 0	48. 51	033348	49·0	033114	49·0	T D
Mar. 25. 0. 0	22. 54. 57	0·033422	51·0	0·033369	50·8	T D	Mar. 28. 0. 0	22. 58. 19	0·032556	50·2	0·032948	50·0	L
1. 50	58. 27	034784		033706			1. 50	23. 0. 49	034335		033476		
2. 0	22. 58. 27	034784	52·5	033677	52·5		2. 0	1. 42	034889	52·2	033515	52·0	
2. 10	23. 0. 14	034873		033677		T D	2. 10	23. 1. 12	034778		033525		L
4. 0	22. 55. 19	035894	53·3	033841	53·2	H B	4. 0	22. 57. 25	035024	54·3	033917	53·8	H B
6. 0	52. 22	035756	53·4	033605	52·8		6. 0	53. 6	035707	54·8	034068	54·5	
8. 0	51. 52	036121	53·2	033530	53·0		8. 0	52. 44	035723	54·5	033471	53·7	
10. 0	53. 6	036145	52·3	033540	52·5	H B	10. 0	51. 33	035456	54·5	033498	53·8	H B
12. 0	52. 15	036081	51·4	033320	51·5	T D	12. 0	51. 50	035748	54·0	033590	54·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

March $25^d.$ $2^h.$ $10^m.$ After this time all the iron implements which had been used in boring the hole for the ground thermometers were removed.

DECLINATION MAGNET.
March $24^d.$ 20^h to 24^h; 25^d, between 22^h and 24^h; and 26^d, between $2^h.$ 10^m and 4^h, the changes were larger than usual.

HORIZONTAL FORCE MAGNET.
March $25^d.$ Between $25^d.$ 22^h and $26^d.$ $1^h.$ 50^m large changes took place.

VERTICAL FORCE MAGNET.
March $23^d.$ Between $2^h.$ 10^m and 6^h large changes occurred.
March $24^d.$ Between 4^h and 6^h and between 10^h and 12^h large changes took place.

Daily Observations from March 29 to April 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Mar. 29. 14. 0	22. 50. 46	0·035614	48·0	0·032738	48·0	T D	Apr. 1. 14. 0	22. 50. 25	0·034605	59·0	0·033597	58·7	T D
16. 0	50. 3	034993	48·0	032811	48·0		16. 0	50. 34	035058	58·8	033681	58·5	
18. 0	50. 19	035634	47·6	032856	47·4		18. 0	53. 35	035697	58·0	034549	58·0	T D
20. 0	47. 50	035035	47·2	032887	47·0	T D	20. 0	49. 29	034682	57·5	033563	57·5	H B
22. 0	50. 49	033067	48·0	032873	47·5	L	22. 0	49. 26	032273	57·0	033456	57·0	L
Mar. 30. 0. 0	22. 50. 46	0·033467	51·0	0·033251	51·0	L	Apr. 2. 0. 0	22. 53. 54	0·032400	58·4	0·033622	58·0	L
1. 50	23. 5. 51	034538		033979			1. 50	23. 0. 36	032868		033736		
2. 0	5. 51	034582	56·0	033638	55·2		2. 0	0. 7	032868	60·5	033761	60·0	
2. 10	23. 4. 46	034317		033628		L	2. 10	23. 0. 7	032868		033785		L
4. 0	22. 54. 25	036164	58·4	034352	58·2	T D	4. 0	22. 56. 1	034628	62·0	034235	62·0	T D
6. 0	54. 58	035086	58·7	034232	58·5		6. 0	51. 24	035159	62·0	034108	62·0	
8. 0	52. 32	035144	58·0	033939	58·0		8. 0	51. 9	035013	61·4	033781	61·0	
10. 0	52. 23	035372	57·0	033714	57·0		10. 0	50. 54	035082	60·5	033707	60·3	T D
12. 0	52. 35	035076	55·0	033362	55·0	T D	12. 0	49. 49	034649	59·0	033497	59·0	L
14. 0	53. 34	034648	53·0	033156	53·0	L	14. 0	49. 15	034555	57·4	033292	57·4	
16. 0	53. 34	034651	52·5	033218	52·5		16. 0	48. 20	034701	55·0	032952	55·0	
18. 0	51. 41	034336	49·6	032704	49·5		18. 0	48. 32	034965	53·3	032967	53·3	
20. 0	47. 40	034251	47·8	032611	47·8	L	20. 0	44. 7	034855	52·0	032936	51·8	L
22. 0	48. 42	033270	48·8	033047	48·8	H B	22. 0	50. 16	033667	52·7	032979	52·0	H B
Mar. 31. 0. 0	22. 56. 12	0·032783	51·8	0·033332	51·6	H B	Apr. 3. 0. 0	22. 47. 39	0·032943	54·3	0·033232	53·7	H B
1. 50	23. 3. 27	033646		033663			1. 50	23. 1. 0	034104		033606		
2. 0	3. 32	033845	55·7	033628	55·2		2. 0	0. 58	034148	56·7	033582	56·0	
2. 10	23. 3. 31	034266		033599		H B	2. 10	23. 0. 27	033838		033543		H B
4. 0	22. 58. 12	035491	59·0	034399	61·0	L	4. 0	22. 57. 40	034454	58·5	034127	59·6	L
6. 0	53. 55	035644	61·2	034113	61·8		6. 0	53. 5	034861	59·2	033910	59·0	
8. 0	52. 48	036120	61·4	033837	61·4		8. 0	51. 29	035355	58·2	033597	58·0	
10. 0	52. 48	036008	61·0	033781	61·0	L	10. 0	50. 39	034269	57·8	033640	57·7	L
12. 0	47. 23	036646	59·8	033427	59·7	H B	12. 0	50. 44	034458	56·7	033602	57·0	H B
14. 0	49. 23	035195	58·3	033218	58·0		14. 0	50. 2	034187	55·5	033203	54·9	
16. 0	48. 55	034928	56·6	033171	56·7		16. 0	49. 2	034111	54·4	033218	54·2	
18. 0	49. 20	035380	54·7	033050	54·8		18. 0	48. 37	034248	52·6	033132	52·8	
20. 0	48. 47	034971	53·6	033039	53·5	H B	20. 0	46. 16	033858	52·0	033231	52·2	H B
22. 0	48. 47	033447	54·4	033196	54·0	T D	22. 0	45. 13	032172	51·2	032881	51·0	L
Apr. 1. 0. 0	22. 32. 37	0·032443	58·0	0·033729	58·0	T D	Apr. 4. 0. 0	22. 51. 43	0·031773	52·5	0·033165	52·3	T D
1. 50	54. 23	034768		033809			1. 50	23. 0. 26	033619		033450		
2. 0	54. 32	034946	59·7	033818	59·5		2. 0	0. 26	033840	54·5	033450	54·3	
2. 10	54. 16	034946		033823			2. 10	23. 0. 8	033884		033450		T D
4. 0	49. 45	035569	60·5	033902	60·0		4. 0	22. 56. 43	034191	53·7	033435	53·8	H B
6. 0	53. 7	034427	61·6	034469	61·8		6. 0	50. 27	033405	53·5	033563	53·2	
8. 0	53. 24	034986	61·5	034232	61·6	T D	8. 0	50. 43	033936	53·5	033496	53·0	
10. 0	52. 12	034775	61·3	034161	61·5	H B	10. 0	47. 47	034121	54·2	033546	53·5	H B
12. 0	51. 6	034860	60·5	033858	60·5	T D	12. 0	48. 29	034565	54·2	033493	54·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$. before, and $2^m.30^s$. after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
March 30^d and 31^d. Considerable changes took place.
April 1^d. Between 0^h and 1^h. 50^m a large change took place.
April 3^d. Between 0^h and 1^h. 50^m a considerable change took place.

VERTICAL FORCE MAGNET.
March 30^d. Between 0^h and 4^h a large change occurred.
March 31^d. Between 2^h and 4^h a large change took place.

Daily Observations from April 5 to 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Apr. 5. 14. 0	22. 49. 46	0·033456	52·5	0·033057	52·0	T D	Apr. 8. 14. 0	22. 49. 24	0·030863	56·0	0·033167	56·0	T D
16. 0	48. 9	033858	52·0	032975	51·8		16. 0	49. 36	031073	54·5	032840	54·3	
18. 0	47. 54	033851	53·0	033215	53·0		18. 0	49. 47	030844	52·3	032644	52·3	
20. 0	46. 18	034224	53·5	033325	53·2	T D	20. 0	46. 10	030759	52·0	032851	51·7	T D
22. 0	46. 25	032955	53·2	033159	53·2	L	22. 0	46. 2	029037	52·0	032888	51·8	L
Apr. 6. 0. 0	22. 54. 46	0·031099	54·0	0·033025	53·8	L	Apr. 9. 0. 0	22. 52. 38	0·028357	53·5	0·032903	52·6	L
1. 50	23. 0. 21	031439		033621			1. 50	58. 9	028642		033274		H B
2. 0	1. 42	031881	56·0	033718	55·5		2. 0	58. 11	028996	55·7	033289	54·8	
2. 10	3. 17	032280		033865		L	2. 10	58. 17	029196		033314		H B
4. 0	23. 3. 19	035875	58·0	034505	58·0	T D	4. 0	54. 51	030827	58·0	033830	57·7	T D
6. 0	22. 57. 0	034878	58·0	034890	58·0		6. 0	50. 5	030705	59·5	033969	59·3	
8. 0	39. 50	033424	57·0	034302	56·7		8. 0	48. 35	030266	59·0	033667	59·0	
10. 0	52. 11	028450	56·0	032582	56·0	T D	10. 0	49. 8	030399	59·0	033608	59·0	T D
12. 0	50. 20	031439	56·0	033436	56·0	L	12. 0	49. 38	030023	57·8	033297	57·6	L
14. 0	47. 23	031456	54·8	032972	55·0		14. 0	...	...	..	...	..	
16. 0	47. 22	031116	52·8	032664	52·8		16. 0	...	...	..	...	..	
18. 0	45. 7	031331	51·2	032461	51·2		18. 0	...	...	..	...	..	
20. 0	46. 55	032002	50·2	032805	50·2	L	20. 0	...	...	..	...	..	
22. 0	57. 12	029577	51·3	033390	51·6	H B	22. 0	...	...	..	...	..	
Apr. 7. 0. 0	22. 56. 16	0·031636	52·6	0·033565	52·3	H B	Apr. 10. 0. 0	...	...	..	...	..	
1. 50	56. 42	031361		033672			1. 50	...	...	..	...	..	
2. 0	56. 35	031560	53·2	033648	53·0		2. 0	...	...	..	...	..	
2. 10	56. 48	032070		033687		H B	2. 10	...	...	..	...	..	
4. 0	51. 8	032264	53·3	033870	53·4	L	4. 0	...	...	..	...	..	
6. 0	49. 52	031507	53·8	034127	54·0		6. 0	...	...	..	...	..	
8. 0	45. 32	030622	53·8	033924	53·7		8. 0	...	...	..	...	..	
10. 0	45. 49	030545	54·0	033799	54·0	L	10. 0	...	...	..	...	..	
12. 0	45. 15	031914	54·5	033555	54·2	H B	12. 0	...	...	..	...	..	
14. 0	45. 45	031502	53·9	033135	53·7		14. 0	22. 45. 17	0·030084	53·5	0·032505	53·4	L
16. 0	43. 12	030673	52·8	032903	52·6		16. 0	46. 28	028800	52·2	032188	52·2	
18. 0	49. 33	032177	52·4	032890	52·2		18. 0	45. 58	029073	51·2	032094	51·2	
20. 0	47. 44	030121	51·9	033142	51·7	H B	20. 0	48. 27	029746	51·9	032692	51·8	L
22. 0	50. 31	029320	53·7	033726	53·5	T D	22. 0	48. 59	026544	52·6	032986	52·3	H B
Apr. 8. 0. 0	22. 54. 15	0·030340	56·7	0·034063	56·4	T D	Apr. 11. 0. 0	22. 55. 36	0·026626	56·6	0·033285	55·6	H B
1. 50	59. 51	030535		034183		L	1. 50	23. 1. 43	027385		033383		
2. 0	58. 52	030136	58·5	034154	58·0		2. 0	1. 7	026964	58·2	033383	57·5	
2. 10	58. 19	030425		034134		L	2. 10	23. 0. 50	026853		033368		H B
4. 0	54. 25	031628	60·5	034077	59·8	H B	4. 0	22. 57. 6	027963	59·0	033603	58·5	L
6. 0	50. 46	032299	60·8	034102	60·3		6. 0	52. 44	029428	58·5	033751	58·4	
8. 0	54. 48	031245	60·2	033854	59·8		8. 0	49. 32	029625	57·7	033540	57·6	
10. 0	50. 46	030796	58·6	033377	58·2	H B	10. 0	49. 43	029727	57·0	033407	57·0	L
12. 0	50. 24	030859	57·8	033363	57·5	T D	12. 0	48. 14	028553	55·7	033002	55·8	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m. 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $27^s·5$.

DECLINATION MAGNET.
April 6^d and 8^d. Considerable changes took place.

HORIZONTAL FORCE MAGNET.
April 6^d. From $2^h. 10^m$ to 4^h and from 8^h to 12^h very large changes took place.
April 10^d. Between 20^h and 22^h a large change occurred.

VERTICAL FORCE MAGNET.
April 6^d. From 0^h to 4^h and from 6^h to 22^h considerable changes took place.

Daily Observations from April 12 to 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 12. 14. 0	22. 49. 58	0·029158	58·6	0·032897	58·3	H B
16. 0	46. 43	027959	57·8	032896	57·5	
18. 0	47. 24	028671	57·3	033006	57·2	
20. 0	44. 48	028345	56·3	033023	56·4	H B
22. 0	46. 18	026680	56·4	032883	56·4	L
Apr. 13. 0. 0	22. 56. 43	0·025093	58·0	0·032950	57·8	L
1. 50	23. 3. 15	027520		033566		
2. 0	2. 54	027343	60·3	033590	60·0	
2. 10	2. 41	027255		033575		L
4. 0	2. 24	028568	62·3	034407	62·3	H B
6. 0	23. 0. 10	028745	63·6	034806	63·5	
8. 0	22. 50. 11	027882	63·6	034755	63·2	
10. 0	52. 12	030186	62·7	033742	62·5	H B
12. 0	48. 36	028388	61·5	033669	61·5	L
14. 0	51. 53	028057	60·2	033554	60·2	
16. 0	49. 59	028270	58·2	033114	58·2	
18. 0	49. 29	027879	57·2	033191	57·2	
20. 0	46. 50	027426	56·1	033192	56·0	L
22. 0	47. 57	026797	56·7	033346	56·4	T D
Apr. 14. 0. 0	22. 57. 29	0·026141	58·7	0·033535	58·5	T D
1. 50	23. 1. 53	027333		033903		
2. 0	3. 25	027222	60·5	033927	60·3	
2. 10	3. 25	027222		033927		T D
4. 0	23. 0. 34	029495	62·8	034350	62·7	L
6. 0	22. 54. 43	028543	62·8	034256	62·8	
8. 0	50. 43	027836	57·6	032996	57·7	
10. 0	45. 34	028661	61·8	033869	61·8	L
12. 0	44. 14	027639	61·0	033634	61·0	T D
14. 0	50. 21	028055	59·8	033492	59·5	
16. 0	51. 7	028321	58·5	033462	58·5	
18. 0	47. 39	028664	57·0	033236	57·0	
20. 0	48. 58	028857	56·7	033324	56·5	T D
22. 0	47. 55	026021	56·3	033195	56·2	H B
Apr. 15. 0. 0	22. 59. 15	0·026526	56·8	0·033185	56·7	H B
1. 50	23. 3. 27	027538		033393		
2. 0	3. 28	027560	57·8	033402	57·5	
2. 10	3. 7	027339		033417		H B
4. 0	23. 2. 5	027606	59·5	033930	59·3	T D
6. 0	22. 57. 6	028716	59·0	033920	59·0	
8. 0	48. 17	028229	59·0	033993	59·0	
10. 0	48. 8	028465	58·3	033597	58·0	T D
12. 0	44. 53	027615	57·6	033370	57·6	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 15. 14. 0	22. 44. 18	0·028161	57·3	0·033319	57·0	H B
16. 0	53. 17	028374	56·6	033266	56·8	
18. 0	50. 3	028768	56·7	033187	56·5	
20. 0	51. 56	027951	55·8	032838	55·7	H B
22. 0	22. 54. 2	024302	57·0	033021	56·0	L
Apr. 16. 0. 0	23. 1. 44	0·023229	58·5	0·033729	58·5	L
1. 50	5. 1	025817		034235		
2. 0	5. 1	026127	60·7	034269	60·6	
2. 10	3. 23	026038		034332		L
4. 0	23. 2. 41	027468	62·6	035005	62·5	H B
6. 0	22. 56. 13	026907	63·6	035083	63·5	
8. 0	47. 17	027665	63·5	034499	63·3	
10. 0	38. 27	028602	62·5	033260	62·3	H B
12. 0	44. 14	026975	61·0	032635	61·0	L
14. 0	47. 5	026232	59·5	032263	59·5	
16. 0	49. 45	024472	58·0	032330	58·0	
18. 0	49. 45	026653	56·5	032724	56·5	
20. 0	53. 23	025010	55·3	032955	55·2	L
22. 0	53. 47	025527	56·0	033128	56·0	T D
Apr. 17. 0. 0	22. 57. 49	0·024830	57·5	0·033281	57·5	T D
1. 50	23. 3. 2	026413		033882		
2. 0	3. 9	026413	60·3	033882	60·0	
2. 10	3. 17	026413		033853		T D
4. 0	22. 56. 58	028363	62·0	034588	61·7	L
6. 0	54. 25	028875	62·8	034524	62·8	L
8. 0	52. 39	028606	62·0	034084	61·8	G
10. 0	48. 28	029598	60·8	033488	60·5	T D
12. 0	50. 28	027640	58·4	033218	58·0	
14. 0	50. 51	027852	57·3	033121	57·3	
16. 0	50. 51	027896	56·0	033128	56·0	
18. 0	51. 25	027726	55·0	033049	55·0	
20. 0	47. 21	027955	55·3	033283	55·0	T D
22. 0	49. 48	025402	53·7	032962	53·6	H B
Apr. 18. 0. 0	22. 54. 31	0·025338	54·5	0·033095	54·6	H B
1. 50	23. 0. 35	025775		032972		
2. 0	0. 21	025753	55·5	032972	54·8	
2. 10	23. 0. 31	025907		032982		H B
4. 0	22. 57. 28	027579	57·0	033593	56·8	T D
6. 0	53. 30	028320	56·8	033675	56·5	
8. 0	52. 23	028579	56·5	033724	56·3	
10. 0	52. 23	028143	55·5	033269	55·0	T D
12. 0	51. 31	028150	54·5	033226	54·6	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°; from April $13^d.1^h.50^m$, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
April 13^d, 14^d, and 16^d. Considerable changes took place on each day.
HORIZONTAL FORCE MAGNET.
April $14^d.8^h$. The reading of the thermometer seems to be 5° too small, and if so, the above result should be increased by 0·000850.
April 14^d, 15^d, and 17^d. Between 2^h and 22^h a large change took place.
April 16^d. Between 0^h and $1^h.50^m$ a large change occurred.
VERTICAL FORCE MAGNET.
April 13^d. Several large changes took place.
April $14^d.8^h$. The reading of the thermometer seems to be 5° too small, and if so, the above result should be increased by 0·01320.
April 16^d. Between 6^h and 12^h large changes took place.
April 17^d. Between 2^h and 4^h and between 8^h and 10^h considerable changes took place.
April 18^d. Between $2^h.10^m$ and 4^h a considerable change took place.

Daily Observations from April 19 to 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 19. 14. 0	22. 49. 51	0·027191	51·2	0·032729	51·7	H B
16. 0	43. 42	027311	49·3	032354	49·5	
18. 0	47. 49	027311	48·0	032248	48·2	
20. 0	48. 34	026967	47·8	032577	47·8	H B
22. 0	49. 35	025463	49·5	033134	49·5	L
Apr. 20. 0. 0	22. 54. 48	0·025002	52·0	0·033364	52·0	L
1. 50	23. 0. 18	025826		033558		
2. 0	22. 59. 52	025648	55·8	033543	54·8	
2. 10	23. 0. 24	025826		033513		L
4. 0	22. 58. 24	026431	57·8	033763	57·0	H B
6. 0	55. 22	027973	58·8	033765	58·1	
8. 0	48. 36	028056	58·5	033793	57·8	
10. 0	51. 17	027708	57·5	033495	57·0	H B
12. 0	47. 42	027070	57·0	033456	57·0	L
14. 0	49. 59	026398	55·0	033001	55·0	
16. 0	48. 57	027386	53·0	032790	53·0	
18. 0	48. 57	027370	50·3	032492	50·3	
20. 0	48. 36	027548	49·0	032563	49·0	L
22. 0	50. 36	025769	50·0	032910	50·0	T D
Apr. 21. 0. 0	22. 56. 14	0·026160	53·6	0·033358	53·4	T D
1. 50	23. 0. 35	027531		033783		
2. 0	0. 30	027487	57·5	033783	57·5	
2. 10	23. 0. 44	027487		033807		T D
4. 0	22. 57. 17	027521	59·0	033861	59·0	L
6. 0	54. 6	028311	60·0	033805	59·6	
8. 0	51. 34	028133	60·0	033834	60·0	
10. 0	51. 52	027654	59·0	033570	59·0	L
12. 0	51. 37	028015	58·0	033441	58·0	T D
14. 0	50. 44	027497	56·0	033152	56·0	
16. 0	50. 12	027155	53·2	032570	53·0	
18. 0	50. 12	027155	53·2	032951	53·0	
20. 0	50. 55	027729	51·5	032745	51·5	T D
22. 0	51. 17	026157	51·5	032877	51·3	H B
Apr. 22. 0. 0	22. 58. 11	0·026805	54·4	0·033167	53·8	H B
1. 50	23. 0. 47	026313		033561		
2. 0	1. 17	027088	57·5	033571	56·7	
2. 10	23. 1. 25	027266		033571		H B
4. 0	22. 57. 43	027978	60·0	034248	60·0	T D
6. 0	53. 57	030252	61·0	034424	60·8	
8. 0	50. 37	027691	60·0	034159	60·0	T D
10. 0	52. 34	027897	59·0	033723	58·7	G
12. 0	50. 31	027962	57·3	033226	57·0	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 22. 14. 0	22. 51. 52	0·026568	56·0	0·033118	56·0	L
16. 0	51. 40	026495	55·7	033235	55·5	H B
18. 0	50. 5	026534	54·5	033108	54·3	H B
20. 0	47. 27	026338	54·0	033225	54·0	T D
22. 0	49. 16	025190	53·5	032980	53·5	G
Apr. 23. 0. 0	22. 56. 26	0·026134	55·4	0·033425	55·5	H B
1. 50	23. 0. 46	027138		033561		
2. 0	0. 49	026729	57·6	033539	57·5	H B
2. 10	23. 0. 24	026830		033565		T D
4. 0	22. 55. 44	027679	59·8	034062	60·0	H B
6. 0	53. 42	028116	61·2	033990	61·0	L
8. 0	52. 29	027861	61·0	033756	61·0	T D
10. 0	53. 18	028754	60·0	033443	60·0	G
12. 0	53. 11	029461	58·3	033072	57·8	H B
14. 0	49. 32	028436	56·7	032963	56·5	
16. 0	51. 52	027745	55·5	033050	55·8	
18 0	51. 48	027946	53·3	032639	53·5	
20. 0	48. 40	027441	52·8	032815	52·8	H B
22. 0	47. 58	025316	52·5	032908	52·8	L
Apr. 24. 0. 0	22. 55. 25	0·024823	54·2	0·032976	53·8	L
1. 50	23. 1. 52	025886		033529		
2. 0	1. 52	025886	57·2	033529	57·0	
2. 10	23. 1. 41	026064		033129		L
4. 0	22. 57. 51	027888	59·6	033772	59·4	H B
6. 0	53. 48	028958	61·2	034003	60·7	
8. 0	50. 52	028023	61·3	033892	61·0	
10. 0	51. 18	028642	61·3	033683	61·0	H B
12. 0	51. 3	027978	60·0	033541	60·0	T D
14. 0	50. 53	027971	58·0	033211	57·7	
16. 0	54. 15	028339	56·0	032805	55·7	
18. 0	52. 25	026929	55·0	032436	55·0	T D
20. 0	52. 9	026693	54·0	032737	54·0	G
22. 0	51. 40	024950	54·3	032834	54·0	L
Apr. 25. 0. 0	22. 55. 17	0·024175	58·2	0·033549	58·0	L
1. 50	23. 0. 15	025706		034142		
2. 0	0. 41	026038	62·0	034030	62·0	
2. 10	23. 0. 41	026259		033971		
4. 0	22. 57. 55	026565	63·8	034185	63·7	L
6. 0	54. 29	027757	64·3	034168	64·0	G
8. 0	52. 14	028662	63·5	033977	63·5	
10. 0	50. 52	027846	63·0	033870	63·0	G
12. 0	47. 12	026982	60·0	032736	60·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s{\cdot}8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s{\cdot}6$; in Vertical Plane, $27^s{\cdot}5$.

HORIZONTAL FORCE MAGNET.
April 22^d. Between 6^h and 8^h a large change took place.

VERTICAL FORCE MAGNET.
April 22^d, between $2^h.\ 10^m$ and 4^h; 24^d, between $2^h.\ 10^m$ and 4^h, and again between 22^h and 24^h; and on 25^d, between 10^h and 12^h, large changes took place.

Daily Observations from April 26 to May 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 26. 14. 0	22. 52. 9	0·026247	47·6	0·032044	47·5	L
16. 0	51. 17	026307	46·0	031975	46·0	
18. 0	50. 9	026333	44·2	031904	44·2	
20. 0	48. 35	026046	44·2	032144	44·0	L
22. 0	51. 1	024842	46·5	032546	45·6	H B
Apr. 27. 0. 0	22. 56. 43	0·024216	50·5	0·032753	48·5	H B
1. 50	23. 2. 7	027178		033146		
2. 0	1. 38	026912	53·6	033150	52·5	
2. 10	23. 1. 14	025894		033107		H B
4. 0	22. 55. 37	026977	55·8	033650	55·5	L
6. 0	52. 41	028430	56·8	033866	56·8	
8. 0	52. 13	027276	56·0	033436	56·0	
10. 0	51. 41	026833	56·0	033377	56·0	L
12. 0	51. 30	026774	55·0	033108	55·0	G
14. 0	50. 28	026627	54·0	032986	54·0	
16. 0	51. 24	026305	52·5	032790	52·5	
18. 0	51. 13	026552	52·0	032784	52·0	
20. 0	49. 40	025556	52·0	033014	52·0	G
22. 0	50. 27	024328	52·2	032989	52·0	L
Apr. 28. 0. 0	22. 56. 4	0·023852	55·0	0·032922	54·0	L
1. 50	59. 16	025843		033997		
2. 0	59. 35	026131	60·2	033924	59·7	
2. 10	59. 16	025909		033899		
4. 0	55. 34	027017	63·2	034152	63·0	L
6. 0	52. 50	027733	65·2	034202	64·5	G
8. 0	52. 15	027212	65·0	034139	65·0	
10. 0	52. 45	026865	64·0	033924	64·0	G
12. 0	51. 16	026241	61·5	033396	61·3	L
14. 0	50. 23	026107	58·5	033111	58·5	
16. 0	48. 39	026253	54·8	032558	54·8	
18. 0	47. 42	026501	53·0	032497	53·0	
20. 0	48. 0	025396	50·8	032252	50·5	L
22. 0	48. 30	024287	53·0	033228	52·5	G
Apr. 29. 0. 0	22. 54. 50	0·023911	56·0	0·033050	53·8	G H
1. 50	58. 33	024949		033549		
2. 0	58. 39	025126	59·5	033549	58·0	
2. 10	58. 54	025170		033451		G H
4. 0	57. 52	026676	62·5	033912	62·0	L
6. 0	55. 43	026378	64·0	034237	64·3	
8. 0	54. 12	026821	64·0	033938	64·0	L
10. 0	52. 1	026872	63·0	033655	63·0	G
12. 0	51. 5	026428	61·3	033398	61·2	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Apr. 29. 14. 0	22. 48. 33	0·025696	59·6	0·033131	59·8	H B
16. 0	49. 53	025909	57·6	032809	57·6	
18. 0	46. 43	025921	56·1	032844	56·2	
20. 0	48. 48	025461	54·7	032757	54·3	H B
22. 0	49. 29	024763	54·5	033175	55·2	G
Apr. 30. 0. 0	22. 56. 10	0·022864	57·0	0·033787	56·5	G
1. 50	58. 45	024409		033236		
2. 0	59. 19	025052	57·5	033187	57·0	
2. 10	59. 29	025008		033241		G
4. 0	56. 23	025472	58·8	033443	58·3	H B
6. 0	54. 56	026185	60·0	033721	59·5	
8. 0	52. 30	026431	60·8	033693	60·3	
10. 0	52. 2	026098	60·4	033570	60·5	H B
12. 0	51. 8	025868	61·0	033668	61·0	G
14. 0	52. 13	025971	59·0	033189	59·0	
16. 0	52. 18	025232	57·0	032895	57·0	
18. 0	50. 8	026074	57·0	033090	57·0	
20. 0	50. 45	025914	55·8	032889	55·5	G
22. 0	51. 23	024310	56·0	032989	55·7	L
May 1. 0. 0	22. 55. 13	0·023059	57·5	0·033076	57·5	L
1. 50	59. 16	024669		033346		
2. 0	59. 16	024736	60·2	033346	60·0	
2. 10	59. 34	024802		033346		
4. 0	57. 11	025595	62·0	033821	61·8	L
6. 0	53. 18	026234	62·5	033825	62·0	G
8. 0	52. 42	026536	63·5	033967	63·0	
10. 0	52. 40	026473	63·0	033860	63·0	G
12. 0	52. 15	025912	61·0	033463	61·0	L
14. 0	52. 39	025596	59·4	033214	59·5	
16. 0	52. 6	025494	58·8	033124	58·7	
18. 0	50. 22	025613	58·2	033162	58·2	
20. 0	50. 20	026022	58·0	033159	58·0	L
22. 0	49. 24	024735	58·5	033138	58·2	H B
May 2. 0. 0	22. 54. 5	0·023455	59·7	0·032990	59·3	H B
1. 50	57. 59	024703		033300		
2. 0	57. 52	024814	61·7	033276	61·2	
2. 10	58. 12	025057		033247		H B
4. 0	56. 58	026208	63·0	033743	63·3	L
6. 0	54. 34	026463	64·5	033970	64·4	
8. 0	46. 32	026659	65·0	034105	65·0	
10. 0	51. 48	026105	65·0	033935	65·0	L
12. 0	51. 30	026193	64·6	033679	64·2	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

HORIZONTAL FORCE MAGNET.
April 27d. Between 0^h and $1^h.50^m$ a considerable change occurred.

VERTICAL FORCE MAGNET.
April 28d. Between 0^h and $1^h.50^m$ and between 20^h and 22^h large changes took place.
April 29d. Between 22^h and 24^h a large change took place.

Daily Observations from May 3 to 9.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
May 3. 14. 0	22. 46. 23	0·024641	64·2	0·033281	64·5	H B	May 6. 14. 0	22. 29. 44	0·024414	60·0	0·033248	60·0	L
16. 0	42. 46	022511	62·8	032924	63·0		16. 0	26. 27	024141	58·0	033062	58·0	
18. 0	52. 43	023690	61·6	032962	61·7		18. 0	24. 22	024056	56·2	032830	56·2	
20. 0	47. 33	025144	61·3	032980	61·7	H B	20. 0	22. 32	023383	55·5	032862	55·4	L
22. 0	22. 51. 29	023688	61·2	032830	61·0	L	22. 0	22. 19	023698	56·7	033131	56·4	H B
May 4. 0. 0	23. 0. 31	0·023260	63·5	0·033402	63·5	L	May 7. 0. 0	22. 31. 33	0·024068	59·4	0·033265	58·7	H B
1. 50	4. 21	025431		033857			1. 50	40. 1	025069		033635		
2. 0	4. 59	025586	66·5	033857	66·0		2. 0	39. 46	024803	63·2	033611	61·8	
2. 10	4. 33	025253		033837		L	2. 10	40. 3	024870		033591		H B
4. 0	23. 6. 49	027381	68·6	034576	68·3	H B	4. 0	39. 40	025526	65·5	033993	64·8	L
6. 0	22. 58. 23	025340	68·7	034810	68·5		6. 0	37. 59	026445	67·0	034701	66·8	
8. 0	51. 49	025210	68·2	034712	68·0		8. 0	36. 18	025151	67·2	034706	67·0	
10. 0	39. 25	021872	66·8	033623	66·5	H B	10. 0	35. 13	024103	65·2	033983	65·0	L
12. 0	39. 8	022246	66·0	033642	66·0	D	12. 0	35. 4	023740	63·2	033427	62·8	H B
14. 0	40. 33	023227	65·0	033354	65·0		14. 0	30. 22	024519	61·4	033187	61·6	
16. 0	47. 3	023381	62·0	032728	62·0		16. 0	29. 31	024300	59·2	032901	59·0	
18. 0	49. 37	023322	61·0	032773	61·0		18. 0	24. 21	023945	57·5	032701	57·3	
20. 0	49. 40	023484	60·0	032663	60·0	D	20. 0	24. 20	023498	56·7	032901	56·8	H B
22. 0	51. 55	022547	61·0	033404	61·0	T D	22. 0	27. 4	023546	57·5	032944	57·0	T D
May 5. 0. 0	22. 54. 12	0·023237	63·5	0·033796	63·0	T D	May 8. 0. 0	22. 34. 4	0·024080	59·6	0·033292	59·0	T D
1. 50	54. 26	023670		034008			1. 50	39. 8	025399		034035		
2. 0	54. 30	023626	65·0	034008	65·0		2. 0	39. 36	025687	62·8	034054	62·5	
2. 10	55. 27	023382		034008		T D	2. 10	39. 46	025687		034054		T D
4. 0	56. 53	025153	66·3	034192	66·2	D	4. 0	40. 0	026230	64·3	034143	64·0	H B
6. 0	53. 28	025095	67·0	034613	67·0		6. 0	41. 4	025504	65·5	034375	64·9	
8. 0	48. 23	025382	67·0	034570	67·0		8. 0	40. 10	024808	65·7	034399	65·6	
10. 0	45. 5	024599	65·0	033964	65·0	D	10. 0	34. 34	024699	64·8	034031	64·5	H B
12. 0	42. 39	024651	64·0	033719	64·0	T D	12. 0	31. 24	023670	63·7	033694	63·5	T D
14. 0	40. 25	023749	62·6	033449	62·5		14. 0	29. 41	024086	62·5	033479	62·3	
16. 0	34. 23	024318	61·0	033053	61·0		16. 0	28. 40	024393	61·7	033390	61·5	
18. 0	36. 38	024632	59·2	032604	59·0		18. 0	27. 9	023942	61·0	033282	60·5	
20. 0	33. 6	022931	58·7	032874	58·4	T D	20. 0	26. 56	023219	60·0	033282	60·0	T D
22. 0	32. 19	022514	58·0	032989	58·0	L	22. 0	32. 34	022258	60·6	033405	60·5	L
May 6. 0. 0	22. 38. 50	0·022506	59·2	0·033326	59·0	L	May 9. 0. 0	22. 45. 17	0·023763	63·2	0·033845	63·0	L
1. 50	40. 22	023569		033304			1. 50	56. 32	024769		034119		
2. 0	40. 22	023569	60·5	033304	59·7		2. 0	56. 57	024725	66·0	034129	65·0	
2. 10	40. 15	023834		033314		L	2. 10	57. 3	024327		034109		
4. 0	40. 17	024734	62·4	033961	62·0	T D	4. 0	56. 52	024902	68·6	034961	68·3	L
6. 0	39. 52	026021	63·2	034245	63·0		6. 0	52. 51	025271	69·6	035215	69·3	T D
8. 0	35. 15	026319	63·0	033980	62·7		8. 0	49. 29	025674	69·5	034639	69·0	
10. 0	31. 15	024589	62·2	033678	62·0	T D	10. 0	41. 25	023880	67·8	034065	67·4	
12. 0	31. 35	024097	61·0	033512	61·0	L	12. 0	44. 40	023577	65·5	033359	65·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m, 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

DECLINATION MAGNET.
May 3d to 8d. There were frequently considerable changes during the five days.

HORIZONTAL FORCE MAGNET.
May 4d. Between 8h and 10h a large change took place.

VERTICAL FORCE MAGNET.
May 4d to 9d. Several large changes took place.

Daily Observations from May 10 to 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 10. 14. 0	22. 36. 45	0·024396	59·5	0·033065	59·4	L
16. 0	32. 9	023901	57·5	032978	57·5	
18. 0	29. 39	023656	55·8	032795	55·7	
20. 0	24. 19	022634	55·0	032772	54·8	L
22. 0	27. 50	022059	56·7	032793	55·6	H B
May 11. 0. 0	22. 43. 1	0·022680	59·7	0·033170	58·3	H B
1. 50	23. 0. 29	024865		033850		
2. 0	0. 12	025019	63·3	033776	62·0	
2. 10	23. 0. 2	024865		033752		
4. 0	22. 57. 26	025543	65·6	034017	65·0	
6. 0	54. 11	025943	67·3	034263	66·8	
8. 0	53. 3	025662	67·6	034399	67·5	H B
10. 0	51. 11	024759	66·2	033931	66·0	L
12. 0	48. 39	025774	63·7	033012	63·5	H B
14. 0	46. 53	024581	61·5	032906	61·7	
16. 0	43. 30	021896	58·6	032301	58·5	
18. 0	41. 4	023112	56·9	032222	57·0	
20. 0	43. 56	020888	55·8	032141	55·7	H B
22. 0	22. 57. 46	020052	57·0	032686	56·8	L
May 12. 0. 0	23. 3. 47	0·019156	60·2	0·032965	58·8	L
1. 50	1. 18	021175		033762		
2. 0	1. 18	021286	64·0	033762	63·0	
2. 10	23. 1. 28	021551		033772		L
4. 0	22. 58. 55	022099	66·7	034804	65·8	H B
6. 0	54. 53	028208	67·6	035138	66·7	
8. 0	43. 35	025380	66·2	034391	65·7	
10. 0	47. 4	022750	64·8	033329	64·5	H B
12. 0	46. 57	023509	63·4	032167	63·2	T D
14. 0	49. 13	022318	62·0	032669	62·0	
16. 0	53. 50	021576	60·5	032906	60·0	
18. 0	50. 22	021166	59·0	033018	59·0	
20. 0	50. 14	020954	58·4	033086	58·0	T D
22. 0	22. 53. 35	021594	58·0	032954	58·0	L
May 13. 0. 0	23. 0. 56	0·020078	59·5	0·033284	59·4	L
1. 50	2. 37	021636		033763		
2. 0	1. 55	021746	61·5	033797	61·4	
2. 10	23. 0. 38	022012		033812		L
4. 0	22. 53. 21	026787	62·5	034484	62·5	T D
6. 0	54. 20	025415	62·5	034391	62·5	
8. 0	48. 55	025732	61·5	033933	61·3	
10. 0	49. 51	023698	61·0	033561	61·0	T D
12. 0	53. 10	022377	60·0	033224	60·0	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 13. 14. 0	22. 49. 25	0·023757	59·0	0·032545	59·0	L
16. 0	51. 50	022395	57·5	032442	57·5	
18. 0	47. 45	023170	57·5	032828	57·3	
20. 0	47. 45	021509	57·5	033222	57·5	L
22. 0	50. 2	020240	58·5	033042	56·8	H B
May 14. 0. 0	22. 56. 40	0·020997	61·0	0·033902	61·0	T D
1. 50	58. 16	023805		034040		H B
2. 0	58. 31	023938	62·8	034079	62·3	
2. 10	58. 27	024026		034006		H B
4. 0	55. 41	024246	65·0	034335	64·6	L
6. 0	52. 42	025516	64·4	034060	64·0	
8. 0	54. 46	025850	63·5	033977	63·5	
10. 0	52. 58	024522	62·2	033386	62·0	L
12. 0	50. 12	023518	60·2	033126	60·5	H B
14. 0	48. 33	022811	57·6	032327	57·4	
16. 0	48. 39	023001	55·6	032229	55·7	
18. 0	47. 58	022936	53·0	032186	53·3	
20. 0	47. 58	021258	52·9	032497	52·5	H B
22. 0	52. 46	019756	55·0	032834	54·0	T D
May 15. 0. 0	22. 59. 26	0·020065	57·6	0·033419	57·4	T D
1. 50	59. 36	021815		033866		
2. 0	59. 35	021970	60·6	033900	60·4	
2. 10	59. 42	022036		033900		T D
4. 0	56. 17	024457	62·6	034082	62·2	H B
6. 0	54. 17	024566	63·5	034114	63·3	
8. 0	54. 17	023680	63·5	033794	62·7	
10. 0	53. 0	022979	62·5	033449	62·0	H B
12. 0	53. 0	022956	60·8	033097	60·5	T D
14. 0	51. 38	022436	58·0	032828	58·0	
16. 0	51. 2	022617	56·2	032705	56·0	
18. 0	51. 14	022615	54·5	032669	54·3	
20. 0	48. 8	021224	54·0	032957	54·0	T D
22. 0	48. 6	020316	54·0	032849	54·0	L
May 16. 0. 0	22. 55. 6	0·020573	57·2	0·033212	57·0	L
1. 50	58. 0	021772		033600		
2. 0	58. 5	021971	61·0	033517	60·0	
2. 10	58. 24	022104		033468		L
4. 0	56. 55	023252	64·5	034012	64·3	T D
6. 0	55. 27	024419	65·5	034046	65·0	
8. 0	50. 2	024402	65·4	034022	65·0	
10. 0	50. 4	023544	64·0	033639	63·7	T D
12. 0	53. 9	022795	62·2	033316	62·2	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°; from May $11^d.1^h.50^m$, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET
May $10^d.22^h$ to $11^d.1^h.50^m$ and $11^d.20^h$ to 24^h. The changes were considerable.
May 12^d. Between 6^h and 8^h the change was large for the time of the day.

HORIZONTAL FORCE MAGNET.
May 12^d. Between 4^h and 10^h very considerable changes took place.
May 13^d. Between $2^h.10^m$ and 4^h a large change occurred.
May 14^d. Between 0^h and $1^h.50^m$ a large change took place.

VERTICAL FORCE MAGNET.
May 11^d, 12^d, 13^d, and 14^d. Several large changes took place on each day.

Daily Observations from May 17 to 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 17. 14. 0	22. 51. 42	0·022464	54·0	0·032240	54·0	L
16. 0	49. 50	022671	53·0	032277	53·0	
18. 0	46. 44	022567	52·0	032375	52·0	
20. 0	47. 23	022235	52·0	032463	52·0	L
22. 0	49. 38	021895	53·0	032517	52·8	H B
May 18. 0. 0	22. 53. 37	0·022231	53·8	0·032298	53·3	H B
1. 50	58. 7	023768		032868		
2. 0	58. 14	023702	56·2	032785	55·7	
2. 10	58. 25	023546		032795		H B
4. 0	56. 46	024557	58·5	033023	58·0	L
6. 0	57. 27	026056	59·5	033200	58·8	
8. 0	54. 10	025391	60·8	033728	60·8	L
10. 0	51. 16	025026	61·0	033576	61·0	T D
12. 0	49. 34	025063	60·3	033326	60·5	H B
14. 0	51. 40	024696	58·8	033014	58·8	
16. 0	48. 17	024122	57·5	032524	57·5	
18. 0	55. 7	023538	56·8	032428	56·8	
20. 0	49. 25	023563	56·3	032495	55·8	H B
22. 0	50. 34	021738	57·8	033076	57·5	T D
May 19. 0. 0	22. 55. 56	0·020388	59·5	0·033424	59·5	T D
1. 50	22. 59. 7	022385		033791		
2. 0	23. 1. 5	022651	62·0	033825	62·0	
2. 10	22. 59. 3	022761		033825		T D
4. 0	56. 56	023672	62·8	033572	61·8	H B
6. 0	53. 37	023296	62·8	033842	62·4	
8. 0	51. 21	023572	62·6	033884	62·3	
10. 0	53. 41	023552	61·7	033483	61·3	H B
12. 0	52. 28	023525	60·5	033270	60·4	T D
14. 0	51. 39	023757	59·0	032951	58·8	
16. 0	53. 23	023321	58·0	032845	57·7	
18. 0	53. 26	022166	57·2	032846	57·0	
20. 0	47. 25	022395	57·5	033048	57·3	T D
22. 0	49. 48	020487	58·0	033086	58·0	L
May 20. 0. 0	22. 57. 12	0·021134	59·2	0·033179	59·0	L
1. 50	57. 12	022411		033394		
2. 0	57. 54	022411	60·2	033394	60·0	
2. 10	57. 54	022301		033394		
4. 0	54. 20	023126	61·8	033913	61·5	
6. 0	50. 23	024795	62·5	034308	62·5	L
8. 0	50. 35	025731	62·8	034079	62·5	T D
10. 0	50. 31	024163	61·0	033334	60·7	T D
12. 0	51. 31	024037	60·0	033273	60·0	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 20. 14. 0	22. 52. 27	0·023266	58·2	0·032943	58·2	L
16. 0	51. 22	023192	57·5	032944	57·5	
18. 0	50. 8	023093	56·4	032883	56·4	
20. 0	47. 4	022096	56·0	032941	55·7	L
22. 0	22. 51. 3	020505	56·8	032997	56·5	H B
May 21. 0. 0	23. 1. 32	0·020422	59·7	0·032792	58·2	H B
1. 50	0. 13	023045		033654		
2. 0	2. 25	022094	62·5	033668	62·0	
2. 10	23. 3. 37	022182		033668		H B
4. 0	22. 56. 54	024334	65·0	034441	64·5	L
6. 0	51. 37	024869	65·8	034316	65·8	
8. 0	50. 29	024640	65·5	034067	65·5	
10. 0	53. 10	024045	64·6	033803	64·5	L
12. 0	52. 5	023432	62·3	033246	62·3	H B
14. 0	51. 59	023515	60·7	033102	61·0	
16. 0	51. 21	023113	58·6	032682	58·5	
18. 0	46. 58	022354	57·0	032774	57·3	
20. 0	44. 45	020943	55·6	032722	55·7	H B
22. 0	22. 50. 22	019653	57·0	033033	56·6	T D
May 22. 0. 0	23. 0. 21	0·021849	59·5	0·033374	59·0	T D
1. 50	4. 54	023663		034397		
2. 0	3. 44	024239	64·7	034338	64·5	
2. 10	23. 3. 44	024836		034338		T D
4. 0	22. 59. 56	024054	67·0	034660	67·2	H B
6. 0	52. 22	023557	68·5	034413	68·2	
8. 0	48. 56	024087	68·5	034170	68·0	
10. 0	51. 23	023209	67·5	033719	67·2	H B
12. 0	52. 34	023404	65·0	033466	65·0	T D
14. 0	52. 19	023935	63·3	033242	63·3	
16. 0	52. 39	023603	62·0	033055	62·0	
18. 0	47. 28	022879	61·0	033032	60·7	
20. 0	47. 42	021255	60·3	033102	60·0	T D
22. 0	51. 38	020384	60·0	032994	60·0	L
May 23. 0. 0	22. 59. 31	0·022691	61·2	0·032879	61·0	L
1. 50	23. 2. 17	022666		033139		
2. 0	2. 27	023374		033104		
2. 10	3. 11	023595	63·0	033211	63·0	L
4. 0	23. 1. 13	026242	64·5	034022	64·5	T D
6. 0	22. 54. 0	024998	65·0	034427	64·8	T D
8. 0	53. 4	024157	65·0	034062	65·3	L
10. 0	51. 51	024212	64·8	033829	65·0	
12. 0	52. 39	024120	64·0	033427	64·0	

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

DECLINATION MAGNET.
May 20d and 21d. Between 22h and 24h the change was rather larger than usual.

HORIZONTAL FORCE MAGNET.
May 23d. Between 2h. 10m and 4h a considerable change took place.

VERTICAL FORCE MAGNET.
May 21d. Between 0h and 4h considerable changes took place.
May 22d. Between 0h and 1h. 50m a large change took place.
May 23d. Between 2h. 10m and 4h a large change took place.

Daily Observations from May 24 to 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May. 24. 14. 0	22. 48. 56	0·023796	66·0	0·033223	66·0	L
16. 0	51. 53	022830	64·0	033046	64·0	
18. 0	50. 48	021736	63·0	033292	63·0	
20. 0	48. 50	020946	62·0	033017	61·8	L
22. 0	51. 1	021237	62·8	033063	61·7	H B
May. 25. 0. 0	22. 59. 8	0·021333	64·8	0·033273	63·4	H B
1. 50	59. 0	023639		033482		
2. 0	58. 29	023971	65·6	033574	64·3	
2. 10	58. 42	023860		033628		H B
4. 0	57. 9	023438	66·5	034110	65·5	L
6. 0	54. 45	024980	67·5	034121	67·0	
8. 0	51. 40	024401	68·0	034113	67·8	
10. 0	49. 0	023847	68·0	033922	68·0	L
12. 0	55. 0	024582	67·5	033595	67·3	H B
14. 0	51. 27	023700	65·7	033394	66·0	
16. 0	49. 28	023522	64·0	033204	63·9	
18. 0	49. 28	023055	63·6	033332	63·7	
20. 0	46. 48	021834	62·8	033169	62·5	H B
22. 0	52. 47	021729	64·0	033154	64·0	T D
May. 26. 0. 0	22. 59. 10	0·022784	65·0	0·033018	64·8	T D
1. 50	23. 2. 3	023065		033515		
2. 0	2. 3	023309	66·0	033564	66·0	
2. 10	23. 1. 31	023441		033574		T D
4. 0	22. 58. 0	023290	66·8	033824	66·3	H B
6. 0	54. 20	023302	67·0	033857	66·5	
8. 0	51. 57	024185	66·6	033682	66·3	
10. 0	52. 13	023971	65·6	033374	65·3	H B
12. 0	52. 17	023721	64·0	033064	63·7	T D
14. 0	53. 15	023432	62·3	032840	62·0	
16. 0	51. 4	023331	60·4	032663	60·0	
18. 0	48. 21	023008	58·5	033569	58·0	
20. 0	47. 41	021797	57·5	032710	57·5	T D
22. 0	48. 38	020930	58·0	032779	57·8	L
May. 27. 0. 0	22. 57. 52	0·021602	60·0	0·033018	59·5	L
1. 50	23. 0. 52	022226		033577		
2. 0	0. 41	022359	62·5	033577	61·8	
2. 10	23. 0. 26	022403		033577		L
4. 0	22. 57. 2	023091	65·5	034264	65·2	T D
6. 0	52. 17	024059	66·9	034383	66·7	
8. 0	51. 54	024231	67·0	034131	67·0	
10. 0	51. 54	023463	66·0	033645	65·7	T D
12. 0	51. 54	023319	64·5	033310	64·3	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 27. 14. 0	22. 50. 30	0·023091	62·9	0·033207	62·8	L
16. 0	49. 51	022880	61·4	032994	61·4	
18. 0	48. 27	022786	59·8	032805	59·8	
20. 0	46. 25	022071	59·5	032974	59·0	L
22. 0	50. 11	021289	61·8	032967	58·9	H B
May 28. 0. 0	22. 56. 47	0·021362	63·8	0·033296	61·7	H B
1. 50	59. 26	022990		033612		
2. 0	59. 28	023078	66·6	033697	64·5	
2. 10	59. 17	022946		033688		H B
4. 0	57. 22	022418	67·4	033893	66·4	L
6. 0	53. 31	022851	68·0	033954	67·2	
8. 0	51. 6	023294	68·0	033915	67·7	
10. 0	51. 54	023005	67·6	033692	67·5	L
12. 0	51. 30	022623	66·4	033462	66·5	H B
14. 0	51. 24	022359	63·8	033032	63·8	
16. 0	51. 22	022162	61·6	032831	61·8	
18. 0	48. 30	021948	60·6	032987	60·6	
20. 0	46. 46	020521	59·5	032821	58·7	H B
22. 0	49. 56	020156	61·0	032900	59·2	T D
May 29. 0. 0	22. 51. 48	0·020537	62·2	0·033498	62·0	T D
1. 50	23. 0. 46	021418		033890		
2. 0	0. 46	021418	65·3	033851	64·5	
2. 10	23. 0. 26	021285		033851		T D
4. 0	22. 57. 5	023521	66·6	033755	65·3	H B
6. 0	53. 49	023968	67·8	033968	67·2	
8. 0	52. 20	023667	68·5	033974	68·2	H B
10. 0	52. 23	023450	68·0	033722	68·0	D
12. 0	48. 27	022419	66·5	033379	66·5	D
14. 0	48. 58	022648	64·2	032890	64·0	L
16. 0	52. 17	022069	63·4	033068	63·2	T D
18. 0	45. 39	022710	61·7	032819	61·7	T D
20. 0	47. 41	021384	60·8	032653	59·5	H B
22. 0	22. 52. 18	020595	62·8	032780	60·0	D
May 30. 0. 0	23. 0. 34	0·021657	65·4	0·033435	63·2	H B
1. 50	2. 6	022334		033820		T D
2. 0	1. 22	022368	67·5	033902	67·0	
2. 10	23. 1. 34	022630		033985		
4. 0	22. 57. 53	023685	70·3	034199	69·7	T D
6. 0	55. 50	024955	72·3	034807	72·5	H B
8. 0	50. 56	023312	72·4	034557	72·2	L
10. 0	52. 7	023276	70·5	033875	70·5	L
12. 0	46. 29	021139	69·0	033235	69·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
May 24^d and 26^d. Between 22^h and 24^h the change was rather larger than usual.
May 29^d. Between 0^h and $1^h.50^m$ the change was rather large, and the usual change in the two preceding hours had not taken place.

HORIZONTAL FORCE MAGNET.
May 25^d. Between 0^h and $1^h.50^m$ the change was large.

VERTICAL FORCE MAGNET.
May 27^d. From 0^h to 4^h large changes occurred.
May 28^d and 29^d. Between 22^h and 24^h large changes occurred.
May 30^d. From 4^h to 12^h large changes took place.

Daily Observations from May 31 to June 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
May 31. 14. 0	22. 47. 38	0·021683	70·5	0·033304	70·0	T D	June 3. 14. 0	22. 51. 16	0·019860	71·5	0·033132	71·2	T D
16. 0	47. 50	021302	68·0	033146	68·0		16. 0	51. 29	020198	68·8	032992	68·6	
18. 0	51. 33	021236	65·4	032785	65·3		18. 0	50. 9	019770	65·5	032448	65·0	
20. 0	49. 25	020289	64·0	032729	64·0	T D	20. 0	47. 2	019061	65·5	032803	64·8	T D
22. 0	52. 32	019719	65·2	033198	64·8	L	22. 0	49. 4	018740	67·0	033407	66·7	L
June 1. 0. 0	22. 58. 50	0·020017	68·0	0·033771	67·8	L	June 4. 0. 0	22. 54. 49	0·019317	70·0	0·033435	68·0	L
1. 50	58. 37	020701		034082			1. 50	58. 56	021078		034335		
2. 0	58. 37	020790	71·5	034088	70·2		2. 0	58. 22	021078	74·5	034325	72·8	
2. 10	58. 30	020834		034088		L	2. 10	57. 33	021078		034306		
4. 0	57. 22	022397	74·7	034677	74·0	T D	4. 0	57. 21	021580	76·8	034835	75·8	
6. 0	54. 42	022372	75·6	034721	75·0		6. 0	56. 5	022116	78·0	034811	77·2	L
8. 0	51. 43	022824	75·0	034551	75·0		8. 0	51. 20	021622	77·7	034576	77·0	T D
10. 0	50. 53	022041	73·0	033869	72·7	T D	10. 0	51. 18	020348	75·8	033972	75·4	T D
12. 0	49. 15	021505	70·5	033262	70·4	L	12. 0	52. 26	020288	73·5	033660	73·2	L
14. 0	47. 48	021707	68·3	032456	68·0		14. 0	51. 25	020030	71·2	033314	71·2	
16. 0	46. 56	022157	66·0	031857	66·0		16. 0	50. 25	019922	69·0	033186	69·0	
18. 0	46. 44	020877	64·2	031744	64·0		18. 0	50. 1	019489	67·5	033122	67·5	
20. 0	45. 51	019591	62·5	031860	62·5	L	20. 0	49. 34	019180	66·2	032917	65·8	L
22. 0	22. 53. 49	017064	64·3	032404	62·9	H B	22. 0	52. 32	019460	68·5	032924	65·7	H B
June 2. 0. 0	23. 1. 9	0·020033	67·7	0·033362	66·4	H B	June 5. 0. 0	22. 59. 18	0·021155	71·7	0·033531	69·2	H B
1. 50	1. 37	021743		034317			1. 50	58. 10	020502		035205		T D
2. 0	23. 0. 56	021234	71·9	034283	70·7		2. 0	58. 35	020192	75·8	034717	74·8	
2. 10	22. 59. 34	020326		034161		H B	2. 10	58. 35	020192		034693		T D
4. 0	57. 12	021122	74·5	034550	74·0	L	4. 0	58. 5	020788	78·0	034693	76·8	L
6. 0	54. 32	022130	76·0	034582	76·0		6. 0	55. 15	020839	78·3	034669	77·8	
8. 0	48. 35	021698	75·8	034619	75·5		8. 0	50. 18	020091	78·2	034538	78·0	
10. 0	46. 54	020738	73·8	033788	73·5	L	10. 0	52. 21	020005	76·0	033923	75·8	L
12. 0	52. 15	019539	71·7	033363	71·8	H B	12. 0	50. 15	020048	74·3	033672	74·5	H B
14. 0	48. 3	020312	69·6	033048	70·2		14. 0	49. 35	020023	72·2	033452	72·3	
16. 0	47. 31	020326	67·6	032335	67·8		16. 0	50. 56	019872	70·4	033292	70·7	
18. 0	47. 5	019240	64·6	032423	65·0		18. 0	46. 50	020219	68·4	032781	68·5	
20. 0	47. 34	017176	64·7	032556	63·7	H B	20. 0	46. 5	018473	67·9	032944	67·2	H B
22. 0	22. 54. 3	018730	67·2	033390	65·8	T D	22. 0	49. 11	019608	69·5	033654	69·0	T D
June 3. 0. 0	23. 1. 19	0·019206	70·0	0·034080	69·8	T D	June 6. 0. 0	22. 57. 42	0·020503	73·2	0·034471	73·0	T D
1. 50	22. 59. 29	020237		034848			1. 50	58. 34	021282		034743		
2. 0	59. 29	020635	74·5	034882	74·0		2. 0	58. 23	021216	77·0	034704	76·6	
2. 10	59. 15	020635		034882		T D	2. 10	57. 7	020927		034689		T D
4. 0	57. 14	021529	76·5	034645	75·6	H B	4. 0	58. 31	020999	79·5	034689	78·3	H B
6. 0	54. 28	021374	77·8	034635	76·6		6. 0	55. 40	022553	80·7	035133	80·7	
8. 0	52. 2	021403	76·8	034654	77·0		8. 0	52. 55	022940	80·5	034879	79·7	
10. 0	52. 48	020441	75·7	034259	76·3	H B	10. 0	49. 6	021239	78·7	034432	79·0	H B
12. 0	48. 25	020772	74·0	033683	75·0	T D	12. 0	46. 5	020563	77·2	033845	77·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
June 2d. Between 6h and 8h and between 10h and 12h the changes were large for the times of the day.
June 5d. Between 22h and 24h the change was rather larger than usual.

HORIZONTAL FORCE MAGNET.
June 1d. 22h to 24h. A large change took place between these times.

VERTICAL FORCE MAGNET.
May 31d. 14h to June 2d. 22h. The changes were frequent.
June 3d. Between 0h and 1h. 50m and between 10h and 22h the changes were large and frequent.
June 4d and 5d. Frequent changes occurred.
June 6d. Between 10h and 12h a large change took place.

Daily Observations from June 7 to 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
June 7. 14. 0	22. 46. 26	0·020634	78·4	0·033606	78·0	T D	June 10. 14. 0	22. 52. 27	0·020126	68·9	0·033027	68·4	T D
16. 0	48. 40	020693	76·4	033522	76·0		16. 0	52. 12	020681	68·0	032981	68·0	
18. 0	47. 18	019937	74·3	033321	74·0		18. 0	46. 34	019360	67·0	032920	66·7	
20. 0	46. 34	018067	73·8	033296	72·8	T D	20. 0	46. 35	018722	66·5	032944	66·2	T D
22. 0	51. 5	018738	74·8	033840	74·4	L	22. 0	48. 14	017146	67·0	032968	66·7	L
June 8. 0. 0	22. 54. 58	0·019304	75·0	0·033887	74·8	L	June 11. 0. 0	22. 56. 3	0·019258	69·0	0·033202	68·4	L
1. 50	58. 11	019249		033812			1. 50	59. 46	020653		033616		
2. 0	58. 15	019426	75·2	033860	74·7		2. 0	59. 46	020565	72·0	033645	71·0	
2. 10	58. 24	019426		033860		L	2. 10	59. 33	020565		033626		L
4. 0	58. 11	020042	77·0	034234	76·5	T D	4. 0	57. 48	021121	75·4	034311	75·0	T D
6. 0	55. 44	020914	77·7	034322	77·0		6. 0	54. 43	020968	77·5	034590	77·0	
8. 0	52. 4	021075	78·0	034322	77·7		8. 0	52. 43	020992	77·9	034413	77·4	
10. 0	52. 33	021097	76·3	033776	76·0	T D	10. 0	51. 27	020912	76·0	033823	75·7	T D
12. 0	52. 18	021436	74·0	033385	74·0	L	12. 0	50. 54	020751	74·4	033609	74·3	L
14. 0	50. 57	020653	72·0	032895	72·0		14. 0	49. 14	020312	72·6	033300	72·5	
16. 0	50. 1	020058	69·8	032383	69·8		16. 0	46. 55	020040	71·0	033128	71·0	
18. 0	48. 49	019224	67·5	032080	67·4		18. 0	46. 15	019128	69·8	032916	69·2	
20. 0	45. 59*	018782	66·2	032101	66·0	L	20. 0	45. 48	018262	69·0	032824	68·0	L
22. 0	46. 51	018059	68·2	033062	67·7	T D	22. 0	46. 35	017681	70·8	032957	68·3	H B
June 9. 0. 0	22. 54. 30	0·018890	69·7	0·033479	69·0	T D	June 12. 0. 0	22. 56. 55	0·018562	73·5	0·033266	71·2	H B
1. 50	58. 32	019221		034212			1. 50	58. 56	019820		034204		T D
2. 0	59. 15	019376	72·3	034212	72·0		2. 0	59. 3	020396	77·0	034185	76·0	
2. 10	59. 15	019376		034222		T D	2. 10	59. 51	020994		034156		
4. 0	58. 44	021092	73·8	034134	73·0	L	4. 0	59. 18	022208	78·8	034446	78·0	
6. 0	51. 57	022713	75·0	034741	74·5		6. 0	54. 5	022626	81·0	034718	80·7	T D
8. 0	52. 56	021248	75·5	034556	75·3		8. 0	51. 44	021714	79·8	034519	79·5	L
10. 0	51. 9	019613	75·0	034062	75·0	L	10. 0	52. 11	020939	78·5	033904	78·0	L
12. 0	45. 40	019868	73·5	033662	73·8	H B	12. 0	49. 58	020593	76·2	033683	76·5	H B
14. 0	47. 16	020354	71·8	033110	72·3		14. 0	49. 53	020499	73·7	033326	74·0	
16. 0	47. 2	020477	69·4	032631	69·8		16. 0	49. 18	020882	72·3	033318	72·7	
18. 0	47. 28	018922	68·2	032693	68·3		18. 0	48. 5	020800	70·0	033149	70·7	
20. 0	46. 1	017123	67·0	032864	66·8	H B	20. 0	45. 1	019150	69·8	032914	68·8	H B
22. 0	48. 55	016279	67·5	033058	67·0	T D	22. 0	46. 24	019346	70·3	032967	69·0	T D
June 10. 0. 0	22. 56. 13	0·016832	68·8	0·033176	68·5	T D	June 13. 0. 0	22. 56. 57	0·022528	73·0	0·033534	72·5	T D
1. 50	59. 31	019896		033274			1. 50	23. 5. 28	021418		033940		
2. 0	22. 59. 58	020051	69·5	033260	69·0		2. 0	5. 9	021153	76·5	033940	75·0	
2. 10	23. 0. 17	020671		033260		T D	2. 10	23. 5. 6	020975		033940		T D
4. 0	22. 58. 9	022164	70·6	033909	70·3	H B	4. 0	22. 59. 14	022668	78·9	034592	78·5	H B
6. 0	56. 0	021166	71·5	034266	71·3		6. 0	54. 59	021879	79·6	034813	80·5	
8. 0	54. 1	021183	71·6	034018	71·8		8. 0	51. 52	021631	78·4	034325	78·8	
10. 0	52. 14	020923	71·5	033663	71·2	H B	10. 0	50. 55	022289	75·5	033793	76·2	H B
12. 0	51. 54	020347	70·2	033216	70·0	T D	12. 0	51. 45	021259	74·0	033659	75·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
June 9d. Between 4h and 6h and between 10h and 12h; and 10d, between 16h and 18h, the changes were large for the times of the day.
June 11d and 12d. Between 22h and 24h the changes were rather larger than usual.
June 12d. 22h to 13d. 6h. The changes were large between these times.

HORIZONTAL FORCE MAGNET.
June 12d. Between 22h and 24h a considerable change took place.

VERTICAL FORCE MAGNET.
June 7d. Between 20h and 22h a large change occurred. [the changes were large.
June 8d. Between 8h and 10h, between 14h and 16h, and between 20h and 22h; and 9d, between 0h and 1h. 50m, between 4h and 6h, and between 12h and 14h,
June 10d. Between 2h. 10m and 4h a large change took place.
June 11d and 13d. Between 2h. 10m and 4h and between 8h and 10h, on both days large changes took place.
June 12d. Between 0h and 1h. 50m, between 8h and 10h, and between 22h and 24h, large changes occurred.

Daily Observations from June 14 to 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
June 14. 14. 0	22. 50. 51	0·021361	69·0	0·032547	69·5	T D	June 17. 14. 0	22. 50. 37	0·020196	74·0	0·033203	74·2	T D
16. 0	55. 57	019625	68·3	032600	69·0		16. 0	50. 9	020773	71·4	033077	71·4	
18. 0	52. 15	020398	66·2	032258	66·0		18. 0	49. 14	020690	70·0	032721	69·7	
20. 0	45. 4	019282	66·8	032509	65·7	T D	20. 0	47. 51	018899	70·8	032899	68·8	T D
22. 0	52. 44	018476	70·0	033760	69·7	L	22. 0	50. 20	018388	73·0	033759	72·0	L
June 15. 0. 0	22. 55. 43	0·017461	72·5	0·034212	72·0	L	June 18. 0. 0	22. 56. 53	0·019835	75·0	0·033566	72·2	L
1. 50	57. 44	019827		034732			1. 50	57. 55	021503		035020		
2. 0	58. 22	020005	76·0	034658	75·5		2. 0	57. 26	021104	77·0	034958	79·0	
2. 10	58. 22	019235		034619		L	2. 10	58. 0	021016		034899		L
4. 0	57. 8	021213	79·2	034777	78·5	T D	4. 0	55. 29	019672	81·6	034813	80·5	T D
6. 0	52. 56	023998	81·0	035236	80·5		6. 0	52. 46	021674	81·0	034334	80·0	
8. 0	49. 44	021232	81·0	034878	80·4		8. 0	51. 53	021843	79·0	033941	78·7	T D
10. 0	47. 39	021438	78·7	033987	78·0	T D	10. 0	51. 32	021163	75·0	033203	75·2	L
12. 0	50. 10	020618	77·0	033560	76·7	L	12. 0	51. 58	021897	71·5	032876	72·0	
14. 0	51. 36	020397	75·7	033329	75·6		14. 0	49. 37	021539	70·7	032360	70·4	
16. 0	53. 15	020261	73·6	032935	73·5		16. 0	47. 50	020892	69·5	032342	69·5	
18. 0	52. 15	018354	71·5	032649	71·4		18. 0	50. 35	020579	68·7	032299	68·6	
20. 0	50. 48	016975	71·2	032640	69·8	L	20. 0	53. 3	020416	68·0	032383	68·0	L
22. 0	49. 15	018118	73·5	033204	71·2	H B	22. 0	51. 18	019542	68·2	032664	67·8	H B
June 16. 0. 0	22. 56. 17	0·016205	76·7	0·033701	73·8	H B	June 19. 0. 0	22. 57. 56	0·020968	70·6	0·033232	69·6	H B
1. 50	58. 9	019758		034684			1. 50	57. 40	022270		034080	-	T D
2. 0	55. 55	019670	79·5	034533	78·0		2. 0	56. 50	022159	75·0	034070	74·2	
2. 10	56. 41	020644		034494		H B	2. 10	56. 36	022049		034070		
4. 0	57. 44	022047	80·2	034877	79·8	L	4. 0	53. 58	021758	78·5	034521	77·7	
6. 0	56. 34	022183	81·0	034481	80·0		6. 0	52. 40	022781	81·0	034705	80·5	T D
8. 0	53. 10	021563	79·7	034354	79·8		8. 0	52. 8	022028	81·0	034977	81·2	L
10. 0	48. 21	021329	77·8	033674	77·5	L	10. 0	51. 48	021281	79·6	034078	79·4	L
12. 0	58. 5	022253	76·2	033186	76·3	H B	12. 0	51. 8	021097	78·0	033617	77·8	H B
14. 0	49. 33	019981	74·3	032551	74·5		14. 0	50. 50	020778	75·6	033448	76·2	
16. 0	52. 56	020469	71·7	032915	72·5		16. 0	49. 45	020758	73·4	033152	73·6	
18. 0	52. 23	020725	69·3	032732	69·5		18. 0	47·11	020541	71·6	033276	72·3	
20. 0	47. 5	018988	69·5	032782	68·1	H B	20. 0	46. 59	019751	70·6	032887	69·7	H B
22. 0	49. 7	017759	71·0	033353	69·8	T D	22. 0	51. 3	019469	73·5	033180	70·7	T D
June 17. 0. 0	22. 59. 41	0·019613	75·0	0·034296	74·5	T D	June 20. 0. 0	22. 58. 19	0·019953	77·0	0·033735	74·0	T D
1. 50	58. 41	020634		034711			1. 50	23. 0. 4	021478		034449		
2. 0	58. 41	020856	78·4	034652	77·7		2. 0	22. 59. 42	021434	80·5	034415	79·2	
2. 10	58. 41	020634		034652		T D	2. 10	59. 9	021368		034415		T D
4. 0	58. 31	021290	80·3	034610	79·2	H B	4. 0	54. 55	021515	82·8	034629	81·8	H B
6. 0	54. 43	020903	80·5	034486	79·3		6. 0	51. 5	020618	82·6	034504	82·2	
8. 0	52. 52	022019	78·6	034338	79·0		8. 0	50. 40	020954	79·5	033876	80·0	
10. 0	50. 46	021827	77·6	034087	78·2	H B	10. 0	52. 31	020831	77·6	033663	77·7	H B
12. 0	50. 25	021820	76·0	033625	76·5	T D	12. 0	52. 1	020710	76·5	033473	76·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

DECLINATION MAGNET.
June 16d. From 8h to 14h the changes were large.

VERTICAL FORCE MAGNET.
During this week there were frequently large changes.

Daily Observations from June 21 to 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
June 21. 14. 0	22. 47. 18	0·021462	72·2	0·032661	72·0	T D
16. 0	49. 37	020630	70·3	032353	69·8	
18. 0	46. 38	020058	68·5	032263	68·0	
20. 0	53. 7	018192	68·2	032549	67·7	T D
22. 0	56. 23	018729	69·8	032835	68·5	L
June 22. 0. 0	22. 59. 35	0·020842	73·5	0·033246	72·0	L
1. 50	23. 1. 22	023087		034066		
2. 0	1. 5	023054	78·5	034052	77·6	
2. 10	23. 0. 48	022865		034032		L
4. 0	22. 56. 56	021735	82·0	034652	81·3	T D
6. 0	54. 10	021706	83·4	034666	82·7	
8. 0	52. 58	021903	83·0	034260	82·4	
10. 0	50. 34	021187	81·0	033787	80·7	T D
12. 0	53. 35	021545	79·2	033486	79·0	L
14. 0	51. 32	022021	77·7	032882	77·6	
16. 0	49. 43	022773	76·0	032631	75·8	
18. 0	46. 16	021205	74·2	032701	74·0	
20. 0	46. 50	019410	72·5	032647	72·5	L
22. 0	50. 48	019052	71·7	032762	71·7	H B
June 23. 0. 0	22. 55. 51	0·020958	70·8	0·032608	70·6	H B
1. 50	56. 49	021195		032685		
2. 0	56. 12	022103	70·5	032689	69·8	
2. 10	57. 33	022856		032782		H B
4. 0	56. 59	021165	69·8	032791	69·4	L
6. 0	54. 4	022143	69·3	032649	69·0	
8. 0	53. 31	021924	68·8	032901	68·7	
10. 0	48. 44	020818	67·5	032644	67·5	L
12. 0	50. 42	020946	66·3	032443	66·0	H B
14. 0	49. 55	020497	64·7	032355	64·8	
16. 0	51. 28	021025	63·9	032269	63·7	
18. 0	46. 28	019510	62·8	032176	62·7	
20. 0	46. 54	019422	62·8	032121	61·7	H B
22. 0	50. 57	016909	63·0	032079	62·0	T D
June 24. 0. 0	22. 55. 46	0·019515	64·0	0·032153	62·5	T D
1. 50	56. 25	020867		032780		
2. 0	56. 41	020977	65·7	032780	64·6	
2. 10	57. 55	021243		032814		T D
4. 0	54. 21	021236	66·7	033271	66·0	H B
6. 0	48. 46	021297	66·8	033313	66·4	
8. 0	50. 58	021917	66·8	033109	66·6	H B
10. 0	49. 48	020633	66·8	032965	66·5	G
12. 0	47. 51	020629	66·0	032736	66·0	G
June 24. 14. 0	22. 47. 45	0·020223	64·0	0·032305	64·0	L
16. 0	47. 50	020238	63·7	032501	63·6	T D
18. 0	45. 27	020182	63·5	032577	63·0	T D
20. 0	45. 39	018332	64·6	032504	62·8	H B
22. 0	48. 50	017412	67·0	033307	66·8	G
June 25. 0. 0	22. 53. 44	0·019063	67·2	0·033185	67·0	L
1. 50	57. 49	020041		033338		T D
2. 0	57. 43	020280	68·5	033350	68·2	T D
2. 10	58. 15	021288		033372		H B
4. 0	55. 16	020381	70·4	033618	69·9	T D
6. 0	53. 33	021549	70·5	033797	71·0	L
8. 0	51. 7	021444	71·7	033890	72·0	H B
10. 0	50. 19	020554	70·5	033201	70·0	G
12. 0	49. 22	022102	67·5	032574	67·2	T D
14. 0	47. 36	020655	65·5	032066	65·0	
16. 0	46. 29	018186	64·0	031713	63·2	
18. 0	45. 52	019983	62·2	031528	61·0	
20. 0	42. 4	018834	61·3	031673	60·0	T D
22. 0	44. 24	018153	61·2	032175	61·2	L
June 26. 0. 0	22. 52. 43	0·018536	62·8	0·032232	62·8	L
1. 50	57. 16	019862		032774		
2. 0	57. 32	019950	65·0	032764	65·0	L
2. 10	57. 32	020961		032784		
4. 0	56. 5	020856	67·2	033082	67·0	T D
6. 0	53. 56	021530	68·3	033162	67·8	
8. 0	51. 6	022010	68·0	033083	67·5	
10. 0	49. 40	021719	67·2	032863	67·0	T D
12. 0	47. 46	020607	66·0	032726	66·0	L
14. 0	46. 42	020782	65·2	032315	65·0	
16. 0	46. 9	021286	64·0	032232	64·0	
18. 0	45. 30	021184	63·4	032254	63·4	
20. 0	44. 45	020784	63·0	032285	63·0	L
22. 0	47. 14	018559	64·5	032309	63·0	H B
June 27. 0. 0	22. 52. 9	0·018346	66·5	0·032528	64·7	H B
1. 50	55. 13	019632		032822		
2. 0	55. 22	019676		032822		
2. 10	55. 39	019854	68·6	032818	67·2	H B
4. 0	56. 38	020899	69·8	033082	69·2	L
6. 0	52. 37	022033	71·0	033462	70·6	
8. 0	50. 53	022875	71·0	033488	70·7	
10. 0	47. 44	021199	70·0	033167	70·0	L
12. 0	50. 10	021117	69·0	032588	68·5	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
June 25d. Between 22h and 24h the change was rather larger than usual.

HORIZONTAL FORCE MAGNET.
June 23d. 22h. The reduced reading at this time is 0·002513 less than the previous reading, and it is also 0·002606 less than the succeeding reading: the observation was noted as being correct at the time it was made.

VERTICAL FORCE MAGNET.
June 22d. Between 0h and 1h. 50m, between 2h 10m and 4h, and between 12h and 14h, large changes took place.
June 24d. Between 0h and 1h. 50m and between 20h and 22h large changes occurred.
June 25d. Between 10h and 12h, 12h and 14h, and 20h and 22h, large changes took place.
June 27d. Between 10h and 12h a large change took place.

Daily Observations from June 28 to July 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
June 28. 14. 0	22. 46. 47	0·019455	67·3	0·032331	67·0	H B
16. 0	46. 30	020446	65·7	031940	66·0	
18. 0	46. 14	019438	65·5	032205	65·6	
20. 0	43. 36	019419	65·0	032356	64·6	H B
22. 0	48. 0	019309	68·0	032985	66·8	T D
June 29. 0. 0	22. 51. 31	0·018099	70·0	0·033091	68·7	T D
1. 50	56. 8	020476		033394		
2. 0	56. 42	020476	72·0	033394	70·9	
2. 10	55. 22	020476		033394		T D
4. 0	55. 5	021661	73·5	033466	72·3	H B
6. 0	53. 54	022739	74·5	033700	74·0	
8. 0	51. 44	022318	74·5	033784	74·0	
10. 0	45. 11	020646	73·0	033220	72·7	H B
12. 0	47. 19	020705	71·0	032752	70·5	T D
14. 0	44. 20	020143	69·0	032438	68·7	
16. 0	41. 48	021220	67·0	031899	66·4	
18. 0	43. 38	020792	65·0	031598	64·7	
20. 0	46. 3	019157	64·5	031724	63·0	T D
22. 0	47. 28	017796	66·0	031988	63·8	H B
June 30. 0. 0	22. 55. 19	0·018112	67·6	0·032424	65·8	H B
1. 50	58. 27	020293		033060		
2. 0	58. 48	020714	70·4	033060	68·6	
2. 10	58. 48	020979		033031		H B
4. 0	56. 18	021938	72·0	033089	70·5	T D
6. 0	53. 50	020960	72·5	033260	71·0	
8. 0	49. 24	022222	72·5	033286	71·2	
10. 0	50. 26	021147	71·0	033128	71·0	T D
12. 0	46. 43	020807	69·0	032547	68·8	L
14. 0	46. 45	020423	67·0	032190	67·0	
16. 0	45. 55	020349	65·0	032008	65·0	
18. 0	44. 38	020537	63·5	031880	63·5	
20. 0	42. 44	019259	63·8	032183	63·5	L
22. 0	46. 38	018349	66·0	031915	62·6	H B
July 1. 0. 0	22. 54. 43	0·018449	67·5	0·032404	64·6	H B
1. 50	53. 47	019846		032937		
2. 0	53. 40	019913	69·6	032898	68·0	
2. 10	53. 20	020135		032849		H B
4. 0	52. 21	021989	71·0	033326	70·4	L
6. 0	50. 54	022527	71·3	033421	71·0	
8. 0	49. 37	021309	71·3	033372	71·0	
10. 0	48. 20	021155	70·0	032933	69·8	L
12. 0	45. 59	022778	69·0	032502	68·5	H B
July 1. 14. 0	22. 44. 21	0·020596	67·5	0·032029	66·8	H B
16. 0	41. 9	021064	66·6	032043	66·4	
18. 0	38. 31	020020	65·8	032307	65·8	
20. 0	35. 48	018957	65·8	032422	65·7	H B
22. 0	47. 53	017641	66·0	032487	65·8	T D
July 2. 0. 0	22. 51. 34	0·018563	67·0	0·032479	66·6	T D
1. 50	57. 37	019409		032893		
2. 0	58. 4	019785	69·5	032893	69·0	
2. 10	58. 29	019874		032844		T D
4. 0	57. 46	020607	71·6	033790	71·7	H B
6. 0	52. 14	022101	72·7	034103	72·4	
8. 0	50. 37	021949	73·5	033830	73·2	
10. 0	49. 41	021514	72·9	033334	72·5	H B
12. 0	44. 45	021734	72·5	032911	72·3	T D
14. 0	43. 28	020169	71·5	032627	71·0	
16. 0	51. 15	020381	70·4	032616	70·5	
18. 0	44. 57	020826	69·5	032457	69·7	
20. 0	50. 27	019435	69·0	032447	68·7	T D
22. 0	51. 2	018375	68·5	032507	68·5	L
July 3. 0. 0	22. 54. 31	0·017659	69·5	0·032638	69·2	L
1. 50	57. 19	018863		033268		
2. 0	57. 19	018908	71·5	033253	71·2	
2. 10	55. 29	019196		033239		L
4. 0	52. 59	020230	74·2	034045	74·0	T D
6. 0	52. 5	021650	75·0	034155	74·8	
8. 0	50. 41	022270	75·0	033857	74·5	
10. 0	49. 58	021436	74·0	033410	73·6	T D
12. 0	46. 9	020865	72·2	032954	72·0	L
14. 0	46. 52	020124	69·8	032153	69·8	
16. 0	46. 6	019243	68·0	031727	68·0	
18. 0	45. 32	018637	66·0	031384	66·0	
20. 0	46. 20	018704	66·0	031728	65·7	L
22. 0	47. 45	017623	68·5	032234	65·3	H B
July 4. 0. 0	22. 56. 38	0·019056	71·2	0·033054	68·5	H B
1. 50	57. 8	018030		034239		T D
2. 0	57. 35	018319	75·2	034200	73·6	
2. 10	57. 16	018628		034181		T D
4. 0	53. 14	021205	78·5	035426	78·0	L
6. 0	49. 56	021298	81·0	035654	80·2	
8. 0	50. 30	021519	82·3	035687	82·5	
10. 0	49. 16	020905	82·6	035141	82·5	L
12. 0	48. 36	021109	80·8	034176	81·8	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°; from July $1^d.1^h.50^m$, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
From July $1^d.20^h$ to $2^d.1^h.50^m$ large changes took place.
July 2^d. Between 4^h and 6^h and between 14^h and 20^h the changes were large for the times of the day.
July 3^d. Between 22^h and 24^h the change was rather larger than usual.

HORIZONTAL FORCE MAGNET.
July 4^d. Between $2^h.10^m$ and 4^h a large change took place.

VERTICAL FORCE MAGNET.
June 28^d to July 4^d. The changes were large and frequent.

Daily Observations from July 5 to 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 5. 14. 0	22. 47. 12	0·019631	72·5	0·032599	72·6	H B
16. 0	45. 13	019352	70·6	032480	71·0	
18. 0	45. 20	019159	67·9	032151	68·5	
20. 0	43. 54	018075	66·6	032090	65·7	H B
22. 0	22. 47. 7	017855	67·0	032150	65·5	T D
July 6. 0. 0	23. 0. 19	0·014404	67·8	0·031799	65·8	T D
1. 50	22. 59. 9	020790		032665		
2. 0	22. 59. 21	020901	68·9	032665	67·4	
2. 10	23. 0. 13	021167		032641		T D
4. 0	22. 57. 7	020223	69·6	032777	69·2	H B
6. 0	52. 10	020339	69·5	033123	68·8	
8. 0	48. 29	021770	68·8	032879	67·8	
10. 0	45. 25	021068	67·8	032596	67·3	H B
12. 0	42. 35	020136	67·0	032375	67·0	T D
14. 0	36. 47	019091	66·2	031770	66·0	
16. 0	45. 11	018508	65·5	031625	65·0	
18. 0	42. 39	019463	65·0	031952	64·7	
20. 0	44. 34	019028	64·0	031921	63·8	T D
22. 0	47. 39	018212	63·5	032003	63·5	L
July 7. 0. 0	22. 55. 1	0·018762	64·0	0·032135	64·0	L
1. 50	58. 38	020393		032376		
2. 0	58. 48	020504	65·0	032400	64·6	
2. 10	59. 3	020614		032414		L
4. 0	51. 42	021906	67·0	033065	66·4	T D
6. 0	51. 10	021438	67·5	033156	67·0	
8. 0	48. 28	022017	67·0	032853	66·5	
10. 0	49. 22	020069	67·0	032694	66·4	
12. 0	47. 49	020341	66·0	032408	65·5	T D
14. 0	43. 17	020305	65·0	032091	65·0	L
16. 0	45. 30	019916	63·5	032066	63·5	
18. 0	44. 31	019624	62·3	031827	62·3	
20. 0	42. 47	018868	61·5	031852	61·4	L
22. 0	45. 34	017242	61·7	031896	60·7	H B
July 8. 0. 0	22. 53. 2	0·018800	62·4	0·032061	61·6	H B
1. 50	54. 37	019592		032322		
2. 0	54. 49	019967	63·8	032303	63·2	
2. 10	54. 48	020079		032283		H B
4. 0	52. 38	021268	65·2	032701	65·0	L
6. 0	49. 58	022195	67·0	033068	67·0	
8. 0	45. 45	021356	67·8	033098	67·8	
10. 0	48. 56	021258	68·0	032894	67·8	L
12. 0	45. 59	020796	67·5	032564	67·2	H B
July 8. 14. 0	22. 47. 8	0·020521	66·4	0·032433	66·0	H B
16. 0	49. 1	020894	65·6	032379	65·5	
18. 0	46. 44	020194	65·0	032282	64·8	
20. 0	46. 22	018592	64·3	032274	64·2	H B
22. 0	43. 37	017787	64·0	032049	63·4	T D
July 9. 0. 0	22. 51. 31	0·018152	63·8	0·032144	64·5	T D
1. 50	55. 15	019855		032276		
2. 0	55. 34	020010	66·0	032276	65·0	
2. 10	55. 19	020076		032276		T D
4. 0	55. 38	022007	67·2	032739	66·7	H B
6. 0	51. 22	022572	68·7	033251	68·6	
8. 0	49. 43	021795	69·6	033133	69·5	
10. 0	45. 26	021490	69·5	032686	69·0	H B
12. 0	47. 50	022003	69·0	032618	68·7	T D
14. 0	45. 22	021258	68·0	032362	67·7	
16. 0	46. 7	021132	67·0	032331	66·5	
18. 0	43. 29	020544	65·5	032120	65·0	
20. 0	45. 30	019685	65·0	032146	64·6	T D
22. 0	46. 42	018213	65·2	032242	65·0	L
July 10. 0. 0	22. 52. 43	0·018339	66·2	0·032397	66·2	L
1. 50	57. 15	019973		032600		
2. 0	57. 15	020106	68·0	032580	68·0	
2. 10	57. 15	020239		032605		L
4. 0	55. 30	021048	69·5	032981	69·0	T D
6. 0	52. 45	022493	69·8	033199	69·2	
8. 0	50. 37	022228	69·8	032942	69·0	
10. 0	48. 40	021105	68·8	032503	68·2	T D
12. 0	46. 37	020441	67·5	032571	67·5	L
14. 0	46. 15	020529	65·8	031974	65·0	
16. 0	45. 15	020954	64·0	031925	64·0	
18. 0	44. 49	020459	62·0	031656	62·0	
20. 0	41. 23	019669	61·0	031587	61·0	L
22. 0	46. 12	018928	62·5	031624	61·2	H B
July 11. 0. 0	22. 53. 36	0·020286	64·5	0·031797	63·0	H B
1. 50	23. 1. 28	022835		032849		
2. 0	0. 17	017011	66·6	032537	66·3	
2. 10	1. 24	017854		032498		H B
4. 0	23. 0. 2	020538	68·2	033576	68·0	L
6. 0	22. 56. 39	020851	69·0	033995	69·0	
8. 0	46. 43	019856	69·0	033748	69·0	
10. 0	48. 26	020722	68·5	033229	68·5	L
12. 0	47. 18	020542	67·7	032201	67·4	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
July 5^d and 10^d. Between 22^h and 24^h the changes were larger than usual at these times.
From July 6^d. 12^h to 7^d. 4^h the changes were larger than usual.
From July 10^d. 22^h to 11^d. $1^h.\ 50^m$ the changes were large.
July 11^d. Between 6^h and 8^h the change was large for the time of the day.

HORIZONTAL FORCE MAGNET.
July 5^d. 22^h to 6^d. $1^h.\ 50^m$. The changes were large.
July 11^d. Between $1^h.\ 50^m$ and 2^h and between $2^h.\ 10^m$ and 4^h large changes occurred.

VERTICAL FORCE MAGNET.
July 6^d. Between 0^h and $1^h.\ 50^m$ and between 12^h and 14^h the changes were large.
July 7^d. Between $2^h.\ 10^m$ and 4^h; 9^d, between 4^h and 6^h; and 10^d, between 12^h and 14^h, large changes took place.
July 11^d. Between 0^h and 12^h the changes were large and frequent.

Daily Observations from July 12 to 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
July 12. 14. 0	22. 50. 35	0·021535	72·5	0·032577	72·7	H B	July 15. 14. 0	22. 47. 22	0·019342	70·8	0·032593	71·0	L
16. 0	56. 3	019281	70·7	031694	71·0		16. 0	45. 19	019250	70·0	032411	70·0	
18. 0	47. 45	019975	68·4	031880	68·3		18. 0	43. 20	019207	68·7	032440	68·8	
20. 0	42. 46	018686	67·2	032112	66·7	H B	20. 0	42. 52	018645	68·0	032510	68·2	L
22. 0	47. 15	018076	67·0	032692	67·5	T D	22. 0	44. 38	018236	68·2	032629	68·0	T D
July 13. 0. 0	22. 55. 22	0·017563	71·8	0·033272	70·4	T D	July 16. 0. 0	22. 51. 15	0·017132	69·0	0·032329	68·4	T D
1. 50	57. 8	019171		033676			1. 50	55. 54	019317		032356		
2. 0	56. 47	019171	75·0	033676	74·0		2. 0	56. 1	019384	70·0	032356	69·0	
2. 10	55. 55	019436		033638		T D	2. 10	56. 48	019516		032405		T D
4. 0	55. 45	021729	78·2	034290	77·3	H B	4. 0	54. 25	021502	71·0	032958	70·5	L
6. 0	50. 25	022498	79·6	034666	79·0		6. 0	50. 28	021188	71·5	033117	71·2	
8. 0	51. 27	021485	79·5	034490	78·8		8. 0	48. 46	021723	71·0	032902	70·7	L
10. 0	46. 12	019405	78·2	033858	78·2	H B	10. 0	49. 18	021479	71·0	033070	71·0	G
12. 0	50. 58	019776	77·0	033047	76·7	T D	12. 0	49. 18	021472	69·0	032450	68·8	T D
14. 0	54. 15	019615	75·4	032624	75·0		14. 0	46. 20	020441	67·5	031916	67·0	
16. 0	46. 47	019975	74·0	032670	73·7		16. 0	46. 35	020382	66·5	031946	66·2	
18. 0	47. 47	019546	72·0	032443	71·6		18. 0	45. 57	020305	65·0	031960	64·6	
20. 0	43. 14	018738	70·5	032231	70·0	T D	20. 0	47. 6	018748	66·0	032457	65·5	T D
22. 0	44. 7	016420	72·5	032762	71·0	G	22. 0	48. 24	018032	67·0	032773	66·7	L
July 14. 0. 0	22. 50. 55	0·017321	73·5	0·033023	73·0	L	July 17. 0. 0	22. 53. 0	0·019619	68·0	0·032776	68·0	L
1. 50	55. 25	019153		033664			1. 50	53. 36	020169		033050		
2. 0	54. 57	018887	76·2	033684	75·8		2. 0	53. 22	020014	69·8	032976	69·5	
2. 10	54. 57	018976		033650		L	2. 10	53. 22	020191		033015		L
4. 0	54. 28	021230	78·0	033814	77·7	T D	4. 0	52. 3	019430	70·4	033093	70·6	T D
6. 0	52. 2	021308	79·5	033992	79·0		6. 0	51. 11	022118	71·5	033441	71·0	
8. 0	50. 30	021622	79·0	033740	78·4		8. 0	49. 25	020775	70·5	032984	70·0	
10. 0	45. 4	020729	77·0	033347	77·0	T D	10. 0	50. 44	020501	69·8	032681	69·4	T D
12. 0	47. 24	019647	76·5	033191	76·8	G	12. 0	52. 23	020460	68·0	032317	67·5	G
14. 0	52. 29	017952	75·0	032834	75·0		14. 0	51. 3	020382	66·5	032138	66·2	
16. 0	52. 20	017885	72·0	032425	72·0		16. 0	50. 44	019957	64·0	031905	64·0	
18. 0	55. 40	020671	69·5	031967	69·0		18. 0	48. 51	019743	63·0	031880	63·0	
20. 0	47. 21	018085	69·0	032180	68·0	G	20. 0	45. 31	019038	62·5	031938	62·0	G
22. 0	46. 8	018151	69·0	032606	68·8	L	22. 0	48. 42	017659	62·2	031851	62·0	L
July 15. 0. 0	22. 53. 14	0·018818	69·8	0·032840	69·5	L	July 18. 0. 0	22. 55. 15	0·019801	63·6	0·032103	63·2	L
1. 50	55. 36	019632		033027			1. 50	56. 43	020774		032492		
2. 0	55. 36	019941	71·2	033007	70·8		2. 0	56. 47	021107	66·2	032492	66·0	
2. 10	55. 36	019986		033027		L	2. 10	55. 46	021217		032492		L
4. 0	53. 18	020203	73·0	033646	72·5	G	4. 0	53. 35	022401	69·0	033162	69·0	G
6. 0	53. 12	021411	74·5	034194	75·0		6. 0	50. 9	021369	69·7	033464	69·5	
8. 0	50. 10	020695	75·5	033843	75·0		8. 0	50. 9	021461	70·5	033231	70·0	
10. 0	48. 29	020676	75·0	033526	75·0	G	10. 0	50. 38	022328	70·0	032986	70·0	G
12. 0	49. 27	020380	73·0	032872	72·8	L	12. 0	45. 16	020526	68·0	032330	67·8	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m, 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $27^s·5$.

DECLINATION MAGNET.
July 12d. Between 12h and 24h the changes were frequent and larger than usual.
July 13d. Between 8h and 10h and between 14h and 16h the changes were large.
July 14d. Between 8h and 10h, 12h and 14h, and 18h and 20h, the changes were larger than usual at these times.
July 18d. Between 10h and 12h the change was large for the time of the day.

HORIZONTAL FORCE MAGNET.
July 12d. Between 14h and 16h, and 13d, 14d, 16d, and 17d, large changes took place.

VERTICAL FORCE MAGNET.
July 12d. Between 14h and 16h, and between 20h and 24h; 13d, between 2h. 10m and 4h, and between 8h and 12h; and 14d, between 0h and 1h. 50m, the changes were large.
July 15d. Between 2h. 10m and 12h the changes were large and frequent.
July 16d. Between 2h. 10m and 14h the changes were large between these times.
July 18d. Between 2h. 10m and 4h and between 10h and 12h, the changes were large.

Daily Observations from July 19 to 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 19. 14. 0	22. 46. 43	0·020375	67·5	0·032076	67·2	L
16. 0	47. 10	020032	66·0	032160	66·0	
18. 0	46. 24	018489	65·0	032032	65·0	
20. 0	47. 27	017711	64·2	031866	64·0	L
22. 0	44. 27	017889	64·6	031935	63·8	T D
July 20. 0. 0	22. 54. 14	0·019855	66·0	0·032280	65·7	T D
1. 50	53. 12	020934		032800		
2. 0	53. 12	020978	68·7	032790	67·5	
2. 10	52. 47	020978		032790		T D
4. 0	48. 55	022254	71·0	033314	70·5	L
6. 0	49. 59	021402	72·5	033412	72·0	
8. 0	49. 33	021665	73·0	033189	72·8	
10. 0	45. 19	021181	72·5	032964	72·0	L
12. 0	49. 16	020705	71·0	032660	70·5	T D
14. 0	53. 46	021250	69·0	032228	68·7	
16. 0	46. 40	020689	67·0	031820	66·6	
18. 0	47. 59	020386	66·0	031676	65·0	
20. 0	46. 55	018954	65·0	031776	64·4	T D
22. 0	48. 22	018578	65·0	031900	64·5	L
July 21. 0. 0	22. 50. 41	0·019548	66·8	0·032397	66·2	L
1. 50	54. 3	020611		032883		C T
2. 0	54. 3	020833	68·5	032898	68·0	
2. 10	53. 28	020944		032824		C T
4. 0	51. 58	021575	70·0	032906	69·7	T D
6. 0	50. 14	022203	72·0	033309	71·5	
8. 0	48. 37	021273	72·0	033174	71·6	
10. 0	49. 54	020705	71·0	032693	70·5	T D
12. 0	54. 2	020623	70·0	032589	69·7	G
14. 0	48. 20	020630	69·0	032428	68·7	
16. 0	49. 14	020774	67·5	032124	67·0	
18. 0	49. 5	021438	67·5	032178	67·0	
20. 0	46. 39	020110	67·5	032365	67·0	G
22. 0	46. 15	018449	68·8	032708	68·3	L
July 22. 0. 0	22. 53. 20	0·017989	70·0	0·032854	69·5	L
1. 50	55. 6	020100		033152		C T
2. 0	54. 44	020432	72·0	033128	71·0	
2. 10	54. 13	020432		033123		C T
4. 0	53. 21	022805	74·5	033774	74·0	G
6. 0	49. 45	022849	74·5	033789	74·5	G
8. 0	50. 13	021691	74·2	033457	74·0	T D
10. 0	51. 19	021531	73·0	032803	72·5	G
12. 0	50. 20	021487	73·0	032857	72·5	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 22. 14. 0	22. 49. 10	0·021473	72·0	0·032799	71·6	T D
16. 0	48. 12	021189	70·2	032596	70·0	L
18. 0	46. 10	020681	68·0	032360	68·0	L
20. 0	48. 47	019718	67·8	032448	67·5	C T
22. 0	52. 6	017785	67·5	032119	67·0	G
July 23. 0. 0	22. 58. 15	0·019454	69·5	0·032624	69·0	T D
1. 50	58. 21	020594		033365		
2. 0	58. 16	021011	72·8	033517	72·4	
2. 10	57. 38	021648		033524		T D
4. 0	53. 44	021344	74·5	033676	74·0	L
6. 0	52. 20	019953	77·0	034145	76·7	T D
8. 0	48. 52	021097	76·3	033540	75·7	C T
10. 0	49. 11	019805	76·0	033313	76·5	G
12. 0	47. 57	020355	72·2	032222	72·0	L
14. 0	47. 39	020705	71·0	032300	71·0	
16. 0	46. 4	020475	70·3	032432	70·3	
18. 0	45. 25	019734	69·2	032346	69·0	
20. 0	44. 30	018464	68·5	032420	68·5	L
22. 0	47. 42	018262	69·0	032318	69·0	T D
July 24. 0. 0	22. 54. 34	0·019362	70·0	0·032492	69·7	T D
1. 50	58. 26	020945		032728		C T
2. 0	57. 53	021011	71·5	032690	71·0	
2. 10	58. 0	020834		032690		C T
4. 0	55. 29	022476	71·3	032671	70·8	L
6. 0	53. 11	023719	70·5	032789	70·4	
8. 0	43. 59	021727	69·2	032667	69·0	
10. 0	47. 32	021080	68·0	032330	67·8	L
12. 0	45. 8	021021	67·0	032210	66·6	T D
14. 0	42. 9	021762	65·5	031471	65·0	
16. 0	41. 15	019644	63·2	031350	62·6	
18. 0	41. 51	019721	63·0	031578	62·5	
20. 0	45. 47	018093	62·8	031665	61·8	T D
22. 0	46. 26	018033	64·4	032188	64·0	L
July 25. 0. 0	22. 52. 59	0·019412	66·0	0·032434	65·6	L
1. 50	55. 42	019956		032997		
2. 0	54. 52	019956	69·2	032997	68·8	
2. 10	54. 52	019867		032977		L
4. 0	54. 55	022428	71·5	033245	70·5	C T
6. 0	52. 38	022008	71·5	033158	70 8	C T
8. 0	46. 23	022450	71·5	033128	71·0	L
10. 0	44. 31	022374	70·4	032553	70·3	L
12. 0	46. 4	020187	69·0	032242	68·7	G

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
July 19d. Between 22^h and 24^h the change was larger than usual.
July 20d. Between 14^h and 16^h; and 21d, between 12^h and 14^h, the changes were large for these times.
July 24d. Between 6^h and 8^h the change was much larger than usual at this time.

HORIZONTAL FORCE MAGNET.
July 24d. Between 14^h and 16^h; 25d, between $2^h.10^m$ and 4^h, and between 10^h and 12^h, large changes occurred.

VERTICAL FORCE MAGNET.
July 20d. Between 0^h and 4^h; 22d, between $2^h.10^m$ and 4^h, between 8^h and 10^h, and 22^h and 24^h, large changes occurred.
July 23d. Between 0^h and $1^h.50^m$, and between 6^h and 12^h the changes were considerable.
July 24d. Between 12^h and 14^h, and 20^h and 22^h; 25d, between 0^h and $1^h.50^m$, and between 8^h and 10^h, the changes were large.

Daily Observations from July 26 to August 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 26. 14. 0	22. 48. 38	0·020513	70·0	0·032102	69·7	G
16. 0	45. 13	019752	68·0	031970	68·0	
18. 0	44. 53	019888	67·5	032024	67·0	
20. 0	43. 46	018696	67·0	032060	66·5	G
22. 0	49. 11	017998	65·5	031757	65·4	L
July 27. 0. 0	22. 53. 48	0·019003	66·2	0·032052	66·0	L
1. 50	57. 36	020501		032375		C T
2. 0	57. 22	020169	68·5	032351	68·0	
2. 10	57. 51	020280		032356		C T
4. 0	56. 24	021294	70·3	032947	70·0	L
6. 0	50. 25	020713	73·0	033559	73·0	G
8. 0	47. 59	022348	73·5	033290	73·0	
10. 0	47. 31	021643	73·0	032984	73·0	G
12. 0	48. 8	020432	72·0	032393	72·0	L
14. 0	46. 3	020439	71·0	032105	71·0	
16. 0	46. 12	021045	70·4	032154	70·3	
18. 0	45. 13	020501	69·8	031576	67·8	
20. 0	45. 1	018627	69·2	032214	69·2	L
22. 0	45. 55	018773	69·8	032325	69·4	T D
July 28. 0. 0	22. 50. 35	0·018770	71·6	0·032397	71·0	T D
1. 50	56. 57	020108		033036		
2. 0	56. 57	020108	74·0	032963	73·7	
2. 10	56. 57	020108		032938		T D
4. 0	55. 5	021555	76·0	033369	75·7	L
6. 0	51. 4	022337	78·0	033743	78·0	
8. 0	49. 25	022109	79·0	033575	78·7	L
10. 0	48. 21	021843	79·0	033315	78·5	T D
12. 0	45. 44	020396	77·0	032788	76·6	
14. 0	47. 57	020540	75·5	032624	75·0	
16. 0	45. 58	020247	73·0	032097	72·6	
18. 0	43. 50	020292	71·7	032232	71·3	
20. 0	41. 26	020136	70·0	032072	69·4	T D
22. 0	45. 5	018617	72·0	032858	71·6	G
July 29. 0. 0	22. 53. 51	0·019536	73·5	0·032769	72·5	C T
1. 50	23. 0. 46	020123		033195		
2. 0	23. 0. 1	020301	78·0	033147	76·0	
2. 10	22. 59. 40	020899		033176		C T
4. 0	59. 48	022371	79·5	034021	79·0	T D
6. 0	54. 58	021563	81·0	034643	80·8	
8. 0	51. 6	020958	79·0	033726	78·4	
10. 0	50. 52	020795	77·0	032926	76·7	T D
12. 0	47. 23	020116	76·0	033006	76·3	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 29. 14. 0	22. 45. 50	0·020389	75·0	0·032332	74·5	G
16. 0	48. 15	020380	73·0	032364	73·0	
18. 0	46. 12	020568	71·5	032202	71·0	
20. 0	46. 34	019376	71·0	032373	71·0	G
22. 0	48. 30	018030	72·2	032570	71·8	L
July 30. 0. 0	22. 54. 42	0·018710	76·2	0·033161	75·0	L
1. 50	57. 37	020106		033573		
2. 0	57. 3	019774	80·5	033510	79·0	
2. 10	56. 34	019884		033486		L
4. 0	57. 10	022124	83·0	034439	84·0	G
6. 0	53. 13	021306	83·0	034415	84·0	
8. 0	52. 26	022353	82·0	034303	83·3	
10. 0	41. 1	019851	79·0	033144	79·5	G
12. 0	41. 43	021503	77·0	032016	76·8	L
14. 0	45. 35	019886	74·0	031625	73·8	
16. 0	46. 36	020602	73·0	031779	73·0	
18. 0	45. 10	018993	72·0	031881	72·0	
20. 0	43. 44	018037	71·2	032031	71·0	L
22. 0	48. 55	018477	73·0	032376	72·4	T D
July 31. 0. 0	22. 55. 1	0·020123	78·0	0·033677	77·7	T D
1. 50	54. 31	020752		033902		C T
2. 0	54. 32	021416	83·0	033945	81·5	
2. 10	54. 34	021350		033936		C T
4. 0	53. 57	021663	83·8	033963	83·4	L
6. 0	47. 38	023102	83·8	034090	83·4	
8. 0	51. 19	022837	82·5	033591	82·3	
10. 0	49. 13	021349	80·0	032891	79·8	L
12. 0	42. 0	021367	77·5	031992	77·0	T D
14. 0	40. 25	020382	76·0	031854	76·0	
16. 0	47. 58	020322	75·0	032035	74·8	
18. 0	44. 13	020145	75·0	032444	75·0	
20. 0	45. 28	019429	73·0	032145	73·0	T D
22. 0	45. 7	018242	72·8	032149	72·5	L
Aug. 1. 0. 0	22. 52. 47	0·018506	75·0	0·032395	74·5	L
1. 50	56. 50	020054		033902		
2. 0	55. 46	019346	81·5	033853	81·5	
2. 10	57. 19	019611		033877		L
4. 0	53. 27	021143	84·0	034289	83·8	T D
6. 0	46. 45	023392	81·6	033800	81·3	
8. 0	49. 9	022013	80·0	033310	80·0	
10. 0	41. 59	021341	78·0	032702	77·7	T D
12. 0	44. 11	020311	76·5	032216	76·0	G

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
July 27d. Between 22^h and 24^h the change was rather smaller than usual; and it was larger than usual on the 28d, between 0^h and $1^h.50^m$.
July 28d. Between 22^h and 24^h the change was larger than usual, and it was also larger than usual on the 29d, between 0^h and $1^h.50^m$.
July 30d and August 1d. Between 8^h and 10^h the changes were much larger than usual at this time of the day.
July 31d. Between 4^h and 16^h the changes were frequent and large.
August 1d. Between 4^h and 6^h and between 8^h and 10^h the changes were larger than usual at these times.

HORIZONTAL FORCE MAGNET.
July 30d. Between $2^h.10^m$ and 4^h and between 8^h and 10^h large changes took place.
August 1d. Between 4^h and 6^h a large change occurred.

VERTICAL FORCE MAGNET.
July 27d to August 1d. The changes were large and frequent.

Daily Observations from August 2 to 8.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Aug. 2. 14. 0	22. 46. 33	0·021479	71·0	0·031958	71·0	G
16. 0	52. 54	020262	71·0	031885	71·0	
18. 0	45. 17	020969	68·0	031659	68·0	
20. 0	45. 1	019774	68·0	032288	68·0	G
22. 0	44. 56	018807	67·0	031554	66·7	L
Aug. 3. 0. 0	22. 51. 14	0·019224	68·8	0·031995	68·0	L
1. 50	55. 49	019512		032645		L
2. 0	55. 3	019734	71·8	032571	71·2	T D
2. 10	54. 52	019911		032547		T D
4. 0	52. 17	021955	73·8	032804	73·3	L
6. 0	48. 28	023200	75·0	033204	75·0	
8. 0	47. 54	022636	76·5	033351	76·5	G
10. 0	47. 48	022100	74·0	032618	73·5	G
12. 0	45. 52	021247	72·5	032170	72·3	L
14. 0	46. 50	022033	71·0	031787	71·0	
16. 0	46. 51	020832	69·8	031858	69·7	
18. 0	44. 31	020773	68·8	032012	68·8	
20. 0	43. 52	019752	68·0	031995	68·0	L
22. 0	45. 43	018483	67·7	031851	67·2	H B
Aug. 4. 0. 0	22. 55. 37	0·019346	69·0	0·031925	68·2	H B
1. 50	57. 6	021225		032317		
2. 0	56. 15	020495	71·2	032254	70·2	
2. 10	55. 28	020252		032219		H B
4. 0	52. 38	021188	72·8	032618	72·0	L
6. 0	48. 0	021691	74·2	033067	74·0	
8. 0	47. 50	021130	72·2	032222	72·0	
10. 0	48. 48	021742	74·5	032658	74·3	L
12. 0	49. 38	022281	73·5	032306	73·3	H B
14. 0	49. 23	021026	72·5	032163	72·0	
16. 0	50. 37	020812	71·5	032218	71·3	
18. 0	44. 47	020921	69·8	032027	69·6	
20. 0	43. 51	019505	68·5	031791	68·0	H B
22. 0	45. 56	019166	68·2	031849	68·0	T D
Aug. 5. 0. 0	22. 52. 36	0·020058	68·5	0·031843	68·2	T D
1. 50	55. 19	021520		031954		
2. 0	55. 35	021652	68·5	031993	68·4	
2. 10	55. 58	022272		032051		T D
4. 0	52. 42	021793	70·5	032505	70·3	H B
6. 0	48. 45	023108	72·5	032907	72·6	
8. 0	47. 38	022776	74·2	032892	73·8	
10. 0	50. 32	023071	74·5	032691	74·0	H B
12. 0	45. 7	022233	74·0	032555	74·0	T D

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Aug. 5. 14. 0	22. 46. 36	0·021709	73·0	0·032262	72·8	T D
16. 0	45. 59	021361	72·0	032129	71·5	
18. 0	43. 35	021495	70·7	032002	70·3	
20. 0	42. 21	021464	70·0	031871	69·6	T D
22. 0	47. 58	020715	69·5	031529	69·3	L
Aug. 6. 0. 0	22. 56. 32	0·021546	71·0	0·031729	70·5	L
1. 50	23. 1. 55	021937		032506		
2. 0	1. 32	022202	74·6	032555	74·0	
2. 10	23. 2. 10	023531		032555		L
4. 0	22. 50. 48	022780	78·0	033580	77·7	T D
6. 0	50. 33	023696	80·0	033762	79·7	
8. 0	49. 47	023488	80·6	033457	80·0	
10. 0	46. 21	022950	79·0	032908	78·7	T D
12. 0	47. 48	023002	78·0	032734	78·0	L
14. 0	55. 12	023540	77·0	032079	77·0	
16. 0	53. 55	021801	75·5	030537	75·5	
18. 0	45. 9	020525	74·5	031370	74·5	
20. 0	49. 52	018831	73·0	031902	73·0	L
22. 0	22. 51. 39	016177	72·5	031960	72·8	H B
Aug. 7. 0. 0	23. 0. 38	0·017315	73·2	0·032188	72·5	H B
1. 50	3. 50	018251		032301		
2. 0	2. 31	019845	73·5	032315	73·0	
2. 10	23. 1. 58	020288		032408		H B
4. 0	22. 57. 12	021572	74·8	033050	74·4	L
6. 0	53. 3	023547	76·0	033508	75·8	
8. 0	49. 43	024271	77·0	033552	77·0	
10. 0	48. 26	022321	76·6	032944	76·4	L
12. 0	51. 6	022909	75·5	032482	75·7	H B
14. 0	48. 13	022082	73·5	031890	73·7	
16. 0	55. 13	020261	72·3	031673	72·3	
18. 0	51. 28	022225	70·7	031510	70·8	
20. 0	54. 10	019896	69·5	031438	69·4	H B
22. 0	52. 7	016992	70·0	031614	69·7	T D
Aug. 8. 0. 0	22. 53. 52	0·019004	70·5	0·032024	70·2	T D
1. 50	56. 31	021266		032872		
2. 0	54. 53	021266	71·7	032872	71·4	
2. 10	53. 39	021266		032882		T D
4. 0	54. 1	022826	72·8	033200	72·2	H B
6. 0	47. 56	022879	73·5	033481	73·0	
8. 0	48. 8	023759	73·6	033112	73·3	
10. 0	47. 24	022057	72·7	032423	72·3	H B
12. 0	49. 18	021863	71·3	032004	71·6	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
August $2^d.$ $16^h.$ The western declination at this time was 6′. 21″ greater than at 14^h, and it was 7′. 37″ greater than at 18^h: the observations were correct.
August 3^d, 5^d, and 6^d. Between 22^h and 24^h the changes were larger than usual.
August 4^d, between 16^h and 18^h; 5^d, between 10^h and 12^h, and between $5^d.$ 20^h and $6^d.$ 4^h; 6^d, between 12^h and 14^h, 16^h and 18^h, 22^h and 24^h; 7^d, between 14^h and 16^h; and 8^d, between 4^h and 6^h: the changes at all these times were larger than usual for the times of the day.

HORIZONTAL FORCE MAGNET.
August 3^d. Between $2^h.$ 10^m and 4^h a large change took place.
August 6^d. Between 20^h and 22^h, a large change occurred.
August 7^d. From 20^h to $8^d.$ $1^h.$ 50^m large changes occurred.

VERTICAL FORCE MAGNET.
August 2^d to 8^d. The changes were large and frequent.

Daily Observations from August 9 to 15.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Aug. 9. 14. 0	22. 51. 49	0·022194	69·6	0·031664	69·0	T D	Aug. 12. 14. 0	22. 48. 41	0·021124	68·0	0·031685	67·6	T D
16. 0	48. 5	022477	68·4	031166	68·0		16. 0	46. 53	021183	66·0	031134	65·7	
18. 0	51. 53	019335	67·5	031393	67·2		18. 0	51. 18	020046	64·0	030983	63·8	
20. 0	47. 33	019541	66·5	031457	66·0	T D	20. 0	51. 40	020485	64·5	031438	64·2	T D
22. 0	50. 17	017593	66·5	031802	66·2	H B	22. 0	53. 24	016987	64·5	031332	63·7	H B
Aug. 10. 0. 0	22. 55. 46	0·018405	67·5	0·031809	66·5	H B	Aug. 13. 0. 0	22. 53. 42	0·020047	65·7	0·031964	65·5	H B
1. 50	58. 22	019862		032517			1. 50	54. 54	019360		032361		
2. 0	58. 52	019973	69·3	032527	68·5		2. 0	54. 20	019604	67·0	032365	66·3	
2. 10	58. 54	020106		032527		H B	2. 10	54. 10	019360		032390		H B
4. 0	55. 16	021628	70·7	032696	70·4	T D	4. 0	53. 39	020416	68·0	032529	66·7	T D
6. 0	49. 39	020868	71·7	033148	71·5		6. 0	50. 31	021700	68·0	032804	67·0	
8. 0	46. 54	021836	71·4	032933	71·0		8. 0	46. 8	022586	68·0	032625	67·3	
10. 0	47. 53	021531	70·0	032180	69·4	T D	10. 0	50. 14	022589	67·5	031926	67·0	T D
12. 0	40. 40	022527	70·0	032138	69·5	G	12. 0	49. 22	022043	66·5	031701	66·0	G
14. 0	43. 25	021224	69·5	031733	69·0		14. 0	49. 23	021788	65·0	031593	65·0	
16. 0	47. 31	020859	68·0	031679	67·5		16. 0	45. 59	022061	64·0	031319	64·0	
18. 0	50. 53	020271	66·5	031505	66·0		18. 0	52. 27	022717	62·0	030567	62·0	
20. 0	50. 32	022025	66·0	031662	66·0	G	20. 0	49. 25	021857	61·5	030582	61·5	G
22. 0	44. 38	018780	65·8	031450	64·7	H B	22. 0	46. 21	019574	60·7	030566	59·5	H B
Aug. 11. 0. 0	22. 52. 40	0·018427	67·5	0·031805	66·3	H B	Aug. 14. 0. 0	22. 53. 21	0·019702	62·5	0·030909	60·6	T D
1. 50	57. 36	021541		032154			1. 50	57. 34	021234		031768		
2. 0	57. 2	020766	69·8	032106	68·7		2. 0	58. 18	021500	65·0	031783	63·5	
2. 10	55. 50	020390		032067		H B	2. 10	58. 51	021677		031880		T D
4. 0	54. 53	022152	73·0	033121	73·0	G	4. 0	55. 21	023589	67·0	033195	67·0	G
6. 0	51. 23	023259	73·0	033145	73·0		6. 0	51. 12	021557	69·5	033148	69·5	
8. 0	49. 47	022816	73·0	032754	73·0		8. 0	44. 11	021834	71·0	033043	70·5	
10. 0	49. 21	021889	72·5	032525	72·5	G	10. 0	48. 22	019760	70·0	032816	70·0	G
12. 0	48. 9	022888	71·6	032263	71·6	H B	12. 0	51. 13	021172	68·8	031867	68·2	H B
14. 0	44. 20	022174	70·4	031679	70·0		14. 0	48. 18	021482	67·5	031646	66·7	
16. 0	48. 49	021080	69·3	031450	68·8		16. 0	54. 22	022460	65·7	030902	65·3	
18. 0	45. 12	022231	68·0	031654	67·5		18. 0	47. 11	021124	65·0	031046	64·5	
20. 0	47. 49	020574	67·5	031800	67·3	H B	20. 0	45. 19	020349	65·0	031422	64·5	H B
22. 0	45. 13	020205	67·8	031877	67·0	T D	22. 0	48. 33	017249	65·0	031708	64·7	T D
Aug. 12. 0. 0	22. 52. 18	0·018475	67·0	0·031625	66·6	T D	Aug. 15. 0. 0	22. 58. 22	0·018083	68·6	0·032498	68·3	T D
1. 50	56. 10	021339		032068			1. 50	55. 25	021004		033392		
2. 0	56. 59	021405	69·0	032078	68·5		2. 0	55. 15	021004	72·5	033363	72·0	
2. 10	57. 26	021693		032127		T D	2. 10	55. 14	021115		033363		T D
4. 0	49. 36	022642	69·5	032791	69·2	H B	4. 0	53. 55	022296	74·5	033335	73·5	H B
6. 0	51. 34	022768	70·5	033394	70·2		6. 0	48. 49	020717	75·5	033594	74·5	
8. 0	51. 44	023166	70·5	032967	70·3		8. 0	48. 42	021776	74·7	033018	74·0	
10. 0	42. 27	021549	70·5	032395	70·2	H B	10. 0	43. 14	023166	73·5	032638	73·5	H B
12. 0	49. 14	021029	69·0	031531	68·7	T D	12. 0	58. 57	021206	72·0	031105	71·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET.
During this week there were frequent changes larger than usual at the times of their occurrence.

HORIZONTAL FORCE MAGNET.
August 9d. Between 16^h and 18^h a large change occurred.
August 10d. Between 20^h and 22^h a large change took place.
August 11d. Between 0^h and $1^h.50^m$ a large change took place.
August 12d. Between 0^h and $1^h.50^m$, and from 20^h to 24^h, the changes were larger than usual.
August 13d. 20^h to 15d. $1^h.50^m$. Large changes took place between these times.

VERTICAL FORCE MAGNET.
August 10d to 16d. The changes were large and frequent.

Daily Observations from August 16 to 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Aug. 16. 14. 0	22. 46. 41	0·020851	69·0	0·031869	69·0	T D	Aug. 19. 14. 0	22. 49. 2	0·021714	66·0	0·031682	66·0	T D
16. 0	51. 18	021198	67·0	031512	67·0		16. 0	47. 6	021202	65·2	031496	65·0	
18. 0	53. 6	020061	65·0	030709	64·2		18. 0	44. 49	020748	65·0	031485	64·6	
20. 0	52. 19	020795	64·5	030924	64·0	T D	20. 0	45. 16	019845	63·6	031444	63·2	T D
22. 0	52. 40	018626	64·5	031286	63·8	H B	22. 0	44. 47	019872	63·5	031150	63·0	G
Aug. 17. 0. 0	22. 56. 2	0·020088	66·2	0·031547	64·7	H B	Aug. 20. 0. 0	22. 52. 44	0·020349	65·0	0·031640	65·0	G
1. 50	54. 29	020817		032088			1. 50	58. 1	020936		031989		
2. 0	54. 29	020817	68·8	032069	67·3		2. 0	58. 4	021334	66·5	032062	66·5	
2. 10	54. 29	020862		032088		H B	2. 10	57. 38	021312		032048		G
4. 0	52. 1	021173	70·5	032416	69·3	T D	4. 0	51. 6	021574	67·0	032070	66·5	T D
6. 0	48. 42	022159	70·7	032517	69·5		6. 0	48. 4	022770	67·0	032062	66·6	
8. 0	48. 13	022101	71·4	032705	70·8		8. 0	48. 49	022315	67·0	031950	66·5	
10. 0	48. 31	021974	70·0	032141	69·4	T D	10. 0	49. 11	022069	66·0	031779	66·0	T D
12. 0	46. 4	022895	68·0	031656	67·6	G	12. 0	49. 10	022180	66·0	031808	66·0	G
14. 0	46. 20	022061	67·0	031365	67·0		14. 0	48. 8	021921	65·0	031598	65·0	
16. 0	47. 25	022043	66·5	031356	66·5		16. 0	48. 8	021766	65·0	031635	65·0	
18. 0	44. 42	021091	66·5	031892	66·5		18. 0	46. 23	021788	65·0	031886	65·0	
20. 0	45. 55	020622	64·0	031327	64·0	G	20. 0	43. 34	020349	65·0	031960	65·0	G
22. 0	46. 36	019821	64·5	031347	63·8	H B	22. 0	48. 44	019159	63·6	031278	63·5	H B
Aug. 18. 0. 0	22. 55. 2	0·020728	65·8	0·031428	64·6	H B	Aug. 21. 0. 0	22. 54. 54	0·020850	64·3	0·031267	63·6	H B
1. 50	57. 16	021515		032049			1. 50	57. 47	020795		031523		
2. 0	57. 28	021736	68·6	032039	67·8		2. 0	57. 13	020817	65·8	031542	64·7	
2. 10	57. 32	021846		032039		H B	2. 10	56. 51	020994		031557		H B
4. 0	54. 28	021191	71·0	032753	71·0	G	4. 0	53. 34	021464	67·0	032139	67·0	G
6. 0	51. 29	022498	71·0	032762	71·0		6. 0	50. 10	022936	68·5	032141	68·0	
8. 0	48. 34	021376	70·0	032426	70·0		8. 0	47. 43	021829	68·5	032126	68·0	
10. 0	48. 36	022335	69·0	032142	69·0	G	10. 0	44. 20	022095	68·5	032054	68·0	G
12. 0	47. 31	021832	67·6	031634	67·0	H B	12. 0	46. 17	022153	67·8	031619	67·0	H B
14. 0	47. 28	023460	66·5	031366	66·3		14. 0	45. 26	021723	66·7	031538	66·2	
16. 0	47. 6	021636	64·5	030981	64·2		16. 0	47. 30	021946	65·8	031618	65·5	
18. 0	45. 25	020831	63·8	031257	63·6		18. 0	45. 46	022736	65·5	031687	65·3	
20. 0	45. 13	019872	63·5	031436	63·0	H B	20. 0	50. 42	020869	64·8	031451	64·5	H B
22. 0	45. 10	019208	63·5	031504	63·0	T D	22. 0	46. 30	019729	65·0	031472	64·6	T D
Aug. 19. 0. 0	22. 54. 32	0·019116	64·0	0·031552	63·7	T D	Aug. 22. 0. 0	22. 56. 36	0·020253	66·0	0·031342	65·4	T D
1. 50	55. 5	022035		031991			1. 50	23. 1. 9	022187		031909		
2. 0	54. 48	021813	65·8	031991	65·4		2. 0	1. 18	022187	68·0	031885	67·4	
2. 10	54. 45	021747		031991		T D	2. 10	23. 0. 34	022187		031836		T D
4. 0	52. 3	021789	66·7	032104	66·2	H B	4. 0	22. 54. 44	023389	69·6	032356	69·0	H B
6. 0	47. 9	022557	67·7	032375	66·5		6. 0	51. 9	022779	70·7	032349	69·6	
8. 0	47. 39	022194	68·3	032354	67·8		8. 0	48. 47	022283	71·3	032359	70·3	
10. 0	46. 17	021898	67·6	032102	67·5	H B	10. 0	52. 48	023522	69·6	031775	68·7	H B
12. 0	49. 1	021530	67·0	031887	67·0	T D	12. 0	45. 19	021235	68·0	031446	67·4	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s{\cdot}8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s{\cdot}6$; in Vertical Plane, $27^s{\cdot}5$.

DECLINATION MAGNET.
August 17^d, 18^d, 19^d, 21^d, and 23^d. The changes between 22^h and 24^h were large.
August 20^d, between $2^h.\ 10^m$ and 4^h; and August 22^d, between $2^h.\ 10^m$ and 4^h and between 10^h and 14^h: the changes were larger than usual.
HORIZONTAL FORCE MAGNET.
August 15^d. Between 0^h and $1^h.\ 50^m$ a large change took place.
August 16^d. Between 20^h and 22^h, and 22^d, between 10^h and 12^h, large changes occurred,
VERTICAL FORCE MAGNET.
August 16^d, between 16^h and 18^h; and August 17^d, between 0^h and $1^h.\ 50^m$, and between 16^h and 20^h: large changes took place.
August 18^d. Between $2^h.\ 10^m$ and 4^h, and between 10^h and 12^h, large changes occurred.
August 20^d, between 20^h and 22^h; and August 21^d, between $2^h.\ 10^m$ and 4^h: large changes took place.
August 22^d. Between 0^h and $1^h.\ 50^m$, between $2^h.\ 10^m$ and 4^h, and between 8^h and 10^h, large changes took place.

Daily Observations from August 23 to 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Aug. 23. 14. 0	22. 47. 33	0·022239	67·0	0·031600	66·6	T D
16. 0	47. 22	021847	66·0	031436	65·7	
18. 0	45. 28	021541	65·5	031447	65·0	
20. 0	43. 59	020895	66·0	031718	65·2	T D
22. 0	46. 41	019526	65·5	031617	65·0	H B
Aug. 24. 0. 0	22. 54. 6	0·019751	66·3	0·031448	65·8	H B
1. 50	59. 6	021295		031591		
2. 0	58. 24	021029	67·7	031629	66·8	
2. 10	58. 36	021118		031639		H B
4. 0	54. 35	022221	69·5	032259	69·0	T D
6. 0	51. 25	023583	69·7	032325	69·4	
8. 0	47. 7	021826	70·3	032406	70·0	
10. 0	45. 18	021785	69·8	031828	69·4	T D
12. 0	39. 57	023379	68·5	031122	68·0	G
14. 0	46. 33	022102	67·5	031293	67·0	
16. 0	44. 16	022426	65·5	030784	65·5	
18. 0	48. 55	020426	63·5	031026	63·5	
20. 0	42. 25	020274	63·0	031314	63·0	G
22. 0	49. 1	018396	62·5	031053	61·7	H B
Aug. 25. 0. 0	22. 58. 46	0·019818	63·7	0·031226	62·5	H B
1. 50	57. 50	022208		031801		
2. 0	56. 47	021234	66·3	031808	65·5	
2. 10	56. 19	021013		031759		H B
4. 0	53. 33	021523	68·0	032706	67·0	T D
6. 0	49. 41	022885	69·5	032523	68·8	G
8. 0	42. 1	023350	69·5	032478	69·0	
10. 0	49. 21	021922	68·0	031814	67·5	G
12. 0	48. 22	020840	67·5	031323	67·3	H B
14. 0	43. 57	023416	66·5	031292	66·5	
16. 0	43. 42	021575	65·7	031186	65·8	
18. 0	45. 38	021023	64·8	031315	64·5	
20. 0	43. 33	019422	64·5	031402	64·0	H B
22. 0	48. 51	018033	64·4	031227	63·8	T D
Aug. 26. 0. 0	22. 54. 56	0·019596	65·0	0·031318	64·7	T D
1. 50	58. 5	021404		031564		
2. 0	58. 26	021847	66·0	031564	66·1	
2. 10	58. 17	022003		031613		T D
4. 0	55. 10	021881	67·5	032002	66·7	H B
6. 0	51. 12	022467	68·6	032234	68·0	
8. 0	44. 23	022945	69·2	032191	68·8	
10. 0	49. 26	022002	68·6	031843	68·2	H B
12. 0	47. 46	021966	68·0	031687	68·0	T D
Aug. 26. 14. 0	22. 49. 16	0·022017	67·0	0·031479	66·6	T D
16. 0	50. 35	021736	66·0	031105	65·7	
18. 0	42. 41	021367	65·0	031038	64·6	
20. 0	44. 34	020127	65·0	031359	65·0	T D
22. 0	51. 1	018475	65·7	031360	64·8	H B
Aug. 27. 0. 0	22. 59. 53	0·018742	67·4	0·031599	66·5	H B
1. 50	56. 57	021406		032300		
2. 0	56. 30	021539	70·7	032276	69·8	
2. 10	56. 43	021805		032286		H B
4. 0	52. 12	022373	73·0	032723	72·7	T D
6. 0	48. 52	023599	75·0	032883	74·8	
8. 0	46. 34	022927	74·7	032785	74·5	
10. 0	42. 1	019886	74·0	032255	73·7	T D
12. 0	35. 25	022067	72·5	031213	71·5	G
14. 0	47. 37	021062	70·5	031592	70·0	
16. 0	47. 24	021387	68·5	031459	68·0	
18. 0	46. 38	021375	67·0	031366	66·5	
20. 0	42. 35	021132	67·0	031550	66·5	G
22. 0	47. 5	020025	67·0	031602	66·7	T D
Aug. 28. 0. 0	22. 55. 27	0·020671	69·5	0·031869	69·0	T D
1. 50	23. 2. 13	022918		032549		
2. 0	1. 43	022918	72·3	032549	72·0	
2. 10	23. 0. 46	022741		032466		T D
4. 0	22. 57. 1	022229	74·5	032931	74·5	C T
6. 0	53. 13	022023	75·5	033083	75·0	C T
8. 0	48. 40	021163	75·0	032951	75·0	T D
10. 0	49. 19	022059	73·5	032047	73·0	G
12. 0	42. 4	019879	72·0	031745	72·0	G
14. 0	47. 32	021104	71·4	031909	71·0	T D
16. 0	47. 32	021010	69·5	030260	68·5	H B
18. 0	43. 12	020066	67·5	031305	67·7	H B
20. 0	44. 28	017623	67·2	031488	67·0	C T
22. 0	48. 21	018228	67·5	031634	67·0	G
Aug. 29. 0. 0	22. 55. 32	0·019897	68·2	0·031857	68·4	T D
1. 50	56. 58	020476		031969		C T
2. 0	58. 13	021029	69·0	032050	69·5	
2. 10	55. 11	020344		032155		C T
4. 0	53. 43	021071	72·5	032877	73·0	H B
6. 0	45. 31	024358	72·3	032857	72·5	C T
8. 0	46. 54	021709	71·7	032529	71·5	T D
10. 0	44. 56	026502	71·5	032334	71·5	G
12. 0	46. 13	022458	69·2	031264	68·5	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

DECLINATION MAGNET
August 24d. Between 0h and 1h. 50m, 10h and 12h, 12h and 14h, and 18h and 24h, large changes took place for their respective times.
August 25d. Between 6h and 10h the changes were larger than usual.
August 26d. Between 6h and 10h, 16h and 18h, and 20h and 24h, large changes took place.
August 27d, between 10h and 14h, and 22h and 24h; Aug. 28d, between 0h and 1h. 50m, and 10h and 14h; and Aug. 29d, between 4h and 6h: the changes were large.

HORIZONTAL FORCE MAGNET.
August 24d. Between 16h and 18h a large change took place.
August 25d, 27d, 28d, and 29d. Large and frequent changes took place.

VERTICAL FORCE MAGNET.
Aug. 24d, 25d, 27d, 28d, and 29d. The changes were large and frequent.

Daily Observations from August 30 to September 5.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Aug. 30. 14. 0	22. 46. 54	0·021239	67·5	0·031336	67·0	H B	Sep. 2. 14. 0	22. 47. 29	0·022155	69·5	0·031607	69·3	H B
16. 0	50. 8	020817	65·8	031307	66·0		16. 0	46. 26	021917	66·8	031185	66·5	
18. 0	47. 17	020862	64·5	031320	64·8		18. 0	44. 19	021319	65·5	031304	65·2	
20. 0	44. 36	020319	63·0	031094	63·0	H B	20. 0	45. 31	020644	62·7	031051	62·8	H B
22. 0	47. 33	019234	63·0	031078	63·0	T D	22. 0	49. 34	019927	62·0	030865	62·0	T D
Aug. 31. 0. 0	22. 51. 43	0·020083	65·0	0·031537	64·7	T D	Sep. 3. 0. 0	22. 55. 6	0·020799	64·0	0·031378	64·0	T D
1. 50	55. 22	021029		032224			1. 50	55. 25	021900		032312		
2. 0	55. 33	021250	69·0	032176	68·5		2. 0	55. 25	022010	68·0	032288	68·0	
2. 10	55. 56	021361		032176		T D	2. 10	55. 16	022010		032239		T D
4. 0	52. 13	021845	72·5	032648	72·3	H B	4. 0	51. 33	023065	71·6	032676	71·5	H B
6. 0	49. 14	022296	74·5	032814	74·3		6. 0	58. 58	022616	73·0	032574	73·0	
8. 0	47. 23	022306	74·3	032450	73·7		8. 0	50. 6	022319	73·2	032266	73·0	
10. 0	45. 40	022136	73·3	032036	72·7	H B	10. 0	50. 6	022373	71·7	032027	72·0	H B
12. 0	46. 37	021539	72·0	031994	71·8	T D	12. 0	47. 5	022394	70·0	031718	70·0	T D
14. 0	50. 30	022391	70·5	031502	70·2		14. 0	46. 5	022187	68·0	031413	67·7	
16. 0	42. 2	020918	69·0	031377	68·8		16. 0	44. 47	023202	65·5	031009	65·0	
18. 0	44. 31	020859	68·0	031483	68·0		18. 0	52. 27	021116	63·0	030671	62·8	
20. 0	44. 39	021353	67·0	031488	67·0	T D	20. 0	45. 12	021661	61·0	030191	60·8	T D
22. 0	46. 29	019560	65·7	031317	65·8	H B	22. 0	22. 59. 3	019197	60·7	030391	60·3	H B
Sep. 1. 0. 0	22. 53. 29	0·020429	65·6	0·031225	65·4	H B	Sep. 4. 0. 0	23. 1. 35	0·019371	62·5	0·030869	61·5	H B
1. 50	57. 15	022003		031184			1. 50	3. 9	019896		032250		
2. 0	56. 56	022312	66·0	031218	65·5		2. 0	1. 4	019762	66·5	032241	65·7	
2. 10	57. 13	022246		031223		H B	2. 10	23. 0. 58	020560		032241		H B
4. 0	52. 13	022470	66·8	031609	66·5	T D	4. 0	22. 57. 7	022306	70·0	032791	70·0	T D
6. 0	49. 29	022187	68·0	032049	68·0		6. 0	51. 13	020875	72·0	032847	72·0	
8. 0	48. 16	022409	68·0	031863	67·5		8. 0	49. 56	019590	72·0	032417	72·0	
10. 0	48. 16	022309	67·8	031751	67·3	T D	10. 0	43. 39	021812	71·0	032153	71·0	T D
12. 0	45. 16	022317	67·2	031293	67·0	G	12. 0	38. 16	021568	71·0	031797	71·0	G
14. 0	45. 43	021651	65·5	031057	65·0		14. 0	53. 21	020236	68·5	031220	68·5	
16. 0	46. 44	021209	65·5	031359	65·0		16. 0	48. 27	021132	67·0	031356	67·0	
18. 0	45. 59	021039	64·5	031339	64·0		18. 0	47. 21	021733	66·5	031672	66·5	
20. 0	45. 59	021238	64·5	031524	64·0	G	20. 0	52. 26	018954	65·0	031349	65·0	G
22. 0	49. 17	020119	63·0	030965	61·7	H B	22. 0	22. 56. 28	017054	64·5	031412	64·0	H B
Sep. 2. 0. 0	22. 54. 59	0·020573	65·8	0·031314	64·0	H B	Sep. 5. 0. 0	23. 0. 56	0·018825	67·5	0·032058	66·8	H B
1. 50	56. 32	022272		032395		T D	1. 50	22. 59. 50	020679		033229		
2. 0	56. 32	022493	69·8	032356	69·0		2. 0	23. 0. 54	021388	71·5	033175	71·0	
2. 10	56. 32	022715		032327		T D	2. 10	22. 59. 49	022162		033206		H B
4. 0	51. 59	022952	72·5	032711	72·5	G	4. 0	46. 56	023130	74·2	034330	74·5	G
6. 0	50. 14	022679	73·5	032482	73·5		6. 0	53. 8	023924	76·0	034273	76·5	
8. 0	47. 10	022502	73·5	032228	73·5		8. 0	41. 56	020584	75·5	033131	75·5	
10. 0	48. 21	022259	73·5	032320	73·5	G	10. 0	47. 24	019572	74·5	031810	74·5	G
12. 0	48. 7	022130	71·7	032051	72·0	H B	12. 0	50. 24	019539	71·7	030573	71·5	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

During the months of September, October, and November, large changes frequently took place in the positions of all the magnets, too numerous to be mentioned in the foot-notes. (See the Section of Extraordinary Observations.)

Daily Observations from September 6 to 12.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 6. 14. 0	22. 50. 4	0·021081	72·3	0·031964	72·5	H B
16. 0	46. 54	020860	69·7	031357	69·0	
18. 0	47. 29	020710	68·3	031396	67·8	
20. 0	45. 42	019944	67·7	031621	67·6	H B
22. 0	49. 59	018187	67·0	031463	67·0	L
Sep. 7. 0. 0	22. 54. 34	0·019700	67·0	0·031693	68·0	L
1. 50	54. 34	020244		032608		
2. 0	53. 48	020355	72·2	032608	71·8	
2. 10	53. 48	020643		032608		L
4. 0	49. 52	021347	75·3	033098	74·8	H B
6. 0	48. 0	020953	76·5	032898	75·8	
8. 0	47. 32	020938	75·5	032520	75·4	
10. 0	46. 54	020845	74·3	032097	73·5	H B
12. 0	47. 51	021198	72·6	031976	72·4	L
14. 0	47. 29	020970	71·0	031714	71·0	
16. 0	46. 44	020705	69·7	031588	69·6	
18. 0	47. 8	020807	69·0	031625	69·0	
20. 0	51. 59	019752	68·0	031313	68·0	L
22. 0	53. 18	018778	68·0	031300	67·4	T D
Sep. 8. 0. 0	22. 57. 52	0·018464	68·5	0·031693	68·0	T D
1. 50	59. 38	020698		032616		
2. 0	58. 52	021052	70·7	032606	70·5	
2. 10	59. 36	021096		032645		T D
4. 0	55. 4	023225	72·8	033500	72·5	L
6. 0	48. 46	023982	74·0	033887	73·8	
8. 0	42. 20	019886	74·0	032945	74·0	
10. 0	44. 43	019672	73·0	032257	73·0	L
12. 0	50. 31	020558	71·7	031895	71·5	T D
14. 0	51. 47	020671	69·5	031499	69·0	
16. 0	48. 34	020774	67·5	031390	67·0	
18. 0	46. 27	020519	66·0	031387	65·7	
20. 0	45. 11	019780	65·3	031432	65·0	T D
22. 0	50. 3	017813	64·8	031317	64·4	H B
Sep. 9. 0. 0	22. 56. 42	0·018533	66·3	0·031760	66·0	L
1. 50	56. 11	021778		032297		
2. 0	55. 41	021955	69·5	032297	69·0	
2. 10	55. 41	022221		032259		
4. 0	57. 22	021283	71·8	032700	70·8	L
6. 0	47. 25	021753	73·0	032061	72·5	T D
8. 0	46. 12	021259	74·0	032817	73·7	
10. 0	50. 19	021045	73·0	032413	73·0	T D
12. 0	50. 4	020691	71·7	032139	72·0	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 9. 14. 0	22. 50. 25	0·020851	70·3	0·031675	69·5	H B
16. 0	48. 56	020656	68·5	031610	68·0	
18. 0	46. 28	020674	67·3	031508	67·0	
20. 0	45. 38	019870	67·0	031702	67·0	H B
22. 0	51. 19	019054	66·5	031449	66·3	L
Sep. 10. 0. 0	22. 56. 22	0·019633	67·3	0·031657	67·2	L
1. 50	54. 53	020399		032036		
2. 0	54. 53	020399	69·2	032060	68·8	
2. 10	54. 25	020443		032060		L
4. 0	51. 50	021974	71·3	032865	71·5	H B
6. 0	50. 24	021532	71·7	032751	71·6	
8. 0	44. 45	021203	72·5	032847	72·0	
10. 0	44. 20	021067	71·7	032551	71·8	H B
12. 0	39. 41	023481	70·4	031350	70·4	L
14. 0	43. 23	020841	69·2	031333	69·0	
16. 0	44. 57	021804	69·0	031587	69·0	
18. 0	44. 12	022520	68·0	031557	68·0	
20. 0	46. 4	019352	67·6	031473	67·5	L
22. 0	22. 59. 5	019445	67·5	031331	67·0	T D
Sep. 11. 0. 0	23. 1. 1	0·018321	68·7	0·031752	68·0	T D
1. 50	1. 17	019761		032329		
2. 0	23. 0. 58	020714	70·4	032508	70·0	
2. 10	22. 59. 5	020204		032426		T D
4. 0	54. 48	019103	72·0	032870	71·5	L
6. 0	31. 40	019716	73·0	033842	73·2	
8. 0	36. 35	021045	73·0	032803	73·0	
10. 0	46. 59	025609	72·5	032058	72·4	L
12. 0	45. 57	020919	72·0	031519	71·7	T D
14. 0	45. 13	022074	71·5	031032	71·0	
16. 0	51. 12	021199	68·7	030640	68·5	
18. 0	45. 18	019871	67·4	030561	67·0	
20. 0	48. 32	019224	67·5	031341	67·0	T D
22. 0	52. 16	017253	67·5	031723	67·0	H B
Sep. 12. 0. 0	22. 55. 27	0·018364	68·3	0·031808	67·7	H B
1. 50	56. 26	020686		032782		
2. 0	57. 0	021549	71·8	032777	71·7	
2. 10	57. 40	021615		032820		H B
4. 0	49. 44	022126	73·5	033106	73·5	G
6. 0	49. 57	020465	73·5	032667	73·5	G
8. 0	46. 35	022083	75·2	032537	75·0	C T
10. 0	47. 14	023915	74·0	031848	74·0	G
12. 0	45. 29	021649	73·3	031685	72·7	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

Daily Observations from September 13 to 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Sep. 13. 14. 0	22. 50. 19	0·023270	67·6	0·031009	67·5	H B	Sep. 16. 14. 0	22. 53. 40	0·021778	69·5	0·031396	69·5	H B
16. 0	45. 15	021334	66·5	030843	66·5		16. 0	45. 10	021295	67·7	031132	67·5	
18. 0	45. 18	021835	65·8	030892	66·0		18. 0	48. 44	021677	66·3	031034	66·3	
20. 0	49. 27	019940	65·2	030917	64·8	H B	20. 0	44. 34	021344	64·6	030911	64·5	H B
22. 0	54. 27	019906	65·0	030956	64·8	L	22. 0	49·13	019344	64·3	030852	64·0	C T
Sep. 14. 0. 0	22. 56. 50	0·019697	65·2	0·031004	64·8	L	Sep. 17. 0. 0	22. 57. 23	0·020054	66·0	0·031243	65·3	C T
1. 50	56. 9	020069		031873			1. 50	57. 17	020620		032036		
2. 0	56. 17	020202	67·0	031863	66·8		2. 0	57. 3	020510	69·2	031987	68·8	
2. 10	56. 57	019959		031897		L	2. 10	56. 35	020576		031992		C T
4. 0	51. 46	020494	69·5	032581	68·8	H B	4. 0	51. 17	021535	72·5	032414	71·9	H B
6. 0	48. 13	021875	70·2	032308	69·5		6. 0	49. 19	022018	74·3	032619	73·8	
8. 0	46. 42	021299	70·2	032051	69·6		8. 0	46. 32	021499	74·5	032613	74·5	
10. 0	45. 29	022189	69·7	031768	69·3	H B	10. 0	48. 20	022923	73·4	031916	73·0	H B
12. 0	45. 17	020944	68·5	031069	68·0	G	12. 0	44. 25	020730	71·8	031641	71·5	C T
14. 0	43. 49	020852	67·7	031191	67·5		14. 0	45. 15	021021	70·0	031105	69·8	
16. 0	47. 22	021533	66·5	031101	66·0		16. 0	46. 16	021513	68·2	031107	68·0	
18. 0	49. 8	022486	65·2	030935	65·0		18. 0	46. 58	021268	66·5	030934	66·2	
20. 0	47. 44	020979	63·5	030807	63·5	G	20. 0	45. 43	020748	65·0	030984	65·0	C T
22. 0	55. 5	016809	62·8	030733	62·5	L	22. 0	48. 38	020629	64·3	030793	64·0	L
Sep. 15. 0. 0	22. 57. 9	0·018655	63·5	0·030811	62·5	H B	Sep. 18. 0. 0	22. 56. 17	0·020339	65·2	0·031130	65·0	L
1. 50	57. 31	019112		031620			1. 50	56. 17	020765		031502		
2. 0	56. 22	019156	65·8	031625	65·6		2. 0	56. 6	020721	66·8	031429	66·5	
2. 10	56. 34	019666		031634		H B	2. 10	56. 35	021540		031526		L
4. 0	53. 12	020050	67·8	032135	67·4	L	4. 0	51. 52	021036	68·0	031772	67·8	C T
6. 0	48. 9	021819	70·0	032158	69·3	C T	6. 0	49. 13	020969	68·0	031703	68·0	G
8. 0	46. 25	021727	70·5	032075	70·0		8. 0	47. 58	021888	67·8	031457	67·2	C T
10. 0	46. 37	021199	70·0	031757	69·5	C T	10. 0	44. 15	021958	66·0	031276	66·2	C T
12. 0	49. 35	021088	68·7	031543	68·6	L	12. 0	46. 52	021806	63·8	030781	63·7	L
14. 0	48. 42	021217	67·5	031376	67·5		14. 0	46·30	021636	62·8	030862	62·6	
16. 0	47. 45	021183	66·0	031175	66·0		16. 0	47. 24	021583	60·8	030718	60·8	
18. 0	47. 4	020938	64·3	030971	64·2		18. 0	46. 8	021381	58·7	030391	58·6	
20. 0	45. 7	020119	63·0	030831	63·0	L	20. 0	44. 49	021314	57·0	030321	57·0	L
22. 0	46. 49	019367	63·0	030758	62·5	H B	22. 0	48. 10	019997	57·2	030389	56·8	H B
Sep. 16. 0. 0	22. 54. 42	0·019846	64·0	0·030995	63·4	H B	Sep. 19. 0. 0	22. 54. 35	0·020695	58·7	0·030638	58·0	H B
1. 50	55. 12	020452		031702			1. 50	55. 5	020699		031580		
2. 0	54. 49	020784	67·3	031716	66·3		2. 0	55. 44	021208	62·5	031580	62·2	
2. 10	56. 9	021625		031756		H B	2. 10	56. 25	021518		031585		H B
4. 0	50. 28	021463	69·6	032058	69·2	L	4. 0	54. 1	022254	65·4	032087	65·5	L
6. 0	48. 47	021948	71·8	032291	71·8		6. 0	52. 58	021532	67·4	032224	67·3	
8. 0	48. 38	022229	72·8	032183	72·5		8. 0	46. 30	021489	67·8	032061	67·7	
10. 0	48. 38	021760	72·0	031978	72·0	L	10. 0	44. 49	020910	67·0	031780	67·0	L
12. 0	47. 10	021717	70·7	031763	71·0	H B	12. 0	48. 47	021575	65·7	031442	66·0	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Daily Observations from September 20 to 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.
d h m	° ′ ″		°		°	
Sep. 20. 14. 0	22. 45. 21	0·022074	64·6	0·030988	64·5	H B
16. 0	45. 7	022173	64·4	031041	64·0	
18. 0	43. 15	021559	63·0	030836	62·5	
20. 0	45. 46	021141	62·5	030900	62·3	H B
22. 0	47. 16	020248	61·8	030713	61·5	L
Sep. 21. 0. 0	22. 52. 20	0·020252	63·0	0·030870	62·3	C T
1. 50	54. 14	020349		031412		
2. 0	54. 36	020836	65·0	031427	64·5	
2. 10	54. 36	021677		031427		C T
4. 0	52. 25	022486	66·5	031787	66·2	H B
6. 0	51. 39	023032	67·5	031718	67·3	
8. 0	31. 49	021094	67·3	032121	67·0	
10. 0	46. 6	021003	66·5	031745	66·5	H B
12. 0	46. 22	020906	65·8	031394	65·5	C T
14. 0	38. 23	020127	65·0	031081	65·0	
16. 0	35. 29	021330	64·0	030788	64·0	
18. 0	42. 27	020426	63·5	030386	63·2	
20. 0	51. 15	017890	62·0	029899	62·0	C T
22. 0	22. 56. 45	013060	62·5	029909	62·5	L
Sep. 22. 0. 0	23. 4. 24	0·015011	64·6	0·032154	64·5	H B
1. 50	22. 57. 9	024810		034744		
2. 0	22. 55. 52	022198	66·5	034497	67·0	
2. 10	23. 0. 14	022375		034316		H B
4. 0	22. 52. 39	021966	68·0	033995	68·0	C T
6. 0	38. 40	024503	68·6	034552	68·3	
8. 0	14. 54	018849	69·2	032592	68·6	
10. 0	32. 9	014268	67·0	030074	67·0	C T
12. 0	47. 9	018696	67·0	028635	67·0	L
14. 0	47. 43	020076	66·0	031106	66·0	
16. 0	53. 33	020349	65·0	030862	65·0	
18. 0	49. 8	020306	65·4	031185	65·3	
20. 0	46. 1	019412	66·0	031686	66·0	L
22. 0	46. 14	018988	66·5	031605	66·3	H B
Sep. 23. 0. 0	22. 52. 28	0·019497	66·5	0·031442	66·0	H B
1. 50	53. 33	020017		031830		
2. 0	53. 21	019774	68·0	031830	67·8	
2. 10	53. 4	019752		031820		
4. 0	50. 18	020528	69·7	032248	69·9	H B
6. 0	49. 14	021420	70·0	032022	69·8	L
8. 0	49. 39	022331	69·5	031779	69·4	L
10. 0	48. 21	020239	68·0	031688	68·0	G
12. 0	54. 37	022187	68·0	031727	68·0	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 23. 14. 0	22. 43. 57	0·020697	66·4	0·031402	66·4	L
16. 0	39. 24	022714	66·8	031356	66·5	H B
18. 0	43. 4	020589	66·8	031334	66·7	H B
20. 0	44. 39	020246	67·0	031435	66·8	C T
22. 0	48. 14	018722	66·5	031317	66·5	G
Sep. 24. 0. 0	22. 55. 31	0·019957	65·3	0·031009	65·0	L
1. 50	56. 53	020937		031459		C T
2. 0	56. 23	021088	67·0	031459	66·8	
2. 10	56. 8	021072		031575		C T
4. 0	50. 46	021224	69·5	032137	69·0	H B
6. 0	48. 51	021719	69·8	032040	69·5	C T
8. 0	40. 9	023287	69·0	031879	69·0	L
10. 0	45. 4	021250	69·0	031918	69·0	G
12. 0	47. 36	021024	67·8	031435	67·5	H B
14. 0	46. 25	020832	66·8	031374	66·7	
16. 0	45. 40	020827	65·6	031317	65·8	
18. 0	45. 9	020921	64·2	030993	64·0	
20. 0	44. 39	020518	63·0	031006	63·0	H B
22. 0	46. 30	019757	62·3	030742	62·0	L
Sep. 25. 0. 0	22. 53. 29	0·019474	63·5	0·031047	63·3	L
1. 50	57. 52	021914		031603		C T
2. 0	55. 56	021183	66·0	031603	65·5	
2. 10	56. 9	021626		031540		C T
4. 0	53. 20	021394	67·5	031716	66·8	H B
6. 0	50. 49	023431	67·5	031677	67·0	
8. 0	47. 37	021703	67·5	031619	67·0	
10. 0	47. 30	021523	66·7	031477	66·5	H B
12. 0	46. 37	022511	66·0	030969	65·5	C T
14. 0	43. 16	021286	64·0	030793	64·0	
16. 0	49. 4	022488	63·0	030602	63·0	
18. 0	46. 14	021167	62·0	030728	62·0	
20. 0	46. 46	020902	62·0	030805	61·8	C T
22. 0	50. 49	018732	62·0	030726	61·5	L
Sep. 26. 0. 0	22. 52. 14	0·019787	63·0	0·030926	62·2	L
1. 50	54. 0	022197		031464		H B
2. 0	53. 4	021532	64·8	031469	64·2	H B and L
2. 10	52. 55	022086		031428		L
4. 0	51. 36	021404	66·0	031828	65·8	C T
6. 0	49. 59	021958	66·0	031491	65·5	
8. 0	49. 21	022249	65·5	031300	65·0	
10. 0	47. 13	021633	65·0	031112	64·2	C T
12. 0	48. 2	023500	64·0	030842	64·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Daily Observations from September 27 to October 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 27. 14. 0	22. 44. 20	0·021474	62·5	0·030836	62·5	L
16. 0	44. 2	021746	61·5	030742	61·5	
18. 0	42. 28	021968	60·2	030643	60·2	
20. 0	48. 13	021960	59·5	030710	59·4	L
22. 0	44. 29	020250	59·6	030786	59·5	H B
Sep. 28. 0. 0	22. 50. 56	0·019952	59·8	0·030698	59·5	H B
1. 50	53. 39	021060		030842		
2. 0	53. 20	020949	61·5	030827	60·4	
2. 10	53. 15	021038		030856		H B
4. 0	51. 14	022049	62·5	031309	62·0	L
6. 0	49. 54	021976	63·5	031632	63·3	
8. 0	45. 16	021371	63·2	031319	63·0	
10. 0	46. 27	021337	63·0	031256	62·8	L
12. 0	54. 1	022506	61·8	030938	61·5	H B
14. 0	44. 55	021124	60·7	030815	60·5	
16. 0	43. 14	021694	59·5	030668	59·0	
18. 0	45. 37	021775	57·5	030423	57·0	
20. 0	45. 37	021527	56·3	030500	56·0	H B
22. 0	47. 8	020147	56·0	030600	55·7	T D
Sep. 29. 0. 0	22. 50. 25	0·020872	58·7	0·031087	58·0	T D
1. 50	53. 23	021831		031592		
2. 0	53. 30	021831	62·0	031572	62·0	
2. 10	53. 18	021831		031533		T D
4. 0	50. 12	022251	64·6	031828	64·5	H B
6. 0	48. 25	022554	65·6	031567	64·7	
8. 0	48. 1	022261	65·7	031643	65·3	
10. 0	46. 6	022108	64·8	031405	64·2	H B
12. 0	48. 6	022529	63·5	031112	63·0	T D
14. 0	48. 9	022629	62·0	030874	62·0	
16. 0	46. 5	022503	61·0	030872	60·7	
18. 0	46. 18	022510	60·0	030776	59·5	
20. 0	44. 51	021831	59·0	030780	58·5	T D
22. 0	45. 5	020820	58·0	030445	57·6	H B
Sep. 30. 0. 0	22. 52. 31	0·021251	59·5	0·030665	58·4	H B
1. 50	53. 4	021712		031563		
2. 0	53. 46	022044	62·6	031549	61·8	
2. 10	53. 6	022000		031529		H B
4. 0	50. 13	022478	64·5	031720	64·0	T D
6. 0	48. 35	022241	64·8	031469	64·3	
8. 0	45. 2	022222	64·3	031327	64·0	
10. 0	44. 22	021950	64·0	031493	63·7	T D
12. 0	46. 55	022010	63·7	031400	63·2	C T
Oct. 1. 0. 0	22. 52. 12	0·020437	60·7	0·030031	58·8	H B
1. 50	54. 54	022226		030918		
2. 0	55. 42	022425	63·8	030932	63·2	
2. 10	55. 39	022204		030937		
4. 0	51. 40	022508	66·5	031627	66·8	C T
6. 0	49. 15	022836	67·0	031299	67·0	
8. 0	38. 33	021574	67·0	031177	67·0	
10. 0	46. 35	021825	66·0	030817	66·0	C T
12. 0	50. 43	022316	65·5	030610	65·5	H B
14. 0	47. 24	022098	63·7	030128	63·5	
16. 0	46. 24	021846	63·0	030278	62·8	
18. 0	45. 50	021933	62·6	030353	62·5	
20. 0	46. 3	021245	62·2	030322	62·0	H B
22. 0	46. 29	020437	62·0	030322	62·0	T D
Oct. 2. 0. 0	22. 55. 13	0·020230	63·0	0·030499	63·0	T D
1. 50	58. 25	020578		030575		
2. 0	58. 39	020400	64·0	030584	63·5	
2. 10	57. 57	020223		030566		T D
4. 0	53. 48	021737	64·7	030751	63·8	H B
6. 0	45. 42	020108	65·8	031059	65·0	
8. 0	42. 19	020461	65·4	031027	65·0	
10. 0	39. 50	020485	64·5	030138	63·8	H B
12. 0	33. 22	020179	64·0	030214	64·0	T D
14. 0	40·11	021030	63·8	029793	63·5	
16. 0	39·13	022555	63·0	029126	63·0	
18. 0	44. 33	021031	62·5	029397	62·0	
20. 0	49. 57	020709	62·3	029862	62·0	T D
22. 0	52·33	019898	61·7	029982	61·7	H B
Oct. 3. 0. 0	22. 54. 37	0·020588	62·5	0·030142	62·0	L
1. 50	55. 22	021311		030730		C T
2. 0	55. 12	021378	64·8	030740	64·0	
2. 10	54. 58	021378		030740		C T
4. 0	52. 38	022460	65·7	030939	65·2	T D
6. 0	50. 8	023473	65·8	030912	65·5	
8. 0	47. 12	022917	65·0	030771	65·0	
10. 0	46. 29	022928	63·5	030312	63·0	T D
12. 0	47·33	022437	61·0	029978	60·8	C T

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$; from October $1^d.\ 0^h.\ 28^s.2$.

Daily Observations from October 4 to 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Oct. 4. 14. 0	22. 47. 58	0·021569	60·2	0·030247	60·2	L	Oct. 7. 14. 0	22. 41. 30	0·019447	61·0	0·029273	61·0	C T
16. 0	46. 47	021798	59·2	030006	59·2		16. 0	39. 31	024318	61·0	028156	61·0	
18. 0	45. 10	021798	59·2	030000	59·0		18. 0	39. 22	015786	60·3	027860	60·0	
20. 0	46. 32	021722	59·4	030152	59·4	L	20. 0	49. 53	017617	60·0	029356	59·8	C T
22. 0	47. 4	020481	60·7	030321	59·6	H B	22. 0	50. 14	018751	61·2	030343	61·0	H B
Oct. 5. 0. 0	22. 52. 3	0·020699	62·5	0·030504	61·7	H B	Oct. 8. 0. 0	22. 58. 48	0·019286	62·0	0·030746	62·0	T D
1. 50	54. 52	022079		030864			1. 50	23. 2. 36	017069		031679		
2. 0	54. 9	022035	64·5	030859	63·4		2. 0	4. 8	018663	64·2	031693	64·0	
2. 10	54. 39	022168		030910			2. 10	23. 3. 45	018376		031785		T D
4. 0	49. 44	020756	64·7	031048	64·5	H B	4. 0	22. 54. 8	021899	65·0	033528	64·8	C T
6. 0	49. 2	021541	65·5	030887	65·0	T D	6. 0	37. 34	020441	64·5	039171	64·0	
8. 0	47. 11	021899	65·0	030583	64·5	C T	8. 0	49. 34	019293	64·0	031219	64·0	C T
10. 0	47. 2	021984	64·2	030444	63·8	C T	10. 0	48. 33	020819	62·3	030379	62·2	L
12. 0	46. 53	022020	63·5	030350	63·0	H B	12. 0	51. 29	020902	60·7	029950	60·5	H B
14. 0	46. 19	021983	62·5	030302	62·5		14. 0	48. 33	020993	58·5	029379	58·2	
16. 0	45. 59	022259	62·3	030295	62·0		16. 0	48. 13	020412	57·3	029658	57·0	
18. 0	45. 51	022342	62·4	030485	62·3		18. 0	49. 48	021196	56·7	029582	56·5	
20. 0	45. 45	021841	61·8	030382	61·7	H B	20. 0	47. 41	020166	56·5	029790	56·0	H B
22. 0	47. 26	020717	61·7	030372	61·5	T D	22. 0	47. 15	019653	57·0	030137	56·7	T D
Oct. 6. 0. 0	22. 52. 11	0·020622	62·7	0·030333	62·2	T D	Oct. 9. 0. 0	22. 49. 56	0·019893	58·8	0·030132	58·0	T D
1. 50	55. 0	021378		030652		C T	1. 50	52. 36	020554		030728		
2. 0	54. 53	021422	63·5	030638	63·0		2. 0	52. 9	020333	61·0	030719	60·7	
2. 10	54. 47	021378		030638		C T	2. 10	52. 38	020267		030676		T D
4. 0	51. 1	021663	64·0	030980	63·7	H B	4. 0	51. 22	021279	62·4	031157	62·5	H B
6. 0	47. 47	021328	63·6	030797	63·2		6. 0	48. 27	021344	63·3	031294	63·2	
8. 0	45. 34	021619	62·7	030439	62·3		8. 0	46. 50	021050	63·0	030952	62·8	
10. 0	40. 34	021289	61·8	030172	61·5	H B	10. 0	45. 44	022064	63·5	030624	63·0	H B
12. 0	42. 10	022104	61·0	029738	61·0	T D	12. 0	45. 34	023721	64·0	030553	64·0	T D
14. 0	45. 49	021934	60·0	029892	60·0		14. 0	42. 14	022282	64·0	029646	64·0	
16. 0	46. 37	022163	59·0	029662	58·6		16. 0	41. 51	021234	65·0	029876	64·7	
18. 0	49. 23	022487	58·3	029528	58·0		18. 0	47. 57	022784	65·0	029770	64·7	
20. 0	46. 24	022258	58·0	029596	57·7	T D	20. 0	52. 28	020570	65·0	029969	64·7	T D
22. 0	48. 58	020609	57·8	029575	57·3	H B	22. 0	54. 2	018240	64·6	030522	64·5	L
Oct. 7. 0. 0	22. 51. 52	0·020258	59·0	0·029788	58·2	L	Oct. 10. 0. 0	22. 57. 40	0·017522	65·3	0·030604	64·6	L
1. 50	52. 49	021496		030510		H B	1. 50	59. 47	018032		031333		
2. 0	52. 49	021695	62·5	030505	61·0		2. 0	59. 7	018032	67·0	031426	66·6	
2. 10	53. 31	021983		030505		H B	2. 10	58. 26	018475		031449		L
4. 0	52. 56	022127	64·0	031381	64·0	C T	4. 0	57. 35	019752	68·0	032258	67·5	T D
6. 0	47. 45	021234	65·0	031469	65·0	T D	6. 0	49. 39	021080	68·0	031656	68·0	
8. 0	37. 41	019515	64·0	031274	64·0		8. 0	46. 20	021685	67·0	031283	66·5	
10. 0	38. 38	019123	63·0	030323	62·6	T D	10. 0	48. 38	022290	66·0	030885	65·7	T D
12. 0	40. 50	020724	62·0	030033	61·8	C T	12. 0	48. 17	021909	64·8	030519	64·7	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $28^s \cdot 2$.

Daily Observations from October 11 to 17.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 11. 14. 0	22. 44. 26	0·021296	58·2	0·029388	58·0	L
16. 0	51. 23	021203	57·0	029240	57·0	
18. 0	45. 53	021918	56·0	029357	56·0	
20. 0	48. 51	021671	55·2	029461	55·2	L
22. 0	53. 52	018746	55·7	029721	55·3	H B
Oct. 12. 0. 0	22. 54. 42	0·021235	56·8	0·029776	56·3	H B
1. 50	52. 51	019620		030239		
2. 0	52. 37	020616	58·5	030248	58·0	
2. 10	54. 6	021015		030341		H B
4. 0	50. 29	021127	60·2	030595	60·0	L
6. 0	49. 9	022647	61·2	030366	60·0	
8. 0	41. 37	022632	61·5	030592	60·8	
10. 0	46. 57	022846	61·2	030380	61·0	L
12. 0	52. 44	023218	61·3	030338	61·0	H B
14. 0	45. 20	022540	60·7	030094	60·5	
16. 0	47. 7	022115	59·5	029979	59·5	
18. 0	47. 24	022803	58·6	029876	58·3	
20. 0	46. 20	022296	57·7	029902	57·5	H B
22. 0	47. 16	021288	57·5	029845	57·0	T D
Oct. 13. 0. 0	22. 50. 38	0·020787	58·2	0·030016	58·0	T D
1. 50	53. 4	021713		030374		
2. 0	53. 4	021713	60·0	030318	59·5	
2. 10	52. 57	021934		030318		T D
4. 0	50. 32	021901	61·5	030509	60·7	H B
6. 0	48. 19	021879	61·5	030556	61·0	
8. 0	46. 39	022275	60·7	030420	60·5	
10. 0	46. 4	022508	59·6	029833	59·3	H B
12. 0	47. 1	022752	58·3	029853	58·0	T D
14. 0	40. 52	021867	57·0	029422	56·6	
16. 0	43. 36	022753	57·0	029433	56·5	
18. 0	46. 21	022428	56·0	029492	55·7	
20. 0	47. 42	022106	54·5	029331	54·0	T D
22. 0	47. 20	021041	53·7	029421	53·6	L
Oct. 14. 0. 0	22. 52. 33	0·020284	54·2	0·029402	54·0	L
1. 50	52. 41	021340		029615		
2. 0	52. 17	021517	55·2	029624	54·9	
2. 10	52. 6	021517		029606		L
4. 0	48. 59	022022	57·0	030156	57·0	T D
6. 0	47. 0	022328	58·8	030328	58·5	
8. 0	46. 24	022735	59·5	030285	59·2	
10. 0	46. 54	022605	60·3	030357	60·0	T D
12. 0	47. 41	022642	60·0	030227	60·0	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 14. 14. 0	22. 48. 20	0·022606	59·0	0·029870	59·0	L
16. 0	47. 3	022480	58·0	029783	58·0	
18. 0	47. 24	022490	56·5	029546	56·4	
20. 0	46. 24	022174	56·2	029627	56·0	L
22. 0	47. 11	021639	56·7	029752	56·3	H B
Oct. 15. 0. 0	22. 50. 4	0·021187	57·3	0·029713	56·7	H B
1. 50	52. 7	022171		029863		
2. 0	52. 2	022149	58·4	029868	57·6	
2. 10	51. 55	022127		029863		H B
4. 0	50. 7	022669	59·5	030177	59·3	T D
6. 0	48. 1	022370	59·7	030179	59·5	L
8. 0	47. 35	022956	59·5	030105	59·4	
10. 0	48. 5	022795	59·2	030047	59·0	L
12. 0	45. 32	023654	59·7	030033	59·0	H B
14. 0	44. 35	021976	59·2	029878	58·8	
16. 0	48. 33	021381	58·7	029724	58·5	
18. 0	45. 3	023295	58·5	029537	58·2	
20. 0	45. 43	022565	58·5	029669	57·8	H B
22. 0	48. 18	020623	58·8	030040	58·5	T D
Oct. 16. 0. 0	22. 52. 54	0·020698	60·8	0·030348	60·0	T D
1. 50	53. 44	021559		030824		
2. 0	53. 20	021559	63·0	030786	63·0	
2. 10	52. 52	021559		030763		T D
4. 0	51. 10	021996	64·4	030709	63·5	H B
6. 0	46. 54	022498	65·4	030614	64·0	
8. 0	47. 1	022777	64·7	030370	63·5	
10. 0	46. 1	022197	63·5	030354	63·0	H B
12. 0	44. 53	022470	62·5	030197	62·0	T D
14. 0	48. 52	022496	62·0	030089	61·8	
16. 0	45. 56	022853	61·5	030073	61·3	
18. 0	45·56	023477	61·0	029983	60·7	
20. 0	46. 11	023211	61·0	030030	60·7	T D
22. 0	45. 15	021144	60·3	029916	60·0	L
Oct. 17. 0. 0	22. 50. 33	0·020717	61·7	0·030026	61·0	L
1. 50	53. 52	021705		030679		H B
2. 0	53. 30	021727	63·6	030647	63·0	
2. 10	53. 18	021772		030619		H B
4. 0	50. 54	022750	64·8	030802	64·5	T D
6. 0	46. 58	022750	64·8	030639	64·5	
8. 0	47. 6	023167	64·0	030433	63·6	
10. 0	44. 26	023603	62·0	029963	61·5	T D
12. 0	45. 29	022864	60·0	029799	60·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.2$.

Daily Observations from October 18 to 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Oct. 18. 14. 0	22. 46. 50	0·023214	53·2	0·029373	53·1	L	Oct. 21. 14. 0	22. 47. 20	0·023650	58·5	0·029758	57·5	H B
16. 0	46. 20	023702	52·6	029262	52·5		16. 0	40. 56	023716	58·5	029574	58·0	L
18. 0	46. 20	024644	52·5	029253	52·4		18. 0	46. 44	023093	59·0	029860	58·7	L
20. 0	46. 7	023965	52·8	029407	54·7	L	20. 0	46. 56	022317	59·0	029918	58·6	T D
22. 0	46. 5	022814	54·5	029573	53·7	H B	22. 0	48. 31	019764	58·3	029713	58·0	C T
Oct. 19. 0. 0	22. 53. 44	0·022838	57·5	0·030142	57·3	T D	Oct. 22. 0. 0	22. 54. 15	0·022676	58·5	0·029762	57·8	H B
1. 50	53. 5	023850		030705		H B	1. 50	55. 33	022142		030122		
2. 0	52. 36	024116	61·5	030681	60·7		2. 0	55. 49	022358	59·5	030233	59·0	
2. 10	52. 50	024359		030662		H B	2. 10	56. 0	022253		030247		H B
4. 0	50. 45	024787	63·5	030834	63·2	L	4. 0	54. 0	022207	59·0	030361	58·8	L
6. 0	51. 20	023434	64·0	030756	63·8		6. 0	33. 28	023137	59·0	030722	59·0	G
8. 0	48. 18	023841	63·4	030659	63·4		8. 0	45. 47	022115	58·2	030006	57·7	H B
10. 0	46. 6	023858	62·2	030379	62·2	L	10. 0	46. 17	023657	57·5	029449	57·0	T D
12. 0	33. 51	023474	61·5	029754	61·5	H B	12. 0	50. 10	023221	56·5	029011	56·5	L
14. 0	39. 36	023690	60·3	029225	60·5		14. 0	45. 44	021843	55·3	028996	55·2	
16. 0	44. 22	021849	59·5	029415	59·0		16. 0	45. 6	022362	54·7	029190	54·7	
18. 0	45. 39	023587	58·0	029319	57·3		18. 0	46. 29	022949	53·6	029199	53·5	
20. 0	46. 55	023594	58·3	029692	57·8	H B	20. 0	46. 29	021817	52·8	029229	52·7	L
22. 0	47. 18	022278	57·2	029405	56·8	T D	22. 0	48. 27	019811	53·5	029390	53·2	H B
Oct. 20. 0. 0	22. 53. 11	0·023299	58·0	0·029805	57·7	T D	Oct. 23. 0. 0	22. 52. 15	0·021335	55·3	0·029560	54·6	H B
1. 50	59. 27	024012		030357			1. 50	55. 14	022461		030124		
2. 0	54. 50	023436	60·5	030241	60·0		2. 0	54. 58	022705	57·5	030110	56·9	
2. 10	54. 33	023569		030172		T D	2. 10	54. 39	023170		030110		H B
4. 0	54. 34	023740	63·2	030768	63·0	H B	4. 0	50. 38	023525	59·2	030273	58·8	L
6. 0	49. 31	023696	63·2	030786	63·0		6. 0	48. 6	023532	59·5	030196	59·3	
8. 0	44. 49	024147	62·6	030506	62·5		8. 0	47. 10	023195	58·3	029872	58·2	
10. 0	47. 5	024038	61·7	030233	61·5	H B	10. 0	46. 20	023000	56·5	029513	56·4	L
12. 0	45. 36	024591	60·0	029485	59·6	T D	12. 0	45. 16	022898	54·6	029272	54·5	H B
14. 0	44. 58	023525	59·2	029815	59·0		14. 0	44. 20	022671	53·0	029114	53·0	
16. 0	46. 42	023808	58·0	029806	58·0		16. 0	45. 48	022620	51·4	029077	51·5	
18. 0	46. 0	023808	58·0	029908	58·0		18. 0	49. 28	022499	50·3	028906	50·5	
20. 0	46. 58	023638	57·0	029696	57·8	T D	20. 0	46. 22	022174	50·6	029345	51·0	H B
22. 0	46. 19	021697	56·0	029583	55·8	L	22. 0	44. 50	021290	51·0	029386	51·0	T D
Oct. 21. 0. 0	22. 52. 46	0·021366	56·0	0·029441	56·0	L	Oct. 24. 0. 0	22. 51. 31	0·022157	54·8	0·029799	54·5	T D
1. 50	53. 51	023459		030157			1. 50	52. 54	023059		030473		
2. 0	53. 51	023569	59·2	030180	58·8		2. 0	52. 38	022926	58·8	030473	58·5	
2. 10	54. 10	023791		030166		L	2. 10	52. 19	022837		030450		T D
4. 0	51. 20	024252	61·0	030547	61·0	T D	4. 0	50. 27	023050	60·7	030281	59·5	H B
6. 0	49. 15	024097	61·0	030668	61·0		6. 0	48. 26	023377	60·8	030265	60·3	
8. 0	47. 2	023927	60·0	030125	60·0	T D	8. 0	39. 38	023518	60·2	030181	60·0	
10. 0	46. 9	025116	59·7	029808	58·5	D	10. 0	46. 38	022538	58·6	029713	58·0	H B
12. 0	42. 9	023886	59·5	029682	58·2		12. 0	43. 10	022923	58·0	029809	57·8	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.2$.

Daily Observations from October 25 to 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 25. 14. 0	22. 46. 49	0·022315	50·0	0·028799	49·6	T D
16. 0	46. 10	022670	50·0	028879	49·5	
18. 0	46. 7	023344	49·8	028849	49·0	
20. 0	46. 40	022414	49·8	028933	49·0	T D
22. 0	44. 18	022094	50·0	029183	50·0	G H
Oct. 26. 0. 0	22. 51. 21	0·021733	51·0	0·029331	51·0	G H
1. 50	53. 57	022405		029527		
2. 0	54. 50	022737	53·0	029504	52·8	
2. 10	53. 46	022626		029480		G H
4. 0	50. 50	022821	54·8	029883	54·5	T D
6. 0	49. 10	022505	54·5	029783	54·3	
8. 0	49. 0	023435	54·5	029653	54·0	
10. 0	45. 37	022863	54·0	029432	53·5	T D
12. 0	47. 0	023077	53·7	029458	53·6	L
14. 0	47. 0	022781	53·0	029347	53·0	
16. 0	46. 17	022788	52·0	029232	52·0	
18. 0	46. 45	023061	51·0	029117	51·0	
20. 0	46. 18	022859	50·2	029006	50·0	L
22. 0	46. 2	021375	50·2	029189	50·2	G H
Oct. 27. 0. 0	22. 50. 34	0·021290	51·0	0·029261	51·0	G H
1. 50	54. 6	022431		029238		
2. 0	53. 52	022099	51·2	029215	51·0	
2. 10	53. 23	021767		029169		G H
4. 0	51. 9	022567	52·0	029449	51·8	L
6. 0	49. 24	022846	52·6	029541	52·5	
8. 0	48. 12	023656	53·2	029679	53·2	
10. 0	45. 2	022535	52·2	029278	52·0	L
12. 0	45. 46	023010	52·0	029363	52·0	G H
14. 0	46. 17	023427	52·5	029363	52·0	
16. 0	47. 2	023622	53·0	029580	53·0	
18. 0	46. 31	023614	53·6	029503	53·5	
20. 0	45. 23	023452	53·3	029356	53·0	G H
22. 0	45. 30	022049	52·6	029412	52·7	H B
Oct. 28. 0. 0	22. 50. 47	0·021337	51·8	0·029189	51·7	H B
1. 50	54. 17	022219		029368		
2. 0	53. 48	022352	52·3	029382	52·2	
2. 10	53. 31	022175		029392		H B
4. 0	51. 35	022479	52·0	029285	51·2	G H
6. 0	49. 58	023309	52·2	029409	52·0	
8. 0	48. 42	023674	52·0	029363	52·0	
10. 0	47. 26	024031	52·8	029363	52·0	G H
12. 0	46. 22	023416	52·7	029357	52·3	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 28. 14. 0	22. 44. 28	0·023692	52·5	0·029045	52·0	H B
16. 0	43. 53	023825	52·5	029181	52·0	
18. 0	47. 57	023141	51·6	029170	51·5	
20. 0	47. 47	022570	51·5	029305	51·5	H B
22. 0	48. 13	021375	50·2	029067	50·0	G H
Oct. 29. 0. 0	22. 52. 24	0·021597	50·2	0·029011	50·0	G H
1. 50	53. 20	022643		029393		
2. 0	53. 20	022754	51·8	029365	51·5	
2. 10	51. 31	022643		029347		G H
4. 0	51. 9	023076	53·3	029720	53·0	H B
6. 0	47. 38	023462	54·4	029660	53·5	
8. 0	45. 3	023755	54·3	029569	53·7	
10. 0	46. 15	022876	54·6	029699	54·3	H B
12. 0	47. 13	023213	54·5	029650	54·5	T D
14. 0	46. 29	023413	54·5	029636	54·5	
16. 0	45. 59	023520	55·0	029655	54·7	
18. 0	47. 31	023588	55·4	029526	55·0	
20. 0	45. 50	023247	56·0	029755	55·5	T D
22. 0	45. 29	022225	55·2	029502	55·0	G H
Oct. 30. 0. 0	22. 52. 42	0·020789	56·0	0·029317	55·0	G H
1. 50	56. 10	020871		029673		
2. 0	56. 8	020871	57·0	029720	56·0	
2. 10	56. 27	021424		029720		G H
4. 0	50. 23	022343	58·5	030301	58·4	T D
6. 0	47. 26	023679	58·8	030080	58·6	
8. 0	46. 10	023505	58·3	029885	58·0	
10. 0	46. 7	023519	57·6	029691	57·0	T D
12. 0	45. 9	023553	56·5	029488	56·0	G H
14. 0	46. 18	023911	56·0	029412	55·8	
16. 0	43. 45	023136	56·0	029089	55·2	
18. 0	47. 1	023221	55·2	029340	55·0	
20. 0	47. 31	023186	54·6	029356	54·8	G H
22. 0	46. 21	022435	53·7	029232	53·5	H B
Oct. 31. 0. 0	22. 52. 12	0·021800	54·0	0·029251	53·7	T D
1. 50	53. 25	023437		029190		H B
2. 0	53. 20	023415	53·6	029194	53·2	
2. 10	53. 31	023393		029236		H B
4. 0	49. 59	022847	53·0	029610	53·5	G H
6. 0	44. 45	023010	52·0	029269	52·0	
8. 0	45. 20	023895	52·0	029293	52·0	
10. 0	46. 35	024202	52·5	029425	52·5	G H
12. 0	46. 0	024158	52·5	029255	52·3	H B

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.2$.

Daily Observations from November 1 to 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 1. 14. 0	22. 46. 34	0·023216	52·3	0·029051	52·0	H B	Nov. 4. 14. 0	22. 46. 0	0·024021	61·6	0·029615	61·0	T D
16. 0	45. 36	023411	51·5	029017	51·7		16. 0	44. 54	024097	61·0	029567	60·7	
18. 0	49. 27	024003	51·2	028935	51·3		18. 0	47. 27	023883	60·0	029514	59·7	
20. 0	47. 6	023304	51·0	028894	51·2	H B	20. 0	48. 34	023219	60·0	029650	60·0	T D
22. 0	46. 58	022150	50·2	028592	50·0	G H	22. 0	46. 43	022624	59·5	029323	58·5	G H
Nov. 2. 0. 0	22. 53. 37	0·021903	52·0	0·029014	51·6	G H	Nov. 5. 0. 0	22. 51. 20	0·022156	60·0	0·029340	59·0	G H
1. 50	56. 31	020727		029601			1. 50	53. 24	023169		029564		
2. 0	55. 57	020727	54·2	029648	54·0		2. 0	53. 12	023280	60·1	029656	59·5	
2. 10	55. 43	021170		029556		G H	2. 10	53. 12	023280		029679		G H
4. 0	50. 35	022765	57·2	030215	57·0	H B	4. 0	49. 54	023647	62·0	030184	61·5	T D
6. 0	48. 7	022257	57·6	030235	57·7		6. 0	48. 16	023780	62·0	030107	61·7	
8. 0	47. 53	022347	58·0	029893	57·6		8. 0	47. 10	024045	62·0	030006	61·7	
10. 0	41. 37	022855	57·6	029318	57·3	H B	10. 0	44. 32	024131	61·2	029723	60·7	T D
12. 0	44·38	022889	57·8	029602	57·6	L	12. 0	45. 29	023712	60·3	029547	59·7	H B
14. 0	49. 38	023153	57·4	029533	57·3		14. 0	46. 55	023662	58·7	029311	58·3	
16. 0	47. 11	022838	56·2	029343	56·2		16. 0	47. 2	023790	57·5	029257	57·0	
18. 0	49·27	023025	56·0	029374	56·0		18. 0	48. 11	023809	56·7	029266	56·6	
20. 0	47. 50	023383	55·5	030030	55·4	L	20. 0	47. 23	023612	55·8	029188	55·7	H B
22. 0	47. 50	020948	55·5	029179	55·0	G H	22. 0	46. 18	022575	54·0	028915	54·0	G H
Nov. 3. 0. 0	22. 53. 13	0·021952	57·5	0·029259	56·0	G H	Nov. 6. 0. 0	22. 51. 22	0·022685	54·0	0·028628	53·0	G H
1. 50	56. 21	021798		030246			1. 50	52. 5	022907		029012		
2. 0	56. 41	021798	60·5	030177	60·0		2. 0	51. 51	023128	54·0	029025	53·5	
2. 10	55. 20	021798		030200		G H	2. 10	51. 44	023128		029025		G H
4. 0	50. 25	023466	62·5	030476	62·0	L	4. 0	49. 45	023833	54·5	029104	53·5	H B
6. 0	47. 21	023850	62·8	030270	62·7		6. 0	47. 27	024160	54·6	029283	54·2	
8. 0	46. 42	023671	62·4	030000	62·2		8. 0	46. 38	023850	54·6	029282	54·3	
10. 0	46. 29	024087	61·2	029684	61·0	L	10. 0	46. 42	023353	53·5	029186	53·5	H B
12. 0	46. 0	023757	59·0	029294	59·0	G H	12. 0	45. 38	023622	53·0	028822	52·0	G H
14. 0	47. 10	023621	58·2	029260	58·0		14. 0	48. 20	023895	52·0	028845	52·0	
16. 0	46. 24	023638	57·0	029271	57·0		16. 0	41. 30	023342	52·0	028758	52·0	
18. 0	46. 54	023808	58·0	029403	57·5		18. 0	45. 18	024287	53·0	029109	53·0	
20. 0	46. 38	023587	58·0	029449	57·5	G H	20. 0	45. 38	023885	53·5	029118	53·0	G H
22. 0	47. 17	022720	58·5	029466	58·0	T D	22. 0	44. 46	022437	52·8	029056	52·8	L
Nov. 4. 0. 0	22. 52. 52	0·022207	59·0	0·029582	58·7	T D	Nov. 7. 0. 0	22. 50. 27	0·021817	52·8	0·028937	52·7	L
1. 50	51. 34	023603		030302			1. 50	53. 18	022275		028881		
2. 0	51. 12	023647	62·0	030270	62·0		2. 0	54. 15	022652	52·5	028904	52·4	
2. 10	50. 53	023647		030270		T D	2. 10	53. 30	022320		028927		L
4. 0	48. 2	023884	63·0	030109	62·0	G H	4. 0	50. 39	022856	52·4	029394	52·2	G H
6. 0	47. 57	024371	63·0	029902	62·0		6. 0	48. 10	023622	53·0	029146	52·5	
8. 0	47. 6	024556	63·7	030047	63·0		8. 0	44. 57	021826	53·5	029274	53·0	
10. 0	47. 45	024658	63·0	029851	62·5		10. 0	34. 4	020667	54·5	029396	54·0	G H
12. 0	42. 20	023422	62·5	029842	62·0	G H	12. 0	42. 47	021636	54·6	028794	54·5	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m. 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $28^s·4$.

Daily Observations from November 8 to 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Nov. 8. 14. 0	22. 47. 30	0·022976	49·2	0·028708	49·0	L
16. 0	48. 23	022854	49·0	028764	49·0	
18. 0	46. 51	023317	48·6	028687	48·5	
20. 0	47. 37	023035	48·5	028881	48·4	L
22. 0	46. 52	021733	48·4	028828	48·2	G H
Nov. 9. 0. 0	22. 51. 2	0·020950	49·0	0·028770	48·5	G H
1. 50	53. 11	022068		029074		
2. 0	52. 7	021869	50·5	029051	50·0	
2. 10	48. 22	021825		029005		G H
4. 0	49. 32	022703	51·5	029269	51·0	C T
6. 0	47. 30	023102	51·5	029109	51·0	C
8. 0	45. 45	022729	51·0	029155	51·0	C
10. 0	45. 46	023212	51·5	029036	51·0	C T
12. 0	47. 10	023452	52·0	029182	51·8	T D
14. 0	47. 21	023496	52·0	029228	51·8	
16. 0	47. 43	023589	51·5	029063	51·0	
18. 0	47. 8	026059	50·4	029028	50·0	
20. 0	46. 26	023555	50·0	029021	49·7	T D
22. 0	45. 12	021920	49·5	028810	49·0	G H
Nov. 10. 0. 0	22. 54. 13	0·021179	51·0	0·028891	50·0	G H
1. 50	53. 9	022907		029717		
2. 0	52. 38	023128	54·0	029726	54·0	
2. 10	52. 30	023128		029717		G H
4. 0	49. 55	023564	55·0	029595	55·0	T D
6. 0	48. 51	024184	55·0	029417	55·0	
8. 0	48. 5	024380	55·5	029418	55·3	
10. 0	47. 0	023741	55·0	029316	55·0	T D
12. 0	46. 50	023452	54·6	029168	54·2	H B
14. 0	47. 33	023381	53·4	028944	53·0	
16. 0	46. 14	023608	52·4	029018	52·5	
18. 0	48. 16	024093	51·6	028891	51·5	
20. 0	46. 28	023700	51·5	029066	51·5	H B
22. 0	46. 12	022707	51·0	028743	50·0	G H
Nov. 11. 0. 0	22. 50. 45	0·022175	51·0	0·028934	51·0	G H
1. 50	52. 22	022958		029311		
2. 0	52. 1	023180	53·0	029275	52·5	
2. 10	51. 53	023291		029229		G H
4. 0	49. 24	023867	54·7	029561	54·7	H B
6. 0	48. 17	023460	55·3	029440	55·0	
8. 0	47. 25	023501	54·5	029326	54·5	
10. 0	39. 52	022977	53·5	029201	53·0	H B
12. 0	46. 53	022788	52·0	028960	52·0	G H
Nov. 12. 0. 0	22. 50. 34	0·021910	51·0	0·028819	50·6	L
1. 50	52. 7	022966		028965		T D
2. 0	51. 51	022788	52·0	028955	51·5	
2. 10	51. 54	022788		028950		T D
4. 0	49. 58	023180	53·0	029169	52·5	G H
6. 0	48. 22	023695	53·3	029201	53·0	
8. 0	47. 24	023992	54·0	029221	53·6	
10. 0	46. 55	024252	54·1	029213	54·0	G H
12. 0	46. 47	023928	54·8	029305	54·7	L
14. 0	46. 47	023527	54·0	029121	54·0	
16. 0	47. 4	023316	52·5	028840	52·5	
18. 0	47. 44	023537	52·5	028927	52·4	
20. 0	46. 52	023538	51·2	028757	51·2	L
22. 0	45. 32	022652	51·2	028787	51·0	G H
Nov. 13. 0. 0	22. 49. 48	0·022357	52·2	0·028845	52·0	G H
1. 50	52. 27	023060		029221		
2. 0	52. 19	023104	53·6	029180	53·6	
2. 10	52. 22	023282		029239		G H
4. 0	50. 31	023435	54·5	029227	54·0	C
6. 0	48. 52	023972	54·8	029242	54·2	C T
8. 0	48. 21	023240	54·4	020097	53·6	C T
10. 0	42. 42	023704	54·0	029104	53·0	C
12. 0	42. 58	023452	53·3	029095	53·0	T D
14. 0	40. 44	023401	53·0	028942	52·8	
16. 0	41. 33	023880	53·0	028942	52·8	
18. 0	45. 35	023563	52·0	028776	52·0	
20. 0	46. 47	023364	52·0	028831	52·0	T D
22. 0	48. 36	022340	52·1	028941	52·0	G H
Nov. 14. 0. 0	22. 51. 5	0·022493	53·0	0·029040	53·0	G H
1. 50	51. 49	022746		029263		
2. 0	51. 55	022746	54·1	029259	54·0	
2. 10	51. 34	022813		029259		G H
4. 0	49. 43	022940	55·5	029408	55·0	T D
6. 0	48. 21	023209	55·0	029259	54·7	
8. 0	47. 58	023186	54·6	029048	54·0	
10. 0	43. 41	022617	53·6	029097	53·6	T D
12. 0	47. 12	023265	52·2	028779	52·1	G H

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $28^s \cdot 4$.

Daily Observations from November 15 to 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 15. 14. 0	22. 47. 39	0·023040	47·1	0·028351	47·3	G H	Nov. 18. 14. 0	22. 47. 21	0·020486	55·0	0·029248	55·0	T D
16. 0	47. 45	023286	47·5	028438	47·4		16. 0	46. 20	021050	54·8	029236	54·7	
18. 0	47. 17	023695	49·0	028757	48·8		18. 0	46. 17	021381	54·4	029200	54·3	
20. 0	45. 48	023623	50·4	029155	51·0	G H	20. 0	46. 47	021136	54·0	029153	54·0	T D
22. 0	45. 52	022473	50·8	029015	50·7	H B	22. 0	45. 48	020388	52·6	028812	52·0	G H
Nov. 16. 0. 0	22. 50. 50	0·022046	50·5	0·028782	50·2	H B	Nov. 19. 0. 0	22. 51. 39	0·020216	53·8	0·029040	53·0	G H
1. 50	52. 9	022489		028845			1. 50	51. 58	021381		029513		
2. 0	51. 46	022489	50·5	028831	50·0		2. 0	51. 32	021425	55·7	029477	55·0	
2. 10	51. 52	022489		028835		H B	2. 10	51. 7	021359		029477		G H
4. 0	49. 51	022993	50·6	029023	50·5	G H	4. 0	48. 24	022037	58·0	029856	58·0	T D
6. 0	48. 28	022874	51·2	029235	52·0		6. 0	47. 36	022343	58·5	029649	58·0	
8. 0	47. 29	023054	52·0	029123	52·1		8. 0	48. 37	022524	58·0	029581	58·0	
10. 0	45. 38	022766	52·0	029010	52·0	G H	10. 0	46. 14	021792	57·6	029408	57·0	T D
12. 0	45. 19	023759	52·5	028937	52·3	H B	12. 0	45. 10	021921	56·8	029454	57·0	H B
14. 0	46. 52	022654	51·6	028805	51·5		14. 0	46. 31	021738	56·5	029246	56·3	
16. 0	44. 55	021799	51·0	028857	51·2		16. 0	45. 30	021739	55·6	029265	55·5	
18. 0	45. 3	022954	50·5	028765	50·5		18. 0	45. 52	022367	54·6	029193	54·5	
20. 0	45. 59	022714	50·0	028613	49·8	H B	20. 0	46. 32	022084	54·5	029068	54·3	H B
22. 0	46. 6	021563	50·0	028710	49·8	L	22. 0	46. 27	021357	54·0	028989	53·5	G H
Nov. 17. 0. 0	22. 50. 23	0·021238	52·0	0·029066	51·5	C T	Nov. 20. 0. 0	22. 52. 45	0·021357	54·0	0·029043	54·0	G H
1. 50	53. 15	021272		029143		L	1. 50	52. 7	022140		029170		
2. 0	53. 28	021428	52·2	029143	52·0		2. 0	51. 17	022140	54·7	029152	54·1	
2. 10	54. 23	021715		029143		L	2. 10	50. 30	022030		029074		G H
4. 0	51. 10	022556	53·5	029326	53·2	H B	4. 0	50. 5	022782	56·0	029650	55·5	H B
6. 0	53. 5	022719	54·2	029410	54·0		6. 0	51. 9	022456	56·3	029741	56·0	
8. 0	42. 44	018963	54·5	032961	54·3		8. 0	48. 40	021641	55·8	029702	55·7	
10. 0	44. 30	020088	55·0	030587	55·0	H B	10. 0	44. 8	023289	55·6	029487	55·3	H B
12. 0	48. 50	020634	56·0	030107	56·0	L	12. 0	36. 50	020774	55·0	028912	54·6	G H
14. 0	46. 16	020590	56·0	029809	56·0		14. 0	44. 59	021705	55·4	028861	55·1	
16. 0	46. 16	020277	55·2	029427	55·2		16. 0	45. 52	022072	55·6	029064	55·0	
18. 0	50. 2	021970	55·0	029294	55·0		18. 0	47. 24	021871	55·2	029110	55·0	
20. 0	48. 0	021459	54·6	029537	54·5	L	20. 0	46. 24	021527	55·0	029053	54·7	G H
22. 0	49. 40	019671	54·5	029121	54·0	G H	22. 0	45. 21	020870	54·0	028812	53·7	T D
Nov. 18. 0. 0	22. 51. 39	0·019926	56·0	0·029473	55·2	G H	Nov. 21. 0. 0	22. 49. 19	0·021432	54·7	0·029070	54·5	T D
1. 50	52. 57	020896		029878			1. 50	50. 40	022370		029348		
2. 0	52. 36	020896	57·8	029837	57·2		2. 0	50·10	022259	55·4	029385	55·0	
2. 10	52. 12	020786		029782		G H	2. 10	49. 55	022481		029385		T D
4. 0	52. 44	019550	59·0	029974	58·5	C T	4. 0	50. 41	020675	55·2	029087	55·0	G H
6. 0	48. 36	021321	59·0	029649	58·0	C	6. 0	48. 8	022404	55·6	029372	55·2	
8. 0	46. 43	021129	58·0	029317	57·0	C	8. 0	47. 46	022361	56·0	029208	55·2	
10. 0	45. 47	021203	57·0	029431	57·0	C T	10. 0	43. 43	022503	55·4	029087	55·0	G H
12. 0	46. 42	020922	56·0	029248	55·7	T D	12. 0	46. 7	022447	55·2	029050	55·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$.

Daily Observations from November 22 to 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Nov. 22. 14. 0	22. 47. 51	0·022007	44·8	0·027852	44·5	T D
16. 0	48. 2	022425	44·0	027958	44·0	
18. 0	47. 30	022314	44·0	028101	44·0	
20. 0	47. 10	022705	45·0	028311	44·5	T D
22. 0	46. 0	021785	46·1	028477	46·0	G H
Nov. 23. 0. 0	22. 49. 10	0·021631	47·8	0·028351	47·0	G H
1. 50	49. 55	022449		028757		
2. 0	49. 46	022560	48·7	028780	48·8	
2. 10	49. 50	022449		028757		G H
4. 0	48. 24	022840	51·0	029120	50·8	T D
6. 0	48. 3	023275	52·0	029109	51·7	
8. 0	47. 41	023214	53·2	029224	53·0	
10. 0	46. 40	023135	54·3	029259	54·0	T D
12. 0	46. 40	022855	55·0	029142	54·6	L
14. 0	48. 7	022855	55·0	029103	54·8	
16. 0	47. 19	023000	55·2	029142	55·0	
18. 0	46. 42	023111	55·2	029110	55·0	
20. 0	46. 34	023093	56·4	029334	56·2	L
22. 0	45. 57	022066	57·0	029408	57·0	G H
Nov. 24. 0. 0	22. 49. 49	0·021927	58·0	0·029271	57·0	G H
1. 50	50. 2	022309		029443		
2. 0	49. 57	022420	58·3	029443	58·0	
2. 10	49. 48	022531		029461		G H
4. 0	46. 49	023270	59·0	029630	59·0	C
6. 0	46. 59	023447	59·0	029765	60·0	C
8. 0	46. 40	023317	59·8	029465	59·3	T
10. 0	45. 52	023586	59·3	029323	58·8	T
12. 0	46. 18	023034	58·0	029036	57·5	G H
14. 0	46. 29	023064	57·4	028996	57·0	
16. 0	46. 56	023387	58·0	029181	57·6	
18. 0	47. 35	023628	58·5	029296	58·0	
20. 0	46. 58	023450	58·5	029128	57·5	G H
22. 0	46. 50	022338	58·6	029316	58·3	H B
Nov. 25. 0. 0	22. 50. 9	0·022176	58·3	0·029088	57·7	H B
1. 50	51. 2	022781		029334		
2. 0	51. 2	022870	58·6	029339	58·3	
2. 10	51. 1	022958		029339		H B
4. 0	49. 20	023222	58·2	029269	58·0	G H
6. 0	47. 43	023178	58·2	029296	58·0	
8. 0	47. 0	023421	59·5	029615	59·5	
10. 0	46. 6	023816	60·0	029518	59·5	G H
12. 0	46. 17	023559	60·7	029725	60·6	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Nov. 25. 14. 0	22. 45. 43	0·023100	59·3	0·029317	59·0	H B
16. 0	45. 17	023032	57·6	029025	57·2	
18. 0	46. 3	023470	56·4	028994	56·3	
20. 0	46. 27	023557	54·7	028666	54·5	H B
22. 0	45. 50	022737	53·0	028203	52·0	G H
Nov. 26. 0. 0	22. 51. 11	0·023614	53·6	0·028490	53·0	G H
1. 50	51. 23	023982		028780		
2. 0	51. 29	023452	54·6	028711	54·1	
2. 10	49. 25	023009		028688		G H
4. 0	54. 5	019556	56·3	029994	55·8	H B
6. 0	56. 7	021672	56·5	030310	56·3	
8. 0	41. 3	020760	55·7	030113	55·5	
10. 0	35. 50	024524	55·7	029235	55·3	H B
12. 0	36. 43	018386	54·5	028428	54·5	T D
14. 0	47. 15	020693	54·0	028599	53·8	
16. 0	54. 5	020283	52·5	028489	52·3	
18. 0	47. 49	021681	52·0	028502	54·0	
20. 0	51. 52	020652	50·5	028266	50·5	T D
22. 0	50. 50	021480	49·5	028378	49·0	G H
Nov. 27. 0. 0	22. 52. 44	0·021256	49·5	0·028535	49·0	G H
1. 50	47. 52	019587		028500		
2. 0	47. 0	019809	48·8	028628	48·0	
2. 10	47. 9	020052		028681		G H
4. 0	51. 18	021835	49·0	028911	49·0	T D
6. 0	46. 57	021750	49·8	028925	49·7	
8. 0	43. 33	022397	51·0	029200	51·0	T D
10. 0	46. 11	022693	51·7	029098	51·5	H B
12. 0	38. 20	024142	51·5	028637	51·3	H B
14. 0	45. 49	022677	52·0	028341	52·0	G H
16. 0	52. 25	021162	53·5	028628	53·0	L
18. 0	47. 16	023050	53·8	028942	53·5	L
20. 0	47. 9	022243	54·0	028995	53·7	T D
22. 0	50. 27	021021	54·5	029025	54·0	H B
Nov. 28. 0. 0	22. 51. 44	0·021408	53·0	0·028800	52·7	G H
1. 50	51. 34	021299		028876		L
2. 0	51. 11	021649	53·5	028949	53·0	
2. 10	50. 23	021272		028995		L
4. 0	49. 12	021732	53·6	029019	53·2	T D
6. 0	43. 32	022822	53·5	029122	53·0	H B
8. 0	43. 9	021051	53·5	029109	53·0	G H
10. 0	46. 6	021681	52·0	028914	52·0	G H
12. 0	45. 45	021777	51·0	028489	51·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$.

Daily Observations from November 29 to December 5.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 29. 14. 0	22. 44. 57	0·021961	37·5	0·027065	37·8	H B	Dec. 2. 14. 0	22. 46. 26	0·021606	44·0	0·027145	44·0	T D
16. 0	46. 10	021482	36·5	027221	37·0		16. 0	46. 26	021941	44·8	027327	44·8	
18. 0	47. 6	021594	35·6	027190	36·0		18. 0	45. 42	022000	44·5	027139	44·3	
20. 0	51. 2	021942	35·3	027358	35·7	H B	20. 0	45. 42	021871	44·0	027007	43·8	T D
22. 0	46. 42	021124	35·7	027291	35·6	T D	22. 0	45. 52	020786	44·0	027056	44·0	G H
Nov. 30. 0. 0	22. 48. 57	0·021839	36·0	0·027616	36·0	G H	Dec. 3. 0. 0	22. 49. 44	0·021136	44·1	0·027060	44·0	G H
1. 50	51. 43	021431		027764			1. 50	51. 54	021163		027103		
2. 0	51. 32	021431	36·2	027718	36·0		2. 0	52. 25	021406	44·0	027188	44·0	
2. 10	51. 26	021209		027718		G H	2. 10	52. 13	020875		027179		G H
4. 0	46. 12	021866	38·5	028531	38·3	H B	4. 0	50. 6	022440	45·0	027390	44·8	T D
6. 0	45. 23	022545	39·5	028148	39·0		6. 0	47. 29	022306	45·0	027333	45·0	
8. 0	44. 52	022364	41·3	028497	41·7		8. 0	47. 14	021871	44·0	027047	44·0	
10. 0	45. 18	022350	43·3	028571	43·0	H B	10. 0	45. 35	021922	43·0	026881	43·0	T D
12. 0	45. 55	021878	43·0	028078	42·0	G H	12. 0	46. 11	021822	41·5	026706	41·8	H B
14. 0	46. 22	022229	43·5	027052	43·5		14. 0	47. 50	021990	40·4	026687	41·0	
16. 0	47. 14	021861	44·2	027145	44·0		16. 0	47. 50	022305	39·0	026501	39·5	
18. 0	47. 17	022041	45·0	027192	44·5		18. 0	45. 56	022183	37·5	026238	37·7	
20. 0	50. 36	021598	45·0	027144	45·0	G H	20. 0	47. 58	022667	36·7	026036	36·8	H B
22. 0	46. 52	021155	45·0	027119	45·0	L	22. 0	48. 51	021456	37·0	026281	37·0	G H
Dec. 1. 0. 0	22. 49. 26	0·021107	43·8	0·026967	43·7	L	Dec. 4. 0. 0	22. 52. 17	0·020460	37·0	0·026366	37·0	G H
1. 50	51. 29	021701		026936			1. 50	53. 34	021360		026759		T D
2. 0	50. 51	021701	43·0	026936	42·8		2. 0	54. 13	021294	38·0	026759	38·0	
2. 10	50. 51	021878		026914		L	2. 10	54. 9	021294		026768		T D
4. 0	50. 12	021609	43·5	027203	43·2	G H	4. 0	53. 39	021432	39·6	027095	39·5	H B
6. 0	46. 20	022450	43·5	027066	43·2		6. 0	53. 44	021472	41·0	027303	41·0	
8. 0	45. 21	021667	44·1	027103	44·0		8. 0	47. 11	021173	42·5	027506	42·5	
10. 0	46. 30	022087	44·1	027120	44·0	G H	10. 0	46. 17	022343	43·0	027208	42·7	H B
12. 0	38. 11	020951	43·8	027117	43·7	L	12. 0	46. 7	021922	43·0	026907	43·1	G H
14. 0	46. 15	020934	43·7	026997	43·6		14. 0	48. 25	022100	43·0	027014	43·0	
16. 0	47. 24	021948	42·5	026835	42·5		16. 0	51. 58	022365	43·0	026976	43·0	
18. 0	48. 45	020996	41·2	026589	41·0		18. 0	48. 2	022919	43·0	026967	43·0	
20. 0	48. 9	021804	41·0	026600	40·8	L	20. 0	47. 35	022808	43·0	026963	43·0	G H
22. 0	46. 57	020845	42·0	027003	42·0	G H	22. 0	48. 1	021820	43·7	027056	43·5	T D
Dec. 2. 0. 0	22. 50. 14	0·019760	42·0	0·026904	42·0	G H	Dec. 5. 0. 0	22. 50. 20	0·021325	43·0	0·027010	43·0	T D
1. 50	52. 37	020239		026917			1. 50	52. 1	021871		027317		
2. 0	52. 7	020458	42·2	026956	42·0		2. 0	52. 12	022026	44·0	027287	44·0	
2. 10	51. 21	020679		026921		G H	2. 10	52. 19	022092		027274		T D
4. 0	48. 46	021701	43·0	027210	42·8	T	4. 0	51. 56	021982	44·0	026568	44·0	G H
6. 0	45. 20	021970	43·8	027365	43·5	T	6. 0	48. 43	022799	44·9	026682	45·0	
8. 0	45. 1	021258	43·0	027074	43·0	C	8 0	47. 32	022705	45·0	026553	45·0	
10. 0	45. 20	021591	43·0	027164	43·5	C	10. 0	46. 45	021997	45·0	026592	45·0	G H
12. 0	44. 49	022757	44·0	027188	44·0	T D	12. 0	46. 40	022104	45·5	026502	45·0	T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°. From Dec. $3^d.0^h$, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$. Time of Vibration in Vertical Plane from Dec. $1^d.0^h$, $29^s.4$.

DECLINATION MAGNET.
Dec. 1^d. At 12^h the western declination was 8′. 19″ less than it was at 10^h, and it was 8′. 4″ less than it was at 14^h.
Dec. 4^d. Between 6^h and 8^h a considerable change occurred for the time of the day.

VERTICAL FORCE MAGNET.
Dec. 5^d. Between $2^h.10^m$ and 4^h a large change took place.

Daily Observations from December 6 to 12.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. forTemp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Dec. 6. 14. 0	22. 48. 34	0·022196	40·7	0·025793	40·5	T D	Dec. 9. 14. 0	22. 36. 32	0·021954	51·0	0·026673	50·8	T D
16. 0	49. 19	022774	41·5	026038	41·3		16. 0	47. 26	021511	51·0	026788	50·8	
18. 0	49. 2	022662	42·4	026218	42·4		18. 0	49. 37	022574	51·0	026940	51·0	
20. 0	48. 48	022985	43·0	026282	43·0	T D	20. 0	47. 48	022375	51·0	026983	51·0	T D
22. 0	47. 38	022365	43·0	026239	43·0	G H	22. 0	47. 51	021120	50·0	026779	50·0	G H
Dec. 7. 0. 0	22. 49. 59	0·021694	44·0	0·026418	44·0	G H	Dec. 10. 0. 0	22. 51. 35	0·021231	50·0	0·026856	50·0	L
1. 50	51. 7	021871		026332			1. 50	52. 26	021188		026583		G H
2. 0	51. 0	021982	44·0	026375	44·0		2. 0	52. 24	021166	49·1	026583	49·0	
2. 10	51. 2	021871		026354		G H	2. 10	52. 50	021410		026592		G H
4. 0	49. 58	022705	45·0	026609	45·0	T D	4. 0	51. 57	021777	51·0	027241	50·7	T D
6. 0	48. 46	022841	45·8	026583	45·6	L	6. 0	45. 18	021341	50·0	027147	50·0	
8. 0	47. 48	024783	45·5	026386	45·0	C	8. 0	48. 14	022227	50·0	027061	50·0	
10. 0	47. 8	023027	46·5	026582	46·0	T	10. 0	39. 31	022116	50·0	027074	50·0	T D
12. 0	46. 54	022790	46·8	026729	46·8	L	12. 0	47. 46	021570	49·0	026669	49·0	L
14. 0	47. 10	022407	46·5	026965	46·4		14. 0	47. 11	021717	47·0	026317	47·1	G H
16. 0	49. 8	022347	45·5	026346	45·4		16. 0	44. 21	022449	46·1	026070	46·2	
18. 0	47. 51	022831	46·0	026487	45·8		18. 0	47. 15	022518	45·2	026198	45·6	
20. 0	47. 51	022756	45·3	026349	45·2	L	20. 0	50. 4	022033	44·3	026118	44·7	G H
22. 0	47. 55	022432	46·0	026527	46·0	G H	22. 0	49. 37	021147	43·0	025986	43·5	L
Dec. 8. 0. 0	22. 50. 15	0·021776	46·7	0·026581	46·5	H B	Dec. 11. 0. 0	22. 51. 4	0·020926	41·7	0·025784	41·6	L
1. 50	51. 51	022441		026665			1. 50	52. 24	020748		025695		T D
2. 0	51. 52	022529	46·7	026669	46·8		2. 0	52. 24	020748	40·0	025704	40·0	
2. 10	51. 34	022662		026665		H B	2. 10	52. 22	020748		025704		T D
4. 0	50. 33	022713	47·0	026666	47·0	C	4. 0	51. 29	020970	40·0	026021	40·0	G H
6. 0	48. 18	022950	48·0	026796	47·8	T	6. 0	48. 26	021191	40·0	026102	40·0	G H
8. 0	47. 28	023222	48·3	026759	48·0	T	8. 0	47. 12	021453	40·5	026055	40·0	C
10. 0	46. 49	022654	46·0	026180	46·0	C	10. 0	46. 39	020833	40·5	026213	40·5	T
12. 0	43. 37	022311	47·5	026513	47·2	H B	12. 0	46. 12	021055	39·2	025868	39·0	H B
14. 0	42. 45	021658	47·7	026551	47·5		14. 0	47. 11	022732	37·6	025387	37·5	
16. 0	45. 44	022439	47·6	026527	47·3		16. 0	45. 15	020717	36·3	025247	36·5	
18. 0	47. 17	022941	47·3	026540	47·3		18. 0	47. 11	021080	35·7	025478	36·0	
20. 0	47. 21	023174	47·5	026597	47·5	H B	20. 0	48. 0	021798	35·5	025518	35·7	H B
22. 0	48. 5	022074	47·8	026670	47·6	T D	22. 0	48. 0	021397	36·0	025483	36·0	L
Dec. 9. 0. 0	22. 50. 13	0·021476	47·8	0·026627	47·5	T	Dec. 12. 0. 0	22. 51. 42	0·020426	36·8	0·025619	36·6	L
1. 50	51. 15	022415		026774			1. 50	53. 17	021092		025900		
2. 0	51. 10	022193	48·5	026817	48·3		2. 0	53. 17	021270	37·6	025879	37·5	
2. 10	51. 0	022193		026804		T	2. 10	53. 12	021226		025986		L
4. 0	50. 30	022730	49·7	026996	49·3	H B	4. 0	51. 5	021678	38·7	026010	38·5	H B
6. 0	49. 44	023207	50·3	027030	49·9		6. 0	48. 39	022409	40·0	026306	40·3	
8. 0	49. 48	022672	50·4	026963	50·0		8. 0	47. 48	022154	41·5	026456	41·5	
10. 0	33. 23	022056	50·3	026987	49·8	H B	10. 0	44. 5	021427	41·0	026390	41·3	H B
12. 0	40. 11	021009	50·0	026880	49·8	T D	12. 0	45. 3	021184	41·0	026268	41·0	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $29^s \cdot 4$.

DECLINATION MAGNET.
Dec. 9d. Between 8^h and 12^h large changes occurred; and between 14^h and 16^h a very considerable change took place.
Dec. 10d. Between 4^h and 6^h a large change occurred for the time of the day; and at 10^h the western declination was 8′. 43″ less than it was at 8^h, and it was 8′. 15″ less than it was at 12^h.

VERTICAL FORCE MAGNET.
Dec. 7d. Between 14^h and 16^h a large change occurred.
Dec. 8d. Between 8^h and 10^h a large change took place.
Dec. 10d. Between $2^h.\ 10^m$ and 4^h a large change took place.

Daily Observations from December 13 to 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 13. 14. 0	22. 47. 28	0·021200	32·5	0·025280	32·4	L
16. 0	47. 48	021074	31·5	025043	31·5	
18. 0	47. 48	021442	30·8	024969	30·7	
20. 0	48. 47	022182	30·2	024938	30·0	L
22. 0	48. 24	021698	31·0	024883	31·0	G H
Dec. 14. 0. 0	22. 52. 11	0·021181	32·0	0·025358	31·8	G H
1. 50	52. 30	021585		025584		
2. 0	52. 28	021629	33·2	025572	33·1	
2. 10	51. 43	021585		025508		G H
4. 0	50. 44	022640	35·5	025729	35·3	T
6. 0	50. 50	022555	35·0	025326	35·0	C
8. 0	49. 52	022127	36·0	025505	36·2	C
10. 0	48. 47	022101	37·8	025888	37·7	T
12. 0	48. 24	021839	36·0	025495	36·0	G H
14. 0	48. 13	021625	35·0	025598	36·0	
16. 0	48. 11	021516	34·1	025445	35·0	
18. 0	47. 15	021831	34·0	025518	35·0	
20. 0	48. 3	021942	34·0	025453	35·0	G H
22. 0	50. 30	021584	34·5	025286	34·4	L
Dec. 15. 0. 0	22. 51. 29	0·020358	33·8	0·025276	33·6	L
1. 50	52. 31	021098		025182		
2. 0	52. 31	021098	33·2	025234	33·0	
2. 10	52. 31	021142		025234		L
4. 0	50. 43	022249	33·2	025498	34·0	G H
6. 0	48. 15	022717	34·0	025468	34·2	G H
8. 0	48. 15	022290	35·0	025680	35·5	G
10. 0	47. 36	022308	35·5	025680	35·5	G
12. 0	47. 0	022526	36·0	025792	36·3	H B
14. 0	46. 23	022922	35·6	025611	36·0	
16. 0	47. 47	021385	34·5	025270	34·5	
18. 0	48. 43	021414	33·5	025130	33·5	
20. 0	47. 36	021693	32·8	025113	33·0	H B
22. 0	47. 53	021636	33·5	025218	33·4	L
Dec. 16. 0. 0	22. 52. 6	0·021465	33·8	0·025152	33. 5	L
1. 50	52. 33	021857		025618		
2. 0	52. 21	021857	34·8	025640	34·3	
2. 10	52. 29	021679		025640		L
4. 0	50. 49	022057	36·5	025953	36·7	H B
6. 0	49. 25	022633	36·5	025753	36·7	
8. 0	49. 1	022542	37·4	025823	37·5	
10. 0	48. 32	022399	37·6	025742	37·5	H B
12. 0	48. 17	022179	38·0	025765	37·8	L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 16. 14. 0	22. 48. 36	0·021737	38·0	0·025808	37·8	L
16. 0	48. 45	022009	37·0	025670	37·0	
18. 0	48. 1	021975	36·8	025603	36·7	
20. 0	47. 42	022452	37·0	025683	37·0	L
22. 0	47. 8	021847	38·0	025962	38·3	H B
Dec. 17. 0. 0	22. 50. 30	0·021863	39·0	0·025930	38·7	H B
1. 50	52. 12	022686		026593		
2. 0	52. 1	022641	41·5	026580	41·6	
2. 10	51. 46	022553		026554		H B
4. 0	49. 42	023298	42·5	026309	42·0	C
6. 0	47. 44	024000	43·5	026296	42·5	T
8. 0	47. 15	023889	43·5	026289	42·8	T
10. 0	47. 48	023147	42·0	025951	41·5	C
12. 0	46. 57	022970	42·0	026147	42·0	G H
14. 0	47. 43	022859	42·0	026134	42·0	
16. 0	48. 2	023381	40·9	025964	41·0	
18. 0	47. 41	023804	40·0	025790	40·0	
20. 0	48. 7	023235	39·0	025574	39·1	G H
22. 0	48. 42	022897	38·7	025590	39·0	H B
Dec. 18. 0. 0	22. 51. 57	0·022759	37·5	0·025472	37·6	H B
1. 50	51. 34	022869		025571		
2. 0	51. 3	022803	37. 5	025622	37·5	
2. 10	50. 48	022715		025643		H B
4. 0	49. 53	023508	38·0	025561	38·0	G H
6. 0	51. 3	023547	38·1	025742	38·2	
8. 0	47. 59	023508	38·0	025729	38·2	
10. 0	44. 33	022069	38·0	025712	38·0	G H
12. 0	44. 30	022964	37·8	025665	37·5	H B
14. 0	47. 16	022973	38·5	025924	38·5	
16. 0	48. 6	023593	38·5	025831	38·5	
18. 0	48. 6	023934	39·6	026102	40·0	
20. 0	46. 47	023895	40·8	026152	41·0	H B
22. 0	47. 19	023565	42·5	026219	42·6	L
Dec. 19. 0. 0	22. 49. 33	0·022665	43·2	0·026206	43·2	G H
1. 50	50. 54	023377		026332		
2. 0	50. 33	023199	44·0	026323	44·0	
2. 10	50. 23	023199		026289		G H
4. 0	49. 8	024008	45·5	026550	45·2	H B
6. 0	47. 55	023953	45·7	026642	46·0	
8. 0	47. 2	024060	46·2	026554	46·3	
10. 0	46. 35	023802	46·5	026582	46·7	H B
12. 0	46. 57	023566	47·2	026561	47·3	L

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $29^s.4$.

VERTICAL FORCE MAGNET.
Between 0^h and $1^h.50^m$ a large change occurred.

Daily Observations from December 20 to 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 20. 14. 0	22. 47. 4	0·023403	46·5	0·026291	46·6	L
16. 0	47. 15	024029	46·8	026440	47·0	
18. 0	46. 56	024203	47·3	026476	47·3	
20. 0	47. 31	025429	48·0	026533	48·0	L
22. 0	48. 36	025071	48·5	026537	48·5	T D
Dec. 21. 0. 0	22. 51. 7	0·024560	49·4	0·026626	49·0	T D
1. 50	50. 5	025064		026838		
2. 0	50. 5	025064	50·8	026851	50·5	
2. 10	50. 5	025064		026851		T D
4. 0	49. 27	025234	51·8	027072	51·5	T
6. 0	50. 35	024740	51·5	026769	51·0	C
8. 0	46. 44	025147	52·2	026926	52·0	G H
10. 0	46. 29	024585	51·5	026687	51·5	C
12. 0	45. 58	024117	52·0	026766	51·8	T D
14. 0	43. 27	023991	51·0	026756	51·0	
16. 0	45. 59	024134	49·5	026492	49·5	
18. 0	46. 12	024500	48·0	026266	47·8	
20. 0	46. 58	024433	46·7	026146	46·5	T D
22. 0	49. 5	024026	46·0	026014	46·0	G H
Dec. 22. 0. 0	22. 50. 36	0·024153	45·7	0·026091	46·0	G H
1. 50	50. 18	024295		026155		
2. 0	50. 18	024517	45·5	026155	45·6	
2. 10	50. 22	024451		026142		G H
4. 0	49. 18	024868	46·0	026208	45·8	T D
6. 0	48. 9	024868	46·0	026174	45·8	
8. 0	47. 28	024802	46·0	026165	45·8	
10. 0	46. 58	023982	46·0	026218	46·0	T D
12. 0	42. 7	022765	46·0	026266	45·6	G H
14. 0	47. 25	023471	45·6	026198	45·6	
16. 0	47. 5	024289	45·2	026114	45·2	
18. 0	48. 13	024919	45·0	026075	45·1	
20. 0	48. 4	024476	45·0	026172	45·5	G H
22. 0	49. 35	024741	46·3	026070	46·0	H B
Dec. 23. 0. 0	22. 52. 8	0·023708	46·6	0·026141	46·5	H B
1. 50	52. 20	025012		026325		
2. 0	53. 10	024968	47·5	026393	47·0	
2. 10	52. 9	024503		026359		H B
4. 0	53. 31	023946	48·0	026475	47·7	G H
6. 0	44. 30	022994	48·0	026892	48·0	
8. 0	45. 46	021495	48·3	027037	48·0	G H
10. 0	47. 34	026928	49·0	026408	48·5	G
12. 0	43. 19	024544	49·7	026378	49·2	H B

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 23. 14. 0	22. 39. 34	0·023733	50·0	0·025924	49·5	H B
16. 0	45. 15	023002	50·0	026238	49·8	L
18. 0	49. 3	023163	50·3	026548	50·0	T D
20. 0	48. 44	023504	51·0	026844	50·8	T D
22. 0	50. 54	022840	51·0	026812	51·0	G H
Dec. 24. 0. 0	22. 52. 15	0·023054	50·7	0·026714	50·5	H B
1. 50	51. 33	023222		026661		L
2. 0	51. 5	023232	49·4	026630	49·5	
2. 10	50. 56	022993		026577		
4. 0	47. 39	023164	49·0	026556	48·9	L
6. 0	49. 28	023174	48·8	026405	48·0	G
8. 0	49. 30	023607	49·0	026754	49·0	T D
10. 0	47. 35	023190	48·5	026463	48·3	H B
12. 0	47. 55	023381	47·8	026209	47·5	
14. 0	....	...	..	...	..	..
16. 0	....	...	..	...	..	..
18. 0	....	...	..	...	..	..
20. 0	....	...	..	...	..	..
22. 0	....	...	..	...	..	..
Dec. 25. 0. 0	....	...	..	...	..	..
1. 50	....	...	..	...	..	..
2. 0	....	...	..	...	..	..
2. 10	....	...	..	...	..	..
4. 0	....	...	..	...	..	..
6. 0	....	...	..	...	..	..
8. 0	....	...	..	...	..	..
10. 0	....	...	..	...	..	..
12. 0	....	...	..	...	..	..
14. 0	22. 51. 38	0·022872	34·0	0·025054	34·2	
16. 0	48. 14	022472	33·6	024969	33·7	
18. 0	46. 12	023404	35·7	025590	36·0	
20. 0	47. 29	021373	35·6	025556	36·0	H B
22. 0	49. 21	022895	37·0	025747	37·0	G H
Dec. 26. 0. 0	22. 51. 32	0·022733	38·0	0·025840	38·0	G H
1. 50	50. 35	023251		026636		T D
2. 0	51. 43	023118	41·7	026648	41·5	
2. 10	51. 24	023030		026682		T D
4. 0	44. 50	023431	42·5	026532	42·0	H B
6. 0	47. 38	023658	42·4	026285	42·3	
8. 0	45. 15	023544	41·6	026175	41·8	
10. 0	44. 20	023583	41·7	026121	41·7	H B
12. 0	45. 16	023848	40·0	025640	40·0	C

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $29^s.4$.

DECLINATION MAGNET.
Dec. 22d. Between 12^h and 14^h a large change took place for the time of the day.
Dec. 23d. Between 4^h and 6^h and between 14^h and 16^h large changes took place for the times of the day.
Dec. 26d. Between $2^h.\ 10^m$ and 4^h a large change occurred.

HORIZONTAL FORCE MAGNET.
Dec. 23d. Between 8^h and 12^h the changes were considerable.
Dec. 25d. Between 18^h and 20^h a large change took place.

VERTICAL FORCE MAGNET.
Dec. 23d. Between 8^h and 10^h a large change took place.
Dec. 25d. Between 16^h and 18^h a large change took place.
Dec. 26d. Between 0^h and $1^h.\ 50^m$ a large change took place.

Daily Observations from December 27 to 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Dec. 27. 14. 0	22. 46. 51	0·023722	36·0	0·025066	35·8	L	Dec. 30. 14. 0	22. 44. 38	...	..	0·025421	38·8	H B
16. 0	44. 9	023637	35·5	025037	35·4		16. 0	46. 50	...	..	025218	37·3	
18. 0	45. 16	023917	35·2	025060	35·0		18. 0	44. 34	...	..	025085	36·0	
20. 0	45. 51	024139	35·2	025146	35·0	L	20. 0	45. 58	...	..	025073	35·0	H B
22. 0	46. 37	023968	35·5	025989	38·0	T D	22. 0	45. 32	...	..	025089	34·8	G H
Dec. 28. 0. 0	22. 49. 20	...	38·5	0·025976	38·0	T D	Dec. 31. 0. 0	22. 49. 3	...	..	0·025062	34·0	G H
1. 50	49. 2	0·025191		026573			1. 50	50. 0	...	..	025341		
2. 0	49. 2	025191	41·0	026573	40·7		2. 0	50. 5	...	..	025341	34·9	
2. 10	48. 35	025191		026573		T D	2. 10	49. 52	...	..	025341		G H
4. 0	47. 31	025966	41·0	026375	41·0	C	4. 0	47. 38	...	..	025845	37·6	H B
6. 0	37. 31	025493	41·5	026161	41·0		6. 0	46. 29	...	..	025779	38·5	
8. 0	41. 16	024859	41·0	025952	41·5	C	8. 0	46. 35	...	..	025572	38·3	
10. 0	44. 40	025037	44·0	026756	44·0	G	10. 0	44. 51	...	..	025376	37·3	H B
12. 0	44. 37	025480	44·0	026375	44·0	T D	12. 0	45. 55	...	..	025362	37·0	L
14. 0	46. 29	024424	43·0	025897	43·0		.....	...	...	..	...	..	..
16. 0	45. 36	024912	43·0	026015	42·8		.....	...	...	..	...	..	..
18. 0	45. 49	024874	42·0	025903	42·0		.....	...	...	..	...	..	..
20. 0	45. 23	025036	41·0	025669	41·0	T D	.....	...	...	..	...	..	..
22. 0	46. 25	024194	41·0	025819	41·0	G H	.....	...	...	..	...	..	..
Dec. 29. 0. 0	22. 48. 50	0·026202	42·0	0·025744	40·8	L	.....	...	...	..	...	..	..
1. 50	49. 44	026708		026018		G H	.....	...	...	..	...	..	..
2. 0	49. 16	026708	42·5	026009	42·0		.....	...	...	..	...	..	..
2. 10	48. 55	026797		025992		G H	.....	...	...	..	...	..	..
4. 0	47. 50	027856	43·0	026140	42·8	T D	.....	...	...	..	...	..	..
6. 0	46. 1	028248	44·0	026252	43·7		.....	...	...	..	...	..	..
8. 0	41. 32	029177	44·0	026247	44·0		.....	...	...	..	...	..	..
10. 0	45. 3	028102	43·8	026124	43·7	T D	.....	...	...	..	...	..	..
12. 0	45. 57	028144	43·0	026026	43·2	G H	.....	...	...	..	...	..	..
14. 0	46. 46	027985	43·5	026106	43·5		.....	...	...	..	...	..	..
16. 0	46. 56	027645	41·5	025826	42·0		.....	...	...	..	...	..	..
18. 0	44. 37	027697	40·5	025669	41·0		.....	...	...	..	...	..	..
20. 0	44. 21	027697	40·5	025797	41·0	G H	.....	...	...	..	...	..	..
22. 0	45. 58	026432	39·7	025545	39·8	H B	.....	...	...	..	...	..	..
Dec. 30. 0. 0	22. 48. 20	...	..	0·025513	39·6	T D	.....	...	...	..	...	..	..
1. 50	49. 38	...	..	025598			.....	...	...	..	...	..	..
2. 0	49. 19	...	..	025654	39·0		.....	...	...	..	...	..	..
2. 10	49. 15	...	..	025654		T D	.....	...	...	..	...	..	..
4. 0	47. 21	...	..	025676	39·0	G H	.....	...	...	..	...	..	..
6. 0	45. 57	...	..	025747	40·0		.....	...	...	..	...	..	..
8. 0	46. 5	...	..	025925	41·0		.....	...	...	..	...	..	..
10. 0	45. 30	...	..	025840	41·0	G H	.....	...	...	..	...	..	..
12. 0	46. 45	...	..	025816	40·7	H B	.....	...	...	..	...	..	..

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $29^s.4$.

DECLINATION MAGNET.
Dec. 28^d. Between 4^h and 6^h a considerable change took place.

HORIZONTAL FORCE MAGNET.
Dec. 28^d. 0^h. The observation was omitted.
Dec. 30^d. The Magnet was taken out of the box.

VERTICAL FORCE MAGNET.
Dec. 27^d. Between 20^h and 22^h a large change took place.
Dec. 28^d. Between 0^h and 1^h. 50^m and between 8^h and 10^h large changes took place.
Dec. 31^d. Between 2^h. 10^m and 4^h a large change took place.

ROYAL OBSERVATORY, GREENWICH.

TERM-DAY OBSERVATIONS

OF

MAGNETOMETERS.

1846.

Term-Day Observations of January 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Jan. 21. 10. 0	22. 49. 21	0·039170	57·2	0·033880	57·0	G	Jan. 21. 14. 0	22. 49. 15	0·038778	57·5	0·033900	57·3	L
5	49. 23	039170		033870			5	49. 17	038795		033916		
10	49. 33	039170		033870			10	49. 17	038795		033897		
15	49. 36	039153		033870			15	49. 17	038795		033905		
20	49. 43	039153		033870			20	49. 18	038768		033905		
25	49. 33	039175		033870			25	49. 21	038812		033931		
30	49. 2	039219		033870			30	49. 21	038829		033957		
35	48. 55	039219		033870			35	49. 27	038829		033957		
40	48. 51	039264		033865			40	49. 27	038829		033984		
45	48. 52	039225		033865			45	49. 27	038846		033984		
50	48. 55	039579		033870			50	49. 27	038846		034010		
55	49. 31	039469		033870			55	49. 36	038929		034010		
Jan. 21. 11. 0	22. 50. 29	0·038915	57·0	0·033870	57·0	G	Jan. 21. 15. 0	22. 49. 36	0·038974	58·0	0·034027	58·0	L
5	49. 57	038915		033846			5	49. 21	038952		033988		
10	49. 40	038870		033846			10	49. 21	038969		034024		
15	49. 20	038848		033860			15	49. 25	038969		034014		
20	49. 3	038782		033860			20	49. 36	038986		034025		
25	49. 0	038693		033860			25	50. 4	038986		034016		
30	48. 53	038605		033860			30	50. 20	038958		034008		
35	48. 36	038472		033865			35	51. 11	038958		034008		L
40	48. 41	038693		033875			40	51. 12	039003		033979		T D
45	49. 7	038915		033870			45	50. 30	039153		034005		
50	49. 7	038848		033870			50	50. 19	039219		034005		
55	49. 7	038848		033870			55	49. 47	039281		033998		
Jan. 21. 12. 0	22. 48. 57	0·038804	57·0	0·033870	57·0	G	Jan. 21. 16. 0	22. 49. 22	0·039281	58·5	0·033913	58·5	T D
5	49. 14	038804		033875			5	48. 44	039281		033973		
10	49. 17	038804		033875			10	48. 30	039281		033949		
15	49. 31	038959		033848			15	48. 23	039347		033949		
20	49. 41	039136		033848			20	48. 9	039347		033949		
25	49. 37	038937		033848			25	48. 1	039258		033949		
30	49. 33	038892		033833			30	47. 46	039258		033937		
35	49. 25	038892		033823			35	47. 35	039170		033925		
40	49. 10	038693		033823		G	40	47. 35	039170		033925		
45	49. 0	038915		033778		L	45	47. 35	039281		033925		
50	49. 12	038848		033768			50	47. 42	039170		033910		
55	49. 12	038804		033768			55	47. 59	039170		033910		
Jan. 21. 13. 0	22. 49. 20	0·038804	57·0	0·033768	56·8	L	Jan. 21. 17. 0	22. 48. 12	0·039281	58·5	0·033910	58·5	T D
5	49. 11	038865		033768			5	48. 12	039281		033901		
10	49. 13	038865		033794			10	48. 1	039347		033901		
15	49. 13	038799		033794			15	48. 1	039347		033891		
20	49. 13	038816		033821			20	48. 1	039347		033891		
25	49. 21	038727		033821			25	48. 1	039347		033876		
30	49. 25	038744		033847			30	48. 1	039391		033876		
35	49. 40	038744		033847			35	48. 9	039391		033876		
40	49. 40	038744		033847			40	48. 9	039391		033861		
45	49. 27	038761		033873			45	48. 9	039391		033827		
50	49. 11	038761		033873			50	48. 8	039502		033852		
55	49. 15	038778		033900			55	48. 5	039502		033852		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of January 21 and 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Jan. 21. 18. 0	22. 48. 3	0·039546	58·5	0·033861	58·5	T D	Jan. 21. 22. 0	22. 51. 6	0·038480	59·0	0·033861	59·0	G
5	48. 3	039613		033861			5	51. 8	038396		033834		
10	48. 0	039529		033849			10	51. 14	038158		033823		
15	47. 58	039485		033825			15	51. 24	038141		033835		
20	47. 41	039485		033750			20	51. 27	037942		033830		
25	47. 41	039374		033750			25	51. 34	037858		033804		
30	47. 58	039357		033713			30	51. 55	037841		033778		
35	47. 58	039357		033723		T D	35	52. 13	037824		033751		
40	48. 16	039158		033732		H B	40	52. 22	037763		033701		
45	47. 55	039313		033711			45	52. 27	037746		033674		
50	48. 5	039362		033687			50	52. 35	037569		033674		
55	48. 5	039318		033666			55	52. 42	037552		033662		
Jan. 21. 19. 0	22. 48. 19	0·039362	58·2	0·033675	58·0	H B	Jan. 21. 23. 0	22. 52. 50	0·037535	58·0	0·033636	58·0	G
5	48. 29	039340		033675			5	52. 51	037535		033626		
10	48. 30	039291		033682			10	53. 3	037375		033667		
15	48. 31	039335		033677			15	53. 18	037220		033697		
20	48. 27	039313		033672			20	53. 18	037348		033672		
25	48. 19	039357		033672			25	53. 23	037348		033747		
30	48. 23	039330		033678			30	53. 33	037365		033678		
35	48. 18	039330		033674			35	53. 47	037365		033708		
40	48. 17	039374		033674			40	53. 55	037365		033735		
45	48. 34	039352		033659			45	53. 55	037382		033725		
50	48. 21	039303		033730			50	54. 3	037382		033710		
55	48. 17	039303		033701			55	54. 15	037354		033751		
Jan. 21. 20. 0	22. 48. 23	0·039214	58·5	0·033676	58·3	H B	Jan. 22. 0. 0	22. 54. 29	0·037399	58·5	0·033839	58·4	G
5	48. 23	039236		033730			5	54. 38	037399		033817		
10	48. 22	039214		033710			10	54. 51	037416		033827		
15	48. 21	039192		033715			15	54. 55	037549		033804		
20	48. 15	039147		033720			20	55. 25	037654		033784		
25	49. 7	039125		033705			25	55. 35	037654		033879		
30	48. 34	039059		033696			30	55. 47	037671		033830		
35	48. 36	039014		033691			35	55. 47	037848		033872		
40	48. 49	039059		033681			40	56. 0	037715		033896		
45	48. 48	039014		033671			45	56. 22	037688		033883		
50	48. 51	038970		033666			50	56. 34	037755		033883		
55	48. 51	038970		033666			55	56. 15	037816		033936		
Jan. 21. 21. 0	22. 48. 52	0·038926	58·5	0·033662	58·3	H B	Jan. 22. 1. 0	22. 56. 15	0·037926	59·0	0·033910	59·0	G
5	49. 56	038904		033678			5	56. 15	038081		033920		
10	50. 3	038899		033678			10	56. 15	038165		033936		
15	49. 58	038877		033710			15	56. 15	038253		033936		
20	50. 18	038805		033715			20	56. 15	038315		033962		
25	50. 32	038938		033741			25	56. 15	038403		033962		
30	50. 30	038888		033771			30	56. 20	038420		034004		
35	50. 25	038844		033771			35	56. 16	038597		034014		
40	50. 40	038778		033808			40	56. 16	038642		034014		
45	50. 49	038839		033808			45	56. 7	038260		034040		
50	51. 0	038861		033844			50	56. 7	038659		034015		
55	51. 2	038701		033844		H B	55	55. 58	038676		034042		G

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of January 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Jan. 22. 2. 0	22. 55. 57	0·038720	59·5	0·034042	59·5	T D	Jan. 22. 6. 0	22. 51. 53	0·039137	60·0	0·034111	60·5	T D
5	55. 57	038786		034035			5	51. 53	039203		034084		
10	55. 57	038769		034040			10	51. 45	039186		034048		
15	55. 43	038769		034014			15	51. 45	039186		034031		
20	55. 31	038752		034014			20	51. 43	039169		034005		
25	55. 19	038642		033996			25	51. 43	039169		033979		
30	55. 19	038625		033961			30	51. 36	039152		033926		
35	54. 57	038625		033961		T D	35	51. 36	039152		033875		T D
40	54. 50	038580		033959		L	40	51. 32	039174		033849		H B
45	54. 50	038386		033935			45	51. 39	039179		033813		
50	54. 16	038386		033908			50	51. 36	039179		033762		
55	54. 6	038369		033873			55	51. 33	039229		033726		
Jan. 22. 3. 0	22. 54. 6	0·038524	59·0	0·033847	58·8	L	Jan. 22. 7. 0	22. 51. 24	0·039251	59·5	0·033699	59·2	H B
5	53. 53	038591		033847			5	51. 26	039295		033699		
10	53. 48	038591		033833			10	51. 34	039278		033695		
15	53. 44	038608		033883			15	51. 31	039367		033695		
20	53. 31	038674		033863			20	51. 33	039372		033680		
25	53. 31	038674		033863			25	51. 30	039283		033743		
30	53. 31	038608		033863			30	51. 33	039266		033709		
35	....	038563		033863			35	51. 22	039244		033729		
40	53. 6	038563		033863			40	51. 23	039111		033733		
45	53. 0	038736		033890			45	51. 15	039072		033685		
50	52. 55	038802		033881			50	51. 28	038962		033685		
55	52. 51	038846		033881			55	51. 24	038945		033699		
Jan. 22. 4. 0	22. 52. 51	0·038846	59·2	0·033871	59·0	L	Jan. 22. 8. 0	22. 51. 30	0·039099	59·0	0·033685	59·2	H B
5	52. 51	038863		033887			5	51. 28	039094		033756		
10	52. 46	038863		033913			10	51. 32	039062		033717		
15	52. 39	038880		033930			15	51. 29	039057		033762		
20	52. 39	038897		033956			20	51. 30	039096		033809		
25	52. 28	038897		033983			25	51. 24	039091		033789		
30	52. 28	038914		034045			30	51. 24	039125		033815		H B
35	52. 28	038931		034072			35	51. 10	039208		033831		G
40	52. 20	038931		034098			40	51. 0	039225		033851		
45	52. 20	038904		034125		L	45	50. 48	039264		033883		
50	52. 20	038921		034151		T D	50	50. 37	039298		033909		
55	52. 20	038921		034153			55	50. 29	039315		033909		
Jan. 22. 5. 0	22. 52. 20	0·038982	60·0	0·034180	60·3	T D	Jan. 22. 9. 0	22. 50. 38	0·039399	60·5	0·033950	60·0	G
5	52. 20	038982		034156			5	50. 54	039399		033950		
10	52. 20	038982		034156			10	50. 51	039515		033928		
15	52. 15	039203		034158			15	50. 57	039493		033942		
20	52. 15	039203		034158			20	51. 7	039476		033916		
25	52. 8	039092		034148			25	51. 4	039476		033916		
30	52. 8	039092		034133			30	51. 2	039459		033889		
35	52. 8	038982		034133			35	50. 53	039459		033889		
40	52. 1	038982		034133			40	50. 53	039459		033894		
45	52. 1	038982		034131			45	50. 49	039442		033873		
50	52. 1	038982		034131			50	50. 46	039508		033873		
55	51. 53	039137		034111			55	50. 34	039513		033842		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

Jan. 22d. 3h. 35m. The observation of the Declination Magnet was inadvertently omitted.

Term-Day Observations of February 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 27. 10. 0	22. 48. 14	0·037149	61·2	0·033996	61·5	G
5	48. 16	037082		033947		
10	48. 22	037149		033947		
15	48. 24	036999		033920		
20	48. 40	036955		033900		
25	48. 37	036955		033895		
30	48. 38	036955		033895		
35	48. 46	037021		033905		
40	48. 57	037065		033939		
45	49. 6	037115		033913		
50	49. 19	037115		033918		
55	49. 19	037137		033913		
Feb. 27. 11. 0	22. 49. 19	0·037159	61·0	0·033913	61·3	G
5	49. 2	037159		033913		
10	49. 2	037159		033918		
15	49. 5	037159		033918		
20	48. 58	037159		033918		
25	48. 54	037203		033918		
30	48. 57	037269		033923		
35	48. 57	037580		033923		
40	48. 59	037580		033923		
45	48. 57	037536		033923		
50	48. 57	037536		033913		
55	48. 47	037536		033913		
Feb. 27. 12. 0	22. 48. 33	0·037381	61·0	0·033918	61·3	G
5	48. 46	037381		033886		
10	48. 56	037364		033886		
15	49. 13	037408		033870		
20	49. 45	037364		033844		
25	49. 54	037347		033864		
30	50. 5	037280		033817		
35	49. 54	037280		033791		G
40	49. 50	037152		033791		L
45	49. 41	037152		033750		
50	49. 47	037152		033709		
55	49. 59	037135		033709		L
Feb. 27. 13. 0	22. 49. 59	0·037135	60·6	0·033683	60·5	L
5	49. 52	037135		033683		
10	49. 41	037201		033683		
15	49. 51	037184		033698		
20	50. 9	037162		033698		
25	50. 5	037162		033707		
30	50. 11	037162		033680		
35	50. 50	037162		033680		
40	50. 53	037118		033671		
45	51. 11	037101		033671		
50	51. 36	037101		033656		
55	51. 36	037057		033656		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 27. 14. 0	22. 51. 22	0·037057	60·4	0·033656	60·4	L
5	51. 26	037057		033656		
10	51. 11	037074		033673		
15	50. 49	037118		033673		
20	50. 36	037162		033673		
25	50. 29	037296		033673		
30	50. 26	037313		033699		
35	50. 22	037379		033699		
40	50. 22	037490		033699		
45	50. 24	037534		033699		
50	50. 24	037551		033725		
55	50. 14	037551		033725		
Feb. 27. 15. 0	22. 50. 14	0·037551	60·7	0·033725	60·7	L
5	49. 53	037507		033725		
10	49. 45	037524		033752		
15	49. 34	037568		033752		
20	49. 21	037568		033752		
25	49. 3	037502		033752		
30	48. 41	037541		033788		L
35	48. 41	037585		033817		T D
40	48. 41	037585		033822		
45	48. 41	037585		033827		
50	48. 41	037602		033854		
55	48. 41	037713		033873		
Feb. 27. 16. 0	22. 48. 49	0·037713	61·0	0·033873	61·0	T D
5	49. 1	037602		033873		
10	49. 1	037602		033878		
15	49. 6	037602		033878		
20	49. 6	037602		033878		
25	49. 6	037602		033878		
30	49. 28	037602		033878		
35	49. 28	037602		033878		
40	49·28	037602		033878		
45	49. 29	037602		033878		
50	49. 2	037469		033878		
55	49. 2	037469		033878		
Feb. 27. 17. 0	22. 48. 53	0·037469	61·0	0·033878	61·0	T D
5	49. 6	037381		033878		
10	49. 6	037381		033878		
15	49. 6	037381		033878		
20	48. 49	037381		033878		
25	49. 4	037425		033854		
30	48. 48	037381		033854		
35	48. 37	037381		033854		
40	48. 37	037381		033854		
45	48. 5	037381		033854		
50	48. 5	037381		033854		
55	48. 5	037381		033854		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of February 27 and 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 27. 18. 0	22. 47. 56	0·037381	61·0	0·033854	61·0	T D
5	47. 56	037381		033854		
10	47. 56	037398		033854		
15	47. 56	037398		033854		
20	47. 56	037220		033854		
25	48. 22	037065		033854		
30	48. 2	037082		033854		
35	48. 9	037082		033854		T D
40	48. 20	037016		033854		H B
45	48. 30	037038		033878		
50	48. 24	036923		033868		
55	48. 32	037122		033868		
Feb. 27. 19. 0	22. 48. 24	0·037166	61·3	0·033864	61·0	H B
5	48. 27	037193		033868		
10	48. 24	037215		033817		
15	48. 22	037353		033793		
20	48. 20	037442		033793		
25	49. 13	037358		033758		
30	49. 12	037341		033737		
35	49. 0	037230		033772		
40	49. 12	037169		033781		
45	49. 4	037147		033772		
50	48. 56	037196		033745		
55	49. 13	037152		033740		
Feb. 27. 20. 0	22. 49. 12	0·036936	60·6	0·033740	60·7	H B
5	49. 34	037030		033758		
10	50. 2	036924		033767		
15	49. 53	036880		033765		
20	49. 56	036952		033760		
25	49. 46	036979		033733		
30	49. 58	036984		033707		
35	50. 11	036962		033712		
40	50. 3	036923		033680		
45	50. 3	036906		033690		
50	49. 40	036734		033669		
55	49. 20	036911		033669		
Feb. 27. 21. 0	22. 49. 46	0·036783	59·7	0·033653	60·0	H B
5	49. 40	036712		033653		
10	49. 23	036601		033667		
15	49. 11	036663		033640		
20	49. 36	036618		033655		
25	49. 53	036547		033660		
30	49. 45	036591		033670		
35	50. 6	036542		033675		H B
40	50. 24	036564		033680		G
45	49. 50	036492		033611		
50	50. 7	036403		033585		
55	50. 7	036199		033585		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Feb. 27. 22. 0	22. 50. 20	0·036155	60·3	0·033590	59·8	G
5	50. 19	036172		033626		
10	50. 24	036172		033648		G
15	50. 30	036189		033654		G H
20	50. 46	036189		033739		
25	50. 43	036206		033766		
30	51. 14	036334		033792		
35	51. 30	036400		033792		
40	51. 47	036461		033829		
45	51. 58	036351		033806		
50	51. 58	036323		033847		
55	51. 58	036368		033874		
Feb. 27. 23. 0	22. 52. 8	0·036451	61·0	0·033900	60·9	G H
5	52. 14	036402		033927		
10	52. 27	036291		033953		
15	52. 26	036419		033954		
20	52. 42	036529		033981		
25	52. 56	036546		034017		
30	53. 18	036590		034010		
35	53. 27	036563		034010		
40	53. 38	036674		034060		
45	53. 52	036802		034038		
50	54. 7	036802		034091		
55	54. 23	036819		034091		G H
Feb. 28. 0. 0	22. 54. 34	0·036819	61·6	0·034118	62·0	T D
5	54. 54	036924		034118		
10	55. 6	037074		034144		
15	55. 6	037091		034144		
20	55. 10	037003		034144		
25	55. 14	037329		034170		
30	55. 45	037346		034170		
35	55. 45	037363		034170		
40	55. 45	037269		034197		
45	55. 22	037397		034197		
50	55. 22	037397		034197		
55	55. 27	037636		034223		
Feb. 28. 1. 0	22. 55. 51	0·037320	62·6	0·034223	62·4	T D
5	55. 51	037387		034250		
10	55. 51	037653		034211		
15	55. 51	037448		034080		
20	55. 51	037448		034194		
25	56. 1	037714		034204		T D
30	55. 55	037670		034231		H B
35	55. 46	037670		034257		
40	55. 46	037714		034262		
45	55. 52	037886		034294		
50	56. 15	037997		034310		
55	56. 22	038085		034286		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

Term-Day Observations of February 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Feb. 28. 2. 0	22. 56. 19	0·038019	62·8	0·034312	63·2	H B	Feb. 28. 6. 0	22. 50. 1	0·037773	66·3	0·034383	66·0	H B
5	56. 14	037881		034339			5	50. 5	037778		034369		
10	56. 14	037898		034334			10	50. 5	037778		034327		
15	55. 48	037832		034330			15	50. 25	037805		034293		
20	55. 48	037850		034343			20	50. 29	037761		034257		
25	55. 38	037932		034323			25	50. 32	037744		034243		H B
30	55. 29	037838		034344			30	50. 31	037766		034206		G
35	55. 18	037838		034356		H B	35	50. 28	037771		034211		
40	55. 18	037744		034351		L	40	50. 29	037771		034177		
45	55. 10	037806		034349			45	50. 33	037754		034151		
50	54. 53	037823		034423			50	50. 34	037732		034127		
55	54. 40	037823		034413			55	50. 34	037715		034101		
Feb. 28. 3. 0	22. 54. 33	0·037840	63·7	0·034440	64·0	L	Feb. 28. 7. 0	22. 50. 35	0·037715	65·7	0·034101	65·5	G
5	54. 33	037857		034476			5	50. 35	037715		034105		
10	54. 33	037857		034476			10	50. 30	037764		034115		
15	54. 12	037874		034502			15	50. 21	037875		034054		
20	53. 53	037846		034454			20	50. 11	037830		034030		
25	53. 44	037846		034481			25	49. 59	037853		034025		
30	53. 44	037908		034478			30	49. 55	037813		034025		
35	53. 30	037925		034448			35	50. 3	037813		034025		
40	53. 25	037925		034461			40	50. 4	037791		034031		
45	53. 25	037897		034461			45	50. 8	037813		034009		
50	53. 31	037870		034452			50	50. 8	037841		034009		
55	53. 20	037870		034413			55	50. 8	037841		033999		
Feb. 28. 4. 0	22. 52. 58	0·037820	64·5	0·034400	64·7	L	Feb. 28. 8. 0	22. 50. 4	0·037796	65·4	0·033999	65·3	G
5	52. 43	037832		034446			5	49. 53	037752		033999		
10	52. 27	037849		034519			10	49. 43	037669		033977		
15	52. 19	037795		034516			15	49. 37	037647		033982		
20	52. 10	037762		034522			20	49. 44	037581		033982		
25	52. 7	037779		034539			25	49. 35	037497		033987		
30	51. 53	037703		034592			30	49. 28	037475		033961		
35	51. 29	037737		034604		L	35	49. 14	037542		033961		G
40	51. 27	037688		034616		H B	40	49. 7	037635		033961		T D
45	51. 5	037700		034623			45	48. 41	037635		033985		
50	50. 59	037645		034686			50	48. 41	037635		033983		
55	50. 50	037618		034678			55	48. 41	037618		033983		
Feb. 28. 5. 0	22. 50. 31	0·037630	66·5	0·034665	66·2	H B	Feb. 28. 9. 0	22. 48. 45	0·037508	65·0	0·033983	65·0	T D
5	50. 21	037541		034616			5	48. 45	037508		033983		
10	50. 7	037474		034591			10	48. 30	037491		033956		
15	50. 4	037524		034545			15	48. 19	037380		033956		
20	50. 12	037413		034541			20	48. 19	037363		033930		
25	50. 10	037369		034521			25	47. 51	037363		033930		
30	50. 2	037413		034516			30	47. 51	037346		033903		
35	49. 38	037369		034516			35	47. 27	037213		033903		
40	49. 36	037391		034502			40	47. 27	037346		033923		
45	49. 47	037529		034456			45	47. 27	037329		033911		
50	50. 0	037596		034456			50	47. 12	037329		033911		
55	50. 1	037640		034427			55	47. 12	037201		033900		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of March 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Mar. 18. 10. 0	22. 35. 51	0·035065	52·2	0·033271	52·0	G
5	37. 33	035021		033271		
10	38. 3	034556		033208		
15	38. 18	034362		033198		
20	38. 27	033875		033179		
25	38. 42	033809		033135		
30	38. 50	033432		033135		
35	39. 0	033366		033135		
40	39. 21	033101		033135		
45	40. 10	032862		033135		
50	40. 27	032574		033135		
55	40. 57	032574		033135		
Mar. 18. 11. 0	22. 40. 54	0·032530	52·0	0·033135	52·0	G
5	40. 21	032530		033160		
10	40. 47	032707		033164		
15	40. 54	032707		033174		
20	40. 55	032707		033160		
25	40. 38	039707		033160		
30	40. 4	032862		033160		
35	39. 9	033238		033174		
40	38. 55	033415		033184		
45	38. 50	033681		033184		
50	37. 44	033637		033184		
55	37. 15	033637		033111		
Mar. 18. 12. 0	22. 36. 18	0·033526	52·0	0·033111	52·0	G
5	34. 53	033747		033096		
10	33. 54	034080		033086		
15	36. 3	034257		033045		
20	37. 16	034412		033040		
25	38. 29	034124		033045		
30	40. 5	034124		033035		
35	40. 39	033925		033035		
40	40. 39	033858		032972		G
45	40. 39	033792		032926		L
50	40. 39	033747		032883		
55	40. 39	033747		032868		
Mar. 18. 13. 0	22. 40. 39	0·033814	52·0	0·032864	51·8	L
5	40. 39	033770		032849		
10	40. 39	033770		032839		
15	40. 39	033747		032865		
20	40. 39	033747		032850		
25	40. 48	033747		032855		
30	40. 48	033592		032865		
35	40. 43	033592		032865		
40	40. 36	033637		032865		
45	40. 36	033681		032892		
50	40. 36	033747		032970		
55	40. 38	033858		032965		
Mar. 18. 14. 0	22. 40. 38	0·033858	52·0	0·032970	52·0	L
5	40. 35	033902		032965		
10	40. 36	033991		032965		
15	40. 7	033991		032962		
20	40. 7	033415		032972		
25	39. 40	033415		033011		
30	39. 29	033459		033021		
35	39. 29	033415		033035		
40	39. 50	033238		033059		
45	39. 35	032751		033072		
50	39. 59	032641		033131		
55	40. 17	032087		033102		
Mar. 18. 15. 0	22. 40. 17	0·032087	52·0	0·033131	51·8	L
5	40. 17	032087		033141		
10	40. 24	032159		033169		
15	40. 24	032291		033179		
20	40. 24	032274		033179		
25	40. 24	032274		033179		
30	40. 0	032257		033162		
35	40. 14	032301		033186		L
40	40. 25	032301		033186		H B
45	40. 29	032329		033206		
50	40. 37	032418		033236		
55	40. 40	032467		033236		
Mar. 18. 16. 0	22. 40. 36	0·032467	51·5	0·033260	51·7	H B
5	40. 36	032467		033260		
10	40. 31	032467		033275		
15	40. 35	032467		033283		
20	40. 30	032489		033288		
25	40. 34	032511		033307		
30	40. 39	032511		033307		
35	40. 39	032578		033312		
40	40. 33	032600		033312		
45	40. 30	032622		033306		
50	40. 40	032666		033315		
55	40. 39	032666		033320		
Mar. 18. 17. 0	22. 40. 37	0·032666	51·5	0·033330	51·5	H B
5	40. 36	032693		033277		
10	40. 38	032659		033254		
15	40. 30	032798		033202		
20	40. 36	032697		033190		
25	40. 28	032702		033122		
30	40. 30	032668		033106		
35	40. 20	032562		033058		
40	40. 25	032523		033037		
45	40. 28	032489		032999		
50	40. 28	032406		032968		
55	40. 25	032416		032924		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m. 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $27^s·5$.

Term-Day Observations of March 18 and 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Mar. 18. 18. 0	22. 40. 32	0·032355	49·8	0·032902	49·7	H B	Mar. 18. 22. 0	22. 43. 5	0·031049	48·5	0·032445	48·0	T D
5	40. 28	032421		032907			5	43. 39	031049		032372		
10	40. 23	032488		032912			10	43. 58	031310		032352		T D
15	40. 13	032333		032942			15	37. 33	029959		032573		G
20	40. 20	032289		032971			20	43. 8	030623		032768		
25	40. 24	032267		032981			25	43. 30	030845		032344		
30	40. 20	032156		032965			30	41. 36	030862		032808		
35	40. 23	032156		032965		H B	35	39. 57	031637		032788		
40	40. 23	032156		033004		T D	40	40. 25	031526		032334		
45	40. 23	032156		032979			45	44. 8	031371		032336		G
50	40. 23	032156		033009			50	44. 18	031166		032809		L
55	40. 23	032156		033023			55	42. 14	030768		032750		
Mar. 18. 19. 0	22. 40. 32	0·032156	49·8	0·033086	49·6	T D	Mar. 18. 23. 0	22. 44. 33	0·031100	48·8	0·032404	48·2	L
5	40. 32	032156		033076			5	43. 48	030525		032456		
10	40. 32	032156		033076			10	44. 52	030657		032353		
15	40. 32	032267		033072			15	45. 18	031073		032370		
20	40. 32	032267		033072			20	43. 53	030874		032355		
25	40. 32	032267		033072			25	45. 54	031183		032367		
30	40. 6	032311		033023			30	...	030343		032372		
35	40. 26	032311		033101			35	...	030431		033120		
40	40. 26	032311		033135			40	...	030298		033105		
45	40. 26	032377		033160			45	...	...		033131		
50	40. 32	032377		033160			50	...	030360		033238		
55	40. 32	032377		033160			55	44. 35	030536		033192		
Mar. 18. 20. 0	22. 40. 32	0·032244	49·8	0·033160	49·6	T D	Mar. 19. 0. 0	22. 44. 48	0·030581	49·0	0·033211	48·8	L
5	41. 52	032360		032797			5	45. 7	030377		033208		
10	42. 11	032282		032832			10	46. 22	030587		033247		
15	42. 40	032309		032731			15	46. 2	030538		033287		
20	36. 42	032049		032720			20	45. 3	031662		033326		
25	35. 38	032630		032770			25	45. 39	030744		033329		L
30	36. 49	031953		033139			30	45. 39	030606		033381		T D
35	39. 26	031781		032936			35	45. 23	030468		033383		
40	39. 10	031764		032670			40	49. 20	030436		033453		
45	39. 22	031747		032623			45	49. 20	030895		033491		
50	39. 22	031713		032597			50	49. 49	031023		033508		
55	39. 22	031696		032544			55	48. 59	031057		033312		
Mar. 18. 21. 0	22. 39. 22	0·031569	48·3	0·032518	48·0	T D	Mar. 19. 1. 0	22. 49. 23	0·031185	50·6	0·033319	50·5	T D
5	39. 22	031635		032518			5	23. 1. 36	030649		033345		
10	39. 22	031569		032508			10	1. 22	031041		032864		
15	42. 23	031586		032557			15	0. 52	030997		033331		
20	42. 3	031431		032435			20	2. 16	030461		032975		
25	36. 12	031519		032821			25	2. 16	030589		033012		T D
30	35. 15	030877		032801			30	2. 18	030473		033028		H B
35	38. 42	030922		032811			35	23. 2. 18	030628		033014		
40	39. 34	031032		032913			40	22 55. 18	031663		033157		
45	40. 50	031226		032503			45	55. 25	032079		033525		
50	41. 57	031360		032503			50	55. 54	031875		033556		
55	43. 30	031049		032474			55	55. 59	031985		033578		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

March $18^d.18^h$ to $19^d.6^h$. Workmen were engaged boring the ground to receive the Ground Thermometers, in doing which a great many iron tools were used; and it is probable that many of the sudden changes in the position of the Declination Magnet, and some of the changes in the position of the Horizontal Force Magnet may be attributed to this cause.

Term-Day Observations of March 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Mar. 19. 2. 0	22. 56. 22	0·032157	51·5	0·033595	51·6	H B
5	56. 49	032196		033600		
10	56. 37	032019		033635		
15	56. 29	032036		033597		
20	56. 25	032053		033587		
25	56. 29	032097		033648		
30	56. 40	032203		033657		
35	56. 12	031755		033624		H B
40	55. 52	031644		033630		L
45	55. 52	031551		033596		
50	55. 18	031501		033581		
55	22. 54. 52	031568		033623		
Mar. 19. 3. 0	23. 0. 21	0·031031	52·3	0·033594	52·0	L
5	23. 0. 32	031469		033381		
10	22. 56. 7	031353		033473		
15	23. 2. 22	031768		033753		
20	2. 31	031370		033296		
25	1. 25	031542		033513		
30	2. 24	031692		033590		
35	2. 24	031598		033421		
40	23. 2. 10	031637		033462		
45	22. 55. 57	032230		033425		
50	22. 59. 15	032075		033449		
55	23. 0. 30	032092		033519		
Mar. 19. 4. 0	22. 59. 26	0·032198	53·3	0·033556	53·5	L
5	23. 0. 41	032193		033557		
10	0. 48	032076		033651		
15	23. 0. 14	032027		033625		
20	22. 58. 28	032044		033539		
25	22. 59. 43	031950		033556		
30	23. 0. 12	032189		033553		L
35	22. 58. 59	031984		033559		T D
40	55. 48	032312		033533		
45	55. 55	032461		033685		
50	58. 57	032589		033693		
55	58. 47	032606		033700		
Mar. 19. 5. 0	22. 58. 28	0·032844	54·5	0·033755	54·7	T D
5	52. 31	032999		034086		
10	51. 48	033127		034074		
15	52. 53	032839		033899		
20	51. 30	032723		033874		
25	44. 55	032723		033889		
30	46. 8	033006		033813		
35	46. 8	033493		033725		
40	46. 8	033670		033564		
45	38. 37	033577		033987		
50	39. 10	033466		033995		
55	39. 10	033483		033995		
Mar. 19. 6. 0	22. 39. 10	0·033483	55·0	0·033971	55·0	T D
5	38. 42	033483		033925		
10	38. 42	033466		033900		
15	38. 15	033310		033820		
20	38. 15	033200		033793		
25	38. 15	033183		033798		
30	35. 46	032563		033772		
35	33. 52	033006		033751		T D
40	33. 7	033188		033780		H B
45	33. 11	033387		033758		
50	33. 46	033432		033722		
55	34. 4	033370		033747		
Mar. 19. 7. 0	22. 33. 52	0·033437	54·6	0·033705	54·2	H B
5	34. 16	033476		033727		
10	34. 30	033321		033708		
15	34. 31	033271		033729		
20	34. 20	033227		033775		
25	35. 8	033244		033741		
30	35. 25	033438		033767		
35	36. 2	033305		033784		
40	36. 15	033322		033745		
45	35. 58	033190		033743		
50	35. 55	033317		033769		
55	35. 46	033273		033759		
Mar. 19. 8. 0	22. 35. 46	0·033290	55·3	0·033781	55·0	H B
5	35. 50	033278		033740		
10	35. 53	033261		033682		
15	36. 5	033205		033665		
20	36. 3	033210		033593		
25	36. 16	033220		033567		
30	36. 18	033159		033540		
35	36. 27	033125		033483		
40	36. 23	033108		033452		
45	36. 22	033074		033399		
50	36. 22	033057		033377		
55	36. 18	033023		033329		
Mar. 19. 9. 0	22. 36. 31	0·033206	53·5	0·033313	53·3	H B
5	36. 31	033228		033303		
10	36. 16	033211		033284		
15	36. 14	033255		033281		
20	36. 15	033322		033300		
25	36. 15	033366		033290		
30	36. 7	033481		033290		
35	35. 48	033636		033286		
40	34. 41	033813		033290		H B
45	34. 24	034035		033317		G
50	34. 4	034062		033317		
55	34. 36	034062		033293		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 228°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of April 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Apr. 22. 10. 0	22. 52. 34	0·027897	59·0	0·033723	58·7	G	Apr. 22. 14. 0	22. 51. 52	0·026568	56·0	0·033118	56·0	L
5	53. 4	027919		033723			5	51. 52	026435		033130		
10	53. 10	027946		033718			10	52. 3	026329		033165		
15	53. 12	027946		033683			15	52. 8	026329		033134		
20	53. 12	027929		033673			20	52. 12	026268		033139		
25	53. 12	027929		033683			25	52. 21	026202		033126		
30	53. 11	027912		033683			30	52. 21	026251		033110		
35	53. 16	027912		033683			35	52. 33	026251		033110		
40	53. 19	027956		033678			40	52. 33	026185		033104		
45	53. 22	027962		033652			45	52. 53	026168		033118		
50	53. 22	027962		033652			50	52. 25	026168		033106		
55	53. 21	027945		033652			55	52. 25	026106		033106		
Apr. 22. 11. 0	22. 53. 21	0·027922	58·5	0·033652	58·5	G	Apr. 22. 15. 0	22. 52. 36	0·026261	55·5	0·033080	55·3	L
5	53. 19	027861		033615			5	52. 29	026305		033099		
10	53. 51	027844		033552			10	52. 17	026350		033118		
15	53. 52	027827		033541			15	52. 17	026367		033154		
20	53. 54	027810		033515			20	52. 25	026434		033154		
25	53. 5	027815		033488			25	52. 19	026322		033125		
30	52. 18	027843		033430			30	52. 10	026389		033144		
35	51. 28	027826		033404			35	52. 17	026278		033154		L
40	51. 28	027920		033378			40	52. 7	026456		033188		H B
45	51. 20	028279		033341			45	51. 57	026517		033220		
50	50. 51	028129		033315			50	51. 57	026517		033215		
55	50. 42	028112		033262			55	51. 57	026473		033220		
Apr. 22. 12. 0	22. 50. 31	0·027962	57·3	0·033226	57·0	G	Apr. 22. 16. 0	22. 51. 40	0·026495	55·7	0·033235	55·5	H B
5	50. 42	027453		033221			5	51. 34	026456		033245		
10	50. 42	027326		033160			10	51. 40	026522		033259		
15	50. 29	026993		033146			15	51. 50	026505		033242		
20	50. 21	026733		033028			20	51. 35	026483		033242		
25	50. 6	026577		033063			25	51. 32	026532		033277		
30	49. 18	026560		033037			30	51. 30	026537		033280		
35	47. 43	026074		033066			35	51. 38	026581		033295		
40	46. 32	025896		033071		G	40	51. 18	026564		033304		
45	47. 36	026057		033076		L	45	51. 17	026564		033314		
50	48. 23	026057		033083			50	51. 1	026569		033287		
55	49. 23	025996		033132			55	50. 53	026569		033311		
Apr. 22. 13. 0	22. 49. 45	0·025929	56·8	0·033156	56·7	L	Apr. 22. 17. 0	22. 51. 3	0·026552	55·0	0·033311	55·2	H B
5	49. 28	025868		033115			5	50. 44	026552		033285		
10	49. 50	026023		033169			10	50. 44	026535		033274		
15	49. 54	025784		033201			15	50. 40	026557		033279		
20	49. 54	025834		033211			20	50. 40	026562		033252		
25	49. 50	025989		033174			25	50. 49	026562		033230		
30	50. 34	026060		033148			30	50. 27	026501		033203		
35	51. 0	026220		033168			35	50. 16	026479		033208		
40	51. 44	026575		033170			40	50. 12	026501		033182		
45	52. 2	026602		033170			45	50. 5	026528		033161		
50	51. 38	026629		033144			50	50. 12	026551		033134		
55	51. 45	026585		033159			55	50. 12	026534		033134		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of April 22 and 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Apr. 22. 18. 0	22. 50. 5	0·026534	54·5	0·033108	54·3	H B	Apr. 22. 22. 0	22. 49. 16	0·025190	53·5	0·032980	53·5	G
5	49. 52	026556		033118			5	49. 25	025190		032980		
10	49. 55	026556		033144			10	49. 32	025163		033021		
15	50. 1	026556		033176			15	49. 44	025274		033021		
20	49. 59	026556		033181			20	50. 17	025291		033047		
25	49. 59	026556		033212			25	59. 43	025180		033037		
30	49. 43	026600		033242			30	51. 4	025087		033050		
35	49. 37	026622		033242		H B	35	51. 20	025087		033054		
40	49. 37	026712		033274		T D	40	51. 36	025087		033035		
45	49. 57	026712		033299			45	51. 40	025325		033051		
50	49. 35	026756		033364			50	51. 48	025436		033051		
55	49. 35	026645		033364			55	52. 10	025564		033051		
Apr. 22. 19. 0	22. 49. 9	0·026645	54·5	0·033391	55·0	T D	Apr. 22. 23. 0	22. 52. 39	0·025520	54·0	0·033078	54·0	G
5	49. 9	026645		033389			5	52. 48	025625		033104		
10	49. 9	026628		033363			10	53. 27	025487		033115		
15	49. 3	026517		033336			15	53. 47	025632		033168		
20	48. 25	026500		033370			20	53. 54	025583		033205		
25	48. 22	026500		033359			25	54. 0	025333		033226		
30	48. 7	026483		033333			30	54. 19	025416		033202		
35	47. 58	026483		033320			35	54. 52	025478		033255		
40	47. 58	026483		033304			40	55. 3	025495		033308		
45	47. 44	026421		033277			45	55. 12	025529		033344		G
50	47. 36	026421		033277			50	55. 33	025568		033370		H B
55	47. 27	026338		033265			55	56. 0	025983		. 033398		
Apr. 22. 20. 0	22. 47. 27	0·026338	54·0	0·033225	54·0	T D	Apr. 23. 0. 0	22. 56. 26	0·026134	55·4	0·033425	55·5	H B
5	47. 21	026338		033225			5	56. 45	026106		033437		
10	46. 52	026228		033249			10	56. 51	026145		033463		
15	46. 52	026228		033249			15	57. 5	026074		033434		
20	46. 52	026228		033249			20	57. 11	026135		033436		
25	46. 52	026228		033249			25	57. 18	026130		033467		
30	46. 52	026228		033201			30	57. 35	026125		033475		
35	46. 45	026095		033176			35	57. 41	026031		033462		
40	46. 45	026095		033176			40	57. 47	025894		033429		
45	46. 35	026006		033201			45	57. 49	025844		033431		
50	46. 46	025940		033201			50	57. 44	025839		033447		
55	46. 46	025940		033210			55	58. 17	026187		033470		
Apr. 22. 21. 0	22. 47. 9	0·025896	54·0	0·033210	54·0	T D	Apr. 23. 1. 0	22. 58. 47	0·026271	56·6	0·033470	56·5	H B
5	47. 9	025785		033176			5	59. 8	026643		033471		
10	47. 18	025768		033139			10	59. 39	026704		033497		
15	47. 27	025635		033115			15	59. 35	026521		033483		
20	47. 39	025618		033089			20	22. 59. 37	026655		033505		
25	47. 54	025486		033074			25	23. 0. 4	026760		033531		
30	48. 1	025469		033047		T D	30	22. 59. 56	026998		033529		
35	48. 13	025447		033072		G	35	23. 0. 32	027436		033531		
40	48. 13	025513		033047			40	0. 54	027608		033498		
45	48. 20	025318		033046			45	1. 3	027404		033535		
50	48. 38	025207		033021			50	0. 46	027138		033561		
55	48. 59	025190		033021			55	0. 37	027066		033588		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of April 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Apr. 23. 2. 0	23. 0. 49	0·026729	57·6	0·033539	57·5	H B	Apr. 23. 6. 0	22. 53. 42	0·028116	61·2	0·033990	61·0	L
5	0. 13	026857		033565		T D	5	53. 44	028160		033951		
10	23. 0. 24	026830		033565			10	53. 33	028177		033971		
15	22. 59. 55	026696		033600			15	53. 21	028133		033977		
20	59. 55	026847		033593			20	53. 16	028133		034003		
25	59. 43	026908		033632			25	53. 12	028133		033988		
30	59. 36	027057		033683		T D	30	53. 5	028150		033991		L
35	59. 27	027146		033693		H B	35	52. 59	028150		033981		T D
40	59. 17	027185		033675			40	52. 38	027995		033983		
45	58. 58	027202		033680			45	52. 38	027929		033983		
50	58. 34	027197		033672			50	52. 29	027946		033983		
55	58. 30	027285		033737			55	52. 29	027946		033983		
Apr. 23. 3. 0	22. 58. 7	0·027325	58·5	0·033740	58·3	H B	Apr. 23. 7. 0	22. 52. 29	0·027946	61·5	0·034010	61·5	T D
5	58. 2	027297		033776			5	52. 29	027990		034010		
10	57. 44	027336		033819			10	52. 29	027973		033959		
15	57. 37	027465		033806			15	52. 29	027973		033944		
20	57. 37	027570		033893			20	52. 22	027956		033918		
25	57. 11	027676		033900			25	52. 22	027956		033884		
30	57. 7	027776		033933			30	52. 24	027895		033857		
35	56. 52	027683		033960			35	52. 24	027895		033847		
40	56. 39	027633		033976			40	52. 24	027895		033847		
45	56. 19	027562		034019			45	52. 24	027878		033816		
50	55. 55	027423		034031			50	52. 29	027811		033816		
55	56. 4	027618		034038			55	52. 29	027794		033756		
Apr. 23. 4. 0	22. 55. 44	0·027679	59·8	0·034062	60·0	H B	Apr. 23. 8. 0	22. 52. 29	0·027861	61·0	0·033756	61·0	T D
5	55. 34	027829		034088			5	52. 33	027861		033756		
10	55. 27	027978		034064			10	52. 33	027861		033756		
15	55. 23	028106		034021			15	52. 19	027861		033756		
20	54. 55	027730		033983			20	52. 19	027861		033756		
25	54. 41	027725		033971			25	52. 19	027861		033756		
30	54. 37	027808		033987			30	52. 14	027861		033756		
35	54. 31	027936		034004			35	52. 16	027883		033756		
40	54. 28	028041		034004		H B	40	52. 51	028104		033741		T D
45	54. 14	028080		034004		L	45	53. 16	028547		033756		G
50	54. 14	028125		034016			50	53. 4	028968		033771		
55	54. 14	028142		034016			55	52. 46	028746		033746		
Apr. 23. 5. 0	22. 54. 26	0·028203	60·8	0·034032	60·7	L	Apr. 23. 9. 0	22. 53. 16	0·028746	61·0	0·033746	61·0	G
5	54. 17	028269		034008			5	53. 7	028729		033719		
10	54. 17	028286		034018			10	53. 12	028313		033679		
15	54. 17	028242		034045			15	53. 16	028695		033679		
20	54. 17	028286		034035			20	53. 30	028939		033652		
25	54. 17	028259		034025			25	52. 18	029165		033621		
30	54. 10	028193		034051			30	53. 43	029237		033595		
35	54. 2	028082		034022			35	53. 30	029220		033568		
40	53. 59	028099		033998			40	53. 47	028915		033556		
45	53. 46	028033		033973			45	53. 40	028788		033547		
50	53. 46	027989		033990			50	53. 36	028832		033520		
55	53. 42	028072		034010			55	53. 19	028859		033464		G

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 222°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of May 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 29. 10. 0	22. 52. 23	0·023450	68·0	0·033722	68·0	D
5	52. 11	023499		033675		
10	51. 50	023477		033675		
15	51. 50	023593		033649		
20	51. 58	023907		033659		
25	52. 7	024085		033637		
30	52. 8	024001		033616		
35	51. 45	024051		033611		
40	52. 4	023984		033585		
45	51. 55	024034		033585		
50	51. 43	023995		033563		
55	51. 7	023618		033558		
May 29. 11. 0	22. 50. 29	0·023358	67·2	0·033532	67·3	D
5	50. 18	023385		033500		
10	50. 7	023363		033500		
15	49. 51	023346		033474		
20	49. 28	023280		033453		
25	48. 47	023196		033453		
30	48. 36	023112		033426		
35	48. 37	022913		033410		
40	48. 28	022808		033414		
45	48. 31	022608		033407		
50	48. 31	022503		033391		
55	48. 25	022591		033395		
May 29. 12. 0	22. 48. 27	0·022419	66·5	0·033379	66·5	D
5	48. 12	022469		033362		
10	48. 35	022385		033350		
15	48. 29	022368		033348		
20	49. 4	022412		033346		
25	49. 21	022506		033335		
30	49. 10	022401		033322		
35	49. 37	022339		033342		
40	49. 38	022411		033321		D
45	50. 6	022504		033314		L
50	50. 49	022682		033273		
55	50. 49	022598		033237		
May 29. 13. 0	22. 50. 49	0·022648	65·5	0·033210	65·4	L
5	50. 57	022742		033184		
10	51. 3	022791		033157		
15	50. 57	022862		033120		
20	50. 44	022912		033093		
25	50. 28	022962		033067		
30	50. 6	022928		033050		
35	49. 56	022911		033024		
40	49. 53	022827		033007		
45	49. 53	022699		032954		
50	49. 23	022726		032942		
55	49. 23	022665		032916		
May 29. 14. 0	22. 48. 58	0·022648	64·2	0·032890	64·0	L
5	48. 51	022720		032883		
10	48. 49	022720		032912		
15	48. 18	022614		032905		
20	47. 42	022597		032883		
25	47. 27	022597		032907		
30	47. 27	022580		032920		
35	47. 38	022563		032904		
40	47. 48	022563		032914		
45	48. 8	022546		032902		
50	48. 27	022463		032900		
55	48. 45	022463		032925		
May 29. 15. 0	22. 49. 15	0·022402	63·4	0·032898	63·2	L
5	49. 18	022335		032932		
10	49. 28	022291		032947		
15	49. 54	022291		032947		
20	50. 25	022291		032971		
25	50. 25	022402		032985		
30	50. 25	022335		032985		
35	50. 50	022335		033009		L
40	50. 50	022335		033009		T D
45	51. 17	022291		033034		
50	51. 17	022158		033053		
55	51. 17	022069		033068		
May 29. 16. 0	22. 52. 17	0·022069	63·4	0·033068	63·2	T D
5	53. 23	022052		033042		
10	53. 27	022035		033016		
15	53. 55	022732		032979		
20	54. 38	022760		032939		
25	54. 38	022743		032887		
30	54. 44	022726		032861		
35	54. 48	022709		032835		
40	54. 5	022625		032808		
45	53. 36	022591		032782		
50	53. 4	022574		032755		
55	52. 21	022624		032744		
May 29. 17. 0	22. 51. 22	0·022607	62·0	0·032737	62·0	T D
5	50. 44	022607		032707		
10	50. 17	022700		032745		
15	49. 28	022700		032759		
20	48. 50	022700		032774		
25	48. 5	022766		032774		
30	47. 20	022838		032773		
35	46. 54	022838		032787		
40	46. 23	022771		032812		
45	46. 23	022727		032822		
50	46. 7	022710		032795		
55	45. 39	022710		032819		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of May 29 and 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 29. 18. 0	22. 45. 39	0·022710	61·7	0·032819	61·7	T D
5	45. 47	022566		032786		
10	45. 47	022460		032733		
15	45. 19	022271		032795		
20	44. 59	022188		032683		
25	44. 43	022265		032630		
30	45. 50	022341		032636		
35	46. 30	022589		032622		T D
40	45. 51	022489		032594		H B
45	45. 36	022428		032517		
50	45. 46	022394		032519		
55	45. 28	022154		032447		
May 29. 19. 0	22. 45. 34	0·022011	59·8	0·032400	59·5	H B
5	45. 28	021652		032429		
10	45. 25	021491		032424		
15	45. 54	021331		032424		
20	46. 4	021221		032468		
25	46. 58	021194		032493		
30	46. 45	021233		032570		
35	46. 18	021183		032628		
40	45. 48	021090		032628		
45	46. 32	021151		032638		
50	46. 26	021284		032657		
55	46. 55	021279		032653		
May 29. 20. 9	22. 47. 41	0·021384	60·8	0·032653	59·5	H B
5	47. 41	021401		032653		
10	47. 36	021440		032653		
15	46. 45	021440		032662		
20	45. 46	021258		032633		
25	45. 40	021319		032618		
30	45. 25	021602		032599		
35	45. 11	021491		032570		
40	46. 14	021287		032594		
45	48. 0	021304		032599		
50	48. 30	021215		032618		
55	49. 12	021099		032643		
May 29. 21. 0	22. 48. 22	0·020939	61·7	0·032653	59·5	H B
5	49. 40	021022		032648		
10	49. 34	020729		032693		
15	48. 58	021610		032664		
20	49. 10	020631		032705		
25	48. 35	020802		032705		
30	49. 39	020576		032707		
35	49. 25	020444		032736		
40	50. 2	020372		032746		
45	50. 15	020544		032743		H B
50	51. 34	020583		032748		D
55	52. 9	020622		032780		
May 29. 22. 0	22. 52. 18	0·020595	62·8	0·032780	60·0	D
5	52. 2	020501		032815		
10	52. 15	020540		032832		
15	53. 54	020712		032849		
20	54. 23	020690		032880		
25	54. 49	020685		032907		
30	55. 32	020945		032933		
35	56. 19	021118		032949		
40	56. 30	021090		032971		
45	57. 16	020886		032997		
50	57. 19	020642		033010		
55	57. 40	020814		033021		D
May 29. 23. 0	22. 58. 9	0·020765	63·8	0·033013	61·2	L
5	58. 55	020716		033032		
10	59. 27	020816		033045		
15	59. 44	020877		033111		
20	22. 59. 52	020828		033203		
25	23. 0. 12	020972		033230		
30	0. 20	021100		033268		
35	23. 0. 8	020962		033296		L
40	22. 59. 54	020819		033285		H B
45	23. 0. 2	021234		033303		
50	0. 15	021362		033394		
55	0. 43	021396		033407		
May 30. 0. 0	23. 0. 34	0·021657	65·4	0·033435	63·2	H B
5	0. 49	021806		033378		
10	1. 20	021846		033390		
15	1. 30	022173		033368		
20	1. 34	021991		033321		
25	1. 40	021874		033361		
30	1. 32	021869		033381		
35	1. 47	022047		033354		H B
40	2. 22	022130		033355		T D
45	2. 30	022368		033357		
50	2. 30	022562		033359		
55	3. 21	022801		033346		
May 30. 1. 0	23. 3. 10	0·022818	66·5	0·033363	64·5	T D
5	3. 15	022724		033415		
10	3. 0	022409		033468		
15	2. 33	021806		033507		
20	2. 3	021651		033526		
25	1. 47	021735		033540		
30	2. 2	022017		033609		
35	2. 9	022034		033662		
40	2. 14	022051		033714		
45	2. 6	022179		033767		
50	2. 6	022334		033820		
55	1. 42	022351		033849		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of May 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
May 30. 2. 0	23. 1. 22	0·022368	67·5	0·033902	67·0	T D
5	1. 22	022535		033909		
10	1. 34	022630		033985		
15	1. 46	023063		034022		
20	1. 46	023141		034114		
25	3. 17	023369		034192		
30	3. 17	023824		034271		T D
35	3. 17	025142		034289		L
40	3. 9	025021		034313		
45	2. 30	024673		034356		
50	2. 0	024220		034415		
55	1. 41	023651		034439		L
May 30. 3. 0	23. 1. 20	0·023242	70·3	0·034384	69·7	T D
5	0. 58	022844		034419		
10	23. 0. 41	022578		034419		
15	22. 59. 48	022578		034428		
20	59. 48	022800		034394		
25	59. 48	022844		034370		
30	59. 30	022888		034350		
35	59. 26	023065		034316		
40	59. 11	023132		034321		
45	58. 59	023242		034247		
50	58. 19	023242		034272		
55	57. 53	023796		034272		
May 30. 4. 0	22. 57. 53	0·023685	70·3	0·034199	69·7	T D
5	57. 29	023547		034252		
10	57. 25	023581		034279		
15	57. 25	023532		034316		
20	57. 25	023566		034394		
25	57. 25	023738		034521		
30	57. 38	023949		034473		
35	58. 20	024121		034550		
40	57. 40	024470		034577		
45	57. 40	024681		034629		
50	57. 40	024831		034682		
55	57. 52	025064		034709		
May 30. 5. 0	22. 56. 31	0·024904	72·0	0·034678	71·7	T D
5	56. 8	024594		034681		
10	56. 9	024633		034632		T D
15	57. 10	025652		034648		H B
20	56. 56	026094		034734		
25	57. 17	026139		034738		
30	57. 3	026842		034784		
35	56. 58	026266		034786		
40	56. 43	026111		034771		
45	55. 41	025624		034788		
50	55. 17	025022		034756		
55	55. 56	025088		034751		
May 30. 6. 0	22. 55. 50	0·024955	72·3	0·034807	72·5	H B
5	55. 23	025132		034793		
10	55. 31	025680		034851		
15	54. 55	024817		034900		
20	55. 0	024086		034831		
25	53. 25	022996		034817		
30	51. 33	022399		034744		
35	50. 39	022886		034769		
40	49. 18	023147		034905		
45	48. 29	023434		034939		
50	47. 47	023523		034973		
55	47. 35	023694		034953		
May 30. 7. 0	22. 47. 42	0·023694	72·7	0·034939	72·5	H B
5	48. 21	023938		034924		
10	49. 7	024254		034936		
15	50. 22	024298		034897		
20	50. 58	024120		034888		
25	51. 8	024076		034790		
30	50. 56	023794		034740		
35	50. 42	023461		034691		
40	50. 44	023616		034672		H B
45	50. 44	023550		034667		L
50	50. 44	023489		034606		
55	50. 56	023378		034577		
May 30. 8. 0	22. 50. 56	0·023312	72·4	0·034557	72·2	L
5	50. 56	023251		034517		
10	50. 56	023251		034517		
15	51. 21	023521		034491		
20	52. 7	023615		034429		
25	52. 38	023770		034400		
30	52. 38	023686		034364		
35	52. 40	023558		034303		
40	52. 40	023514		034278		
45	52. 40	023431		034214		
50	52. 28	023325		034188		
55	52. 28	023414		034188		
May 30. 9. 0	22. 52. 28	0·023463	71·6	0·034161	71·4	L
5	52. 28	023446		034135		
10	52. 38	023429		034098		
15	52. 38	023412		034069		
20	52. 38	023395		034058		
25	52. 38	023378		034007		
30	52. 38	023295		033980		
35	52. 38	023206		033970		
40	52. 31	023123		033944		
45	52. 31	023194		033927		
50	52. 31	023266		033901		
55	52. 31	023293		033901		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

Term-Day Observations of June 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
June 24. 10. 0	22. 49. 48	0·020633	66·8	0·032965	66·5	G
5	49. 47	020638		032858		
10	49. 47	020638		032802		
15	49. 36	020510		032841		
20	49. 23	020555		032815		
25	49. 22	020670		032815		
30	49. 22	020825		032793		
35	49. 21	020852		032798		
40	49. 7	021008		032812		
45	49. 14	021013		032786		
50	49. 1	021124		032786		
55	49. 6	021107		032760		
June 24. 11. 0	22. 49. 17	0·021107	66·2	0·032746	66·0	G
5	49. 25	021062		032746		
10	49. 28	021062		032731		
15	49. 36	021023		032726		
20	49. 46	020957		032726		
25	49. 46	020868		032731		
30	48. 32	020779		032736		
35	48. 31	020779		032736		
40	48. 22	020735		032736		
45	48. 20	020696		032736		
50	47. 59	020674		032736		
55	47. 51	020674		032736		
June 24. 12. 0	22. 47. 51	0·020629	66·0	0·032736	66·0	G
5	47. 58	020546		032728		
10	48. 4	020485		032712		
15	48. 17	020468		032694		
20	48. 32	020451		032678		
25	48. 47	020434		032652		
30	48. 47	020400		032625		
35	48. 18	020339		032599		
40	48. 11	020366		032572		G
45	47. 57	020459		032546		L
50	47. 50	020442		032520		
55	47. 50	020425		032493		
June 24. 13. 0	22. 47. 50	0·020308	64·7	0·032377	64·8	L
5	47. 54	020391		032440		
10	47. 48	020391		032440		
15	47. 45	020330		032414		
20	47. 33	020330		032388		
25	47. 33	020313		032388		
30	47. 33	020230		032361		
35	47. 40	020230		032335		
40	47. 40	020213		032355		
45	47. 45	020213		032342		
50	47. 45	020196		032321		
55	47. 45	020196		032321		
June 24. 14. 0	22. 47. 45	0·020223	64·0	0·032305	64·0	L
5	47. 51	020289		032315		
10	48. 13	020272		032288		
15	48. 20	020272		032303		
20	48. 24	020228		032317		
25	48. 31	020228		032291		
30	48. 31	020211		032301		
35	48. 24	020211		032301		
40	48. 24	020211		032284		
45	48. 24	020211		032299		
50	48. 30	020238		032313		
55	48. 34	020238		032297		
June 24. 15. 0	22. 48. 58	0·020238	63·7	0·032356	63·6	L
5	49. 8	020238		032394		
10	49. 15	020238		032394		
15	49. 28	020305		032394		
20	49. 25	020238		032304		
25	49. 25	020238		032404		
30	49. 25	020238		032394		
35	49 10	020238		032414		L
40	48. 51	020238		032423		T D
45	48. 3	020238		032443		
50	47. 31	020238		032477		
55	47. 50	020238		032491		
June 24. 16. 0	22. 47. 50	0·020238	63·7	0·032501	63·6	T D
5	47. 50	020283		032501		
10	47. 43	020349		032516		
15	47. 31	020349		032516		
20	47. 31	020349		032525		
25	47. 30	020416		032525		
30	47. 29	020504		032555		
35	47. 29	020416		032555		
40	47. 12	020349		032574		
45	47. 6	020349		032589		
50	47. 6	020349		032589		
55	46. 58	020504		032608		
June 24. 17. 0	22. 46. 54	0·020571	63·7	0·032623	63·6	T D
5	46. 54	020438		032611		
10	47. 31	020349		032611		
15	47. 18	020321		032584		
20	47. 5	020266		032618		
25	46. 38	020266		032602		
30	46. 52	020177		032597		
35	46. 59	020111		032570		
40	46. 0	020155		032570		
45	45. 57	020271		032564		
50	45. 31	020315		032588		
55	45. 23	020315		032562		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s.$ before, and $2^m.30^s.$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Term-Day Observations of June 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
June 24. 18. 0	22. 45. 27	0·020182	63·5	0·032577	63·0	T D	June 24. 22. 0	22. 48. 50	0·017412	67·0	0·033307	66·8	G
5	45. 27	020094		032557			5	49. 29	017545		033298		
10	45. 51	020094		032528			10	59. 56	017562		033298		
15	45. 54	020077		032548			15	50. 5	017606		033314		
20	45. 59	020033		032548			20	51. 52	017667		033314		
25	46. 3	019966		032538			25	51. 54	017734		033314		
30	45. 26	020077		032548			30	52. 21	017796		033299		
35	45. 53	020077		032548		T D	35	52. 6	017840		033265		
40	45. 19	020033		032553		H B	40	51. 39	017906		033255		
45	45. 18	020016		032513			45	51. 45	017945		033268		
50	45. 15	019838		032553			50	51. 29	017945		033254		
55	45. 38	019994		032562			55	51. 12	018034		033244		
June 24. 19. 0	22. 46. 9	0·019927	63·3	0·032587	63·0	H B	June 24. 23. 0	22. 50. 56	0·018250	67·5	0·033244	67·0	G
5	45. 51	019855		032602			5	51. 17	018117		033185		
10	45. 55	019629		032606			10	51. 39	018100		033141		
15	45. 35	019447		032584			15	52. 16	018211		033122		
20	45. 49	019353		032584			20	52. 8	018144		033122		
25	45. 47	019303		032575			25	51. 58	018233		033131		G
30	45. 35	018961		032579			30	51. 58	018348		033156		L
35	45. 38	018934		032584			35	52. 18	018637		033171		
40	46. 0	018862		032594			40	52. 31	018703		033171		
45	45. 33	018680		032553			45	52. 10	018903		033185		
50	45. 41	018587		032553			50	52. 30	018886		033185		
55	45. 40	018338		032524			55	52. 27	018996		033185		
June 24. 20. 0	22. 45. 39	0·018332	64·6	0·032504	62·8	H B	June 24. 24. 0	22. 53. 44	0·019063	67·2	0·033185	67·0	L
5	46. 22	018394		032526			5	54. 1	019190		033192		T D
10	46. 31	018455		032535			10	54. 18	019190		033172		T D
15	46. 37	018406		032587			15	54. 31	019052		033183		L
20	46. 41	018378		032538			20	54. 40	019158		033159		
25	46. 36	018373		032534			25	54. 53	019158		033176		
30	46. 48	018390		032546			30	55. 15	019241		033202		
35	46. 39	018297		032546			35	55. 43	019103		033182		
40	46. 39	018247		032558			40	55. 47	019258		033190		
45	46. 37	018220		032558			45	56. 1	019275		033180		
50	47. 1	018126		032570			50	56. 1	019447		033231		
55	47. 32	018076		032570			55	56. 15	019557		033221		
June 24. 21. 0	22. 48. 5	0·018049	65·8	0·032577	63·5	H B	June 24. 25. 0	22. 56. 31	0·019686	68·0	0·033257	67·7	L
5	48. 20	018066		032666			5	56. 53	019597		033247		
10	48. 40	018127		032745			10	57. 20	019503		033259		
15	48. 50	018100		032788			15	57. 20	019260		033259		
20	48. 50	018117		032858			20	56. 54	019122		033251		L
25	49. 6	018112		032917			25	56. 47	018989		033271		T D
30	49. 6	018041		032996			30	56. 54	019073		033298		
35	49. 6	017991		033015			35	57. 16	019205		033312		
40	49. 6	017898		033079		H B	40	57. 31	019360		033312		
45	49. 20	017804		033140		G	45	57. 49	019886		033338		
50	48. 50	017511		033190			50	57. 49	020041		033338		
55	48. 20	017195		033233			55	57. 32	020058		033350		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m. 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $27^s·5$.

Term-Day Observations of June 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
June 25. 2. 0	22. 57. 43	0·020280	68·5	0·033350	68·2	T D	June 25. 6. 0	22. 53·33	0·021549	70·5	0·033797	71·0	L
5	58. 1	020983		033391		T D	5	53. 13	021633		033788		
10	58. 15	021288		033372		H B	10	53. 0	021633		033788		
15	57. 39	020929		033407			15	53. 0	021650		033797		
20	57. 9	020840		033406			20	52. 34	021734		033763		
25	57. 52	021100		033396			25	52. 10	021778		033753		
30	56. 51	020763		033422			30	52. 8	021795		033739		
35	56. 42	020625		033438			35	52. 8	021878		033739		L
40	56. 43	020841		033409		H B	40	50. 39	022055		033685		H B
45	56. 43	020747		033402		T D	45	50. 7	022515		033753		
50	56. 43	020875		033403			50	49. 54	022909		033797		
55	56. 43	020875		033437			55	49. 54	022931		033773		
June 25. 3. 0	22. 56. 25	0·020892	69·5	0·033494	69·0	T D	June 25. 7. 0	22. 49. 46	0·022970	71·3	0·033802	71·0	H B
5	56. 15	021020		033505			5	49. 46	022571		033838		
10	56. 11	021192		033565			10	49. 16	022344		033800		
15	56. 17	021258		033590			15	49. 8	022145		033842		
20	56. 20	021386		033631			20	48. 59	022278		033808		
25	55. 44	021292		033657			25	49. 9	022495		033834		
30	55. 39	021199		033587			30	49. 8	022583		033875		
35	55. 38	021044		033562			35	49. 19	022517		033897		
40	55. 2	020552		033549			40	49. 34	022244		033898		
45	55. 9	020569		033550			45	50. 2	022157		033886		
50	55. 21	020364		033543			50	50. 23	022179		033861		
55	55. 16	020364		033592			55	50. 46	021753		033878		
June 25. 4. 0	22. 55. 16	0·020381	70·4	0·033618	69·9	T D	June 25. 8. 0	22. 51. 7	0·021444	71·7	0·033890	72·0	H B
5	55. 27	020381		033603			5	51. 12	021576		033870		
10	55. 15	020537		033569			10	51. 30	021665		033866		
15	55. 9	020620		033569			15	51. 22	021692		033815		
20	55. 18	020620		033569			20	51. 28	021936		033795		
25	55. 27	020620		033569			25	51. 16	022069		033805		
30	55. 27	020775		033572			30	50. 50	021870		033805		
35	55. 11	020885		033548			35	50. 44	021736		033790		
40	54. 56	020996		033548			40	50. 10	021692		033766		H B
45	54. 56	021079		033558			45	50. 10	021609		033755		G
50	55. 6	021190		033548			50	49. 44	021454		033755		
55	55. 25	021190		033548			55	49. 42	021232		033725		
June 25. 5. 0	22. 55. 31	0·021899	70·6	0·033548	70·0	T D	June 25. 9. 0	22. 49. 46	0·021011	71·5	0·033725	71·8	G
5	55. 15	021965		033574			5	49. 45	020994		033672		
10	55. 15	021633		033580			10	49. 45	020867		033641		
15	54. 14	021633		033578			15	49. 47	020673		033578		
20	54. 6	021566		033593			20	49. 54	020517		033537		
25	54. 6	021566		033604			25	49. 54	020323		033470		
30	54. 6	021549		033646			30	49. 55	020439		033438		
35	53. 59	021505		033667			35	49. 51	020622		033390		
40	53. 45	021505		033717			40	49. 51	020627		033364		
45	53. 44	021439		033735			45	49. 56	020543		033311		
50	53. 44	021394		033735			50	50. 13	020526		033285		
55	53. 44	021461		033761			55	50. 14	020571		033253		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 217°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

Term-Day Observations of July 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
July 22. 10. 0	22. 51. 19	0·021531	73·0	0·032803	72·5	G	July 22. 14. 0	22. 49. 10	0·021473	72·0	0·032799	71·6	T D
5	51. 12	021531		032769			5	49. 7	021522		032773		
10	51. 5	021487		032774			10	49. 0	021522		032746		
15	51. 0	021443		032696			15	48. 54	021505		032770		
20	50. 59	021443		032657			20	48. 46	021488		032744		
25	50. 54	021487		032769			25	48. 46	021488		032727		
30	50. 55	021487		032779			30	48. 36	021471		032701		
35	50. 54	021487		032793			35	48. 32	021454		032701		
40	50. 45	021487		032703			40	48. 19	021454		032675		
45	50. 49	021487		032788			45	48. 8	021393		032663		
50	50. 49	021509		032788			50	48. 5	021376		032647		
55	50. 54	021509		032783			55	48. 5	021376		032647		
July 22. 11. 0	22. 50. 56	0·021509	73·0	0·032788	72·5	G	July 22. 15. 0	22. 48. 12	0·021359	71·2	0·032620	70·7	T D
5	50. 56	021487		032774			5	48. 12	021342		032618		
10	50. 51	021531		032774			10	48. 12	021325		032632		
15	50. 50	021531		032817			15	48. 12	021241		032630		
20	50. 48	021531		032822			20	48. 12	021241		032640		
25	50. 43	021531		032832			25	48. 12	021291		032613		
30	50. 32	021531		032842			30	48. 26	021207		032612		
35	50. 31	021487		032842			35	48. 13	021235		032640		
40	50. 30	021487		032842			40	48. 15	021284		032624		T D
45	50. 29	021487		032822			45	48. 15	021267		032624		L
50	50. 23	021487		032832			50	48. 15	021267		032617		
55	50. 21	021487		032827			55	48. 15	021250		032632		
July 22. 12. 0	22. 50. 20	0·021487	73·0	0·032857	72·5	G	July 22. 16. 0	22. 48. 12	0·021189	70·2	0·032596	70·0	L
5	50. 9	021487		032876			5	48. 16	021105		032593		
10	49. 58	021487		032891			10	48. 15	021088		032567		
15	49. 53	021487		032886			15	47. 40	021116		032540		
20	49. 53	021487		032886			20	47. 29	021054		032514		
25	49. 50	021509		032891			25	47. 22	021104		032488		
30	49. 50	021509		032896			30	47. 21	021087		032490		
35	49. 50	021509		032896		G	35	47. 10	021003		032484		
40	49. 50	021531		032896		T D	40	47. 4	020986		032467		
45	49. 44	021531		032915			45	46. 51	021036		032455		
50	49. 39	021531		032925			50	46. 26	021019		032454		
55	49. 35	021531		032940			55	46. 26	020935		032447		
July 22. 13. 0	22. 49. 17	0·021487	73·0	0·032940	72·5	T D	July 22. 17. 0	22. 46. 32	0·020918	69·0	0·032425	68·8	L
5	49. 17	021470		032913			5	46. 32	020901		032423		
10	49. 17	021453		032887			10	46. 39	020951		032433		
15	49. 15	021392		032887			15	46. 48	020845		032421		
20	49. 14	021392		032860			20	46. 55	020845		032395		
25	49. 14	021375		032834			25	47. 0	020828		032395		
30	49. 14	021402		032832			30	46. 59	020811		032393		
35	49. 14	021341		032842			35	46. 52	020794		032396		
40	49. 14	021324		032830			40	46. 44	020794		032386		
45	49. 14	021351		032779			45	46. 33	020777		032388		
50	49. 14	021351		032752			50	46. 20	020782		032372		
55	49. 14	021334		032752			55	46. 10	020765		032377		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s\cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s\cdot 6$; in Vertical Plane, $27^s\cdot 5$.

Term-Day Observations of July 22 and 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
July 22. 18. 0	22. 46. 10	0·020681	68·0	0·032360	68·0	L
5	46. 10	020681		032351		
10	46. 18	020681		032336		
15	46. 44	020681		032351		
20	47. 1	020593		032360		
25	46. 43	020637		032360		
30	46. 53	020571		032360		
35	47. 20	020681		032375		L
40	47. 10	020681		032400		C T
45	47. 10	020637		032409		
50	47. 10	020681		032434		
55	47. 10	020593		032444		
July 22. 19. 0	22. 46. 19	0·020637	68·0	0·032429	68·0	C T
5	46. 17	020526		032434		
10	47. 0	020482		032446		
15	47. 7	020399		032380		
20	47. 7	020355		032354		
25	47. 4	020289		032379		
30	47. 21	020355		032352		
35	47. 33	019956		032362		
40	47. 10	020067		032376		
45	47. 25	020050		032369		
50	48. 11	020050		032474		
55	48. 24	019829		032448		
July 22. 20. 0	22. 48. 47	0·019718	67·8	0·032448	67·5	C T
5	48. 57	019718		032473		
10	49. 1	019701		032446		
15	49. 7	019657		032460		
20	49. 0	019657		032420		
25	48. 57	019590		032420		
30	48. 47	019506		032378		
35	48. 56	019595		032393		
40	48. 59	019640		032407		
45	49. 5	019506		032367		
50	49. 7	019578		032391		
55	49. 15	019556		032365		
July 22. 21. 0	22. 49. 19	0·019623	67·5	0·032355	67·0	C T
5	49. 42	019445		032341		
10	50. 2	019224		032316		
15	49. 53	019114		032206		
20	49. 51	018959		032192		
25	49. 50	019003		032178		
30	49. 58	018959		032168		
35	50. 18	018516		032158		
40	49. 36	018161		032119		
45	49. 28	017984		032209		
50	50. 0	017896		032194		
55	51. 14	017940		032194		C T
July 22. 22. 0	22. 52. 6	0·017785	67·5	0·032119	67·0	G
5	52. 37	017847		032230		
10	53. 1	017864		032256		
15	53. 16	017858		032283		
20	53. 16	017881		032283		
25	53. 16	017875		032309		
30	53. 15	018114		032336		
35	52. 52	018109		032338		
40	52. 52	018236		032354		
45	53. 17	018209		032342		
50	53. 16	018674		032332		
55	53. 53	018713		032358		
July 22. 23. 0	22. 53. 37	0·018752	68·5	0·032360	68·0	G
5	54. 0	018747		032333		T D
10	54. 18	018698		032364		
15	54. 36	018559		032415		
20	54. 59	018493		032415		
25	55. 29	018510		032441		
30	55. 33	018749		032488		
35	55. 59	018832		032518		
40	56. 10	018716		032520		
45	56. 58	018822		032547		
50	57. 29	019087		032547		
55	58. 10	019282		032597		
July 23. 0. 0	22. 58. 15	0·019454	69·5	0·032624	69·0	T D
5	58. 15	019608		032639		
10	58. 15	019581		032675		
15	57. 24	019625		032650		
20	57. 24	019753		032638		
25	57. 42	019819		032652		
30	57. 49	019903		032679		
35	58. 3	019992		032679		
40	57. 58	020036		032679		T D
45	57. 57	020186		032686		C T
50	57. 57	020296		032705		
55	58. 8	020357		032727		
July 23. 1. 0	22. 58. 7	0·020357	70·0	0·032722	69·5	C T
5	58. 7	020347		032784		
10	58. 8	020398		032888		
15	58. 31	020720		032940		
20	58. 56	020799		033045		
25	58. 56	020739		033097		
30	58. 54	020884		033177		
35	58. 54	020851		033219		C T
40	58. 54	020747		033262		T D
45	58. 48	020670		033312		
50	58. 21	020594		033365		
55	58. 7	020866		033444		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2ᵐ. 36ˢ. before, and 2ᵐ. 30ˢ. after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20ˢ·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24ˢ·6; in Vertical Plane, 27ˢ·5.

Term-Day Observations of July 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
July 23. 2. 0	22. 58. 16	0·021011	72·8	0·033517	72·4	T D	July 23. 6. 0	22. 52. 20	0·019953	77·0	0·034145	76·7	T D
5	57. 55	021166		033524			5	52. 2	020025		034119		
10	57. 38	021648		033524		T D	10	51. 40	020025		034055		
15	57. 42	021802		033550		C T	15	51. 11	019919		034030		
20	57. 35	021886		033550			20	51. 11	020185		034003		
25	57. 30	021665		033571			25	51. 6	020345		033943		
30	57. 40	021548		033552			30	50. 48	020439		033901		
35	57. 25	021106		033565			35	50. 31	020484		033916		T D
40	57. 31	021062		033550			40	50. 24	020710		033870		C T
45	57. 16	020835		033556			45	50. 23	020931		033790		
50	57. 9	020636		033542			50	50. 24	021002		033739		
55	56. 55	020609		033549		C T	55	50. 26	020958		033739		
July 23. 3. 0	22. 56. 46	0·020609	73·3	0·033510	73·0	L	July 23. 7. 0	22. 50. 35	0·020897	76·3	0·033703	75·8	C T
5	56. 46	020448		033521			5	50. 20	020897		033674		
10	56. 39	020134		033533			10	50. 0	020897		033664		
15	56. 19	020040		033540			15	49. 55	020897		033659		
20	56. 19	019879		033540			20	49. 58	020985		033616		
25	54. 29	019852		033556			25	49. 59	020941		033616		
30	54. 11	020091		033568			30	49. 59	020897		033579		
35	53. 58	020019		033585			35	49. 52	020831		033564		
40	53. 35	020125		033596			40	49. 39	020831		033540		
45	53. 22	020275		033613			45	49. 14	020941		033530		
50	53. 22	021044		033585			50	49. 2	021052		033540		
55	53. 22	021194		033649			55	48. 58	021052		033550		
July 23. 4. 0	22. 53. 44	0·021344	74·5	0·033676	74·0	L	July 23. 8. 0	22. 48. 52	0·021097	76·3	0·033540	75·7	C T
5	53. 44	021378		033704			5	48. 52	021030		033567		
10	53. 49	021368		033733			10	48. 51	020924		033583		
15	54. 27	021180		033775			15	48. 32	021146		033568		
20	54. 41	020865		033790			20	48. 31	021323		033595		
25	54. 35	020788		033804			25	48. 40	021035		033571		
30	54. 18	020866		033836			30	48. 50	020797		033572		
35	54. 0	020635		033851			35	48. 47	020863		033574		
40	53. 30	020492		033889		L	40	48. 16	020974		033535		
45	53. 20	020371		033957		T D	45	48. 16	020907		033576		
50	53. 43	020277		034058			50	47. 58	020863		033588		
55	53. 32	020245		034110			55	47. 32	020686		033605		C T
July 23. 5. 0	22. 53. 42	0·020279	76·7	0·034149	76·4	T D	July 23. 9. 0	22. 47. 22	0·020780	76·0	0·033591	76·5	G
5	53. 42	020124		034149			5	46 52	022662		033620		
10	53. 32	020097		034093			10	47. 20	022662		033615		
15	53. 10	020097		034093			15	47. 37	022329		033615		
20	53. 22	020252		034093			20	49. 8	022108		033615		
25	53. 24	020406		034093			25	49. 37	021997		033581		
30	53. 3	020313		034105			30	51. 15	021997		033557		
35	52. 14	020158		034105			35	52. 24	021997		033483		
40	51. 59	020269		034105			40	52. 52	021333		033474		
45	51. 59	020269		034129			45	52. 25	020470		033420		
50	52. 12	020175		034179			50	51. 34	020005		033361		
55	52. 21	020131		034145			55	50. 54	019894		033313		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

Term-Day Observations of August 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Aug. 28. 10. 0	22. 49. 19	0·022059	73·5	0·032047	73·0	G	Aug. 28. 14. 0	22. 47. 32	0·021104	71·4	0·031909	71·0	T D
5	52. 7	021351		032009			5	47. 42	020928		031861		
10	58. 15	021113		031631			10	47. 5	020994		031802		
15	59. 56	022552		031631			15	46. 32	020817		031763		
20	55. 13	021118		031414			20	46. 11	020640		031724		
25	42. 13	022490		031224			25	47. 19	020374		031699		
30	36. 7	022451		031285			30	48. 34	019870		031665		
35	35. 51	023846		031529			35	50. 40	019471		031602		
40	37. 36	024621		031602			40	53. 16	019206		031568		
45	41. 13	024383		031649			45	53. 16	018984		031471		
50	43. 20	023718		031624			50	53. 33	019250		031519		
55	45. 10	022926		031536			55	56. 18	020756		031422		
Aug. 28. 11. 0	22. 44. 16	0·021819	73·0	0·031564	72·5	G	Aug. 28. 15. 0	22. 59. 32	0·021420	71·3	0·031276	71·0	T D
5	43. 58	021072		031487			5	23. 1. 9	021386		031149		
10	44. 18	020457		031450			10	1. 28	021335		031048		
15	42. 58	019444		031450			15	1. 14	021079		030824		
20	41. 40	018979		031424			20	0. 52	020824		030708		
25	40. 22	019095		031424			25	23. 0. 0	020596		030485		
30	39. 2	019188		031421			30	22. 58. 41	020452		030380		
35	37. 55	019171		031504			35	57. 34	019819		030270		T D
40	38. 56	019420		031543			40	54. 22	019215		030183		H B
45	39. 6	020266		031590			45	51. 44	019425		030178		
50	40. 22	020134		031702			50	49. 48	020365		030169		
55	41. 9	020006		031696			55	48. 49	020934		030278		
Aug. 28. 12. 0	22. 42. 4	0·019879	72·0	0·031745	72·0	G	Aug. 28. 16. 0	22. 47. 32	0·021010	68·5	0·030260	68·5	H B
5	43. 31	019879		031807			5	45. 21	021099		030284		
10	43. 46	019945		031807			10	43. 53	020944		030262		
15	44. 25	020033		031812			15	42. 46	021054		030296		
20	44. 54	020410		031842			20	42. 22	020263		030368		
25	45. 12	020432		031881		G	25	40. 38	020374		030417		
30	44. 43	020210		031886		T D	30	39. 40	020484		030472		
35	44. 43	020254		031881			35	39. 17	019931		030600		
40	44. 51	020210		031915			40	38. 35	019869		030697		
45	45. 14	020210		031944			45	38. 49	019891		030836		
50	45. 21	020210		031978			50	39. 29	020024		030899		
55	45. 39	020366		032012			55	40. 19	019980		030897		
Aug. 28. 13. 0	22. 45. 39	0·020520	72·0	0·032037	72·0	T D	Aug. 28. 17. 0	22. 39. 40	0·020068	68·3	0·030961	68·0	H B
5	46. 26	020592		032034			5	40. 33	020340		031069		
10	46. 1	020636		032008			10	41. 17	020074		031080		
15	45. 13	020708		031981			15	40. 59	020190		031105		
20	45. 17	020885		031996			20	41. 39	019818		031149		
25	45. 0	020824		031970			25	42. 44	020394		031222		
30	45. 12	020824		031944			30	43. 7	020399		031245		
35	45. 14	020741		031917			35	42. 55	020249		031294		
40	45. 32	020807		031930			40	42. 48	020072		031298		
45	45. 48	020768		031913			45	42. 11	020277		031250		
50	45. 43	020701		031913			50	41. 41	020193		031281		
55	46. 48	020928		031935			55	43. 7	020326		031267		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Aug. $28^d.\ 10^h$. The changes in the positions of the magnets between this time and $16^h.\ 46^m$ were frequent, and extra observations were taken between these times. (See Section of Extraordinary Observations.)

Aug. $28^d.\ 17^h.\ 7^m.\ 45^s$. The western declination was 22°. 41′. 5″; the reduced reading of the Horizontal Force Magnet was 0·019963; and that of the Vertical Force Magnet was 0·031089.

Term-Day Observations of August 28 and 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Aug. 28. 18. 0	22. 43. 12	0·020066	67·5	0·031305	67·7	H B	Aug. 28. 22. 0	22. 48. 21	0·018228	67·5	0·031634	67·0	G
5	43. 17	019667		031328			5	48. 44	018095		031634		
10	41. 59	019871		031270			10	49. 16	018183		031660		
15	42. 45	019761		031317			15	49. 32	017896		031626		
20	42. 48	019318		031327			20	50. 4	017874		031642		
25	43. 4	019495		031266			25	50. 14	017874		031647		
30	44. 4	019256		031298			30	50. 26	018117		031674		
35	44. 37	018858		031298		H B	35	50. 57	018338		031664		
40	43. 58	018747		031311		C T	40	50. 55	018338		031650		
45	44. 26	018504		031345			45	52. 25	018228		031622		
50	42. 35	018730		031367			50	51. 59	018604		031671		
55	42. 49	018774		031343			55	53. 29	018626		031693		
Aug. 28. 19. 0	22. 43. 47	0·018774	67·2	0·031317	67·0	C T	Aug. 28. 23. 0	22. 53. 33	0·018494	67·5	0·031693	67·5	G
5	42. 15	018686		031365			5	53. 54	018134		031719		
10	42. 5	018863		031380			10	54. 15	017913		031721		
15	45. 15	018487		031370			15	54. 26	018063		031692		
20	44. 43	018243		031365			20	53. 50	018262		031699		
25	44. 39	018509		031414			25	54. 9	018389		031725		G
30	45. 37	018465		031439			30	54. 54	018849		031752		T D
35	45. 34	018199		031439			35	55. 3	019115		031752		
40	44. 45	017956		031415			40	55. 5	019309		031778		
45	44. 23	017889		031390			45	54. 41	019132		031789		
50	44. 41	016848		031390			50	55. 37	019392		031831		
55	44. 41	017779		031454			55	55. 44	019547		031831		
Aug. 28. 20. 0	22. 44. 28	0·017623	67·2	0·031488	67·0	C T	Aug. 29. 0. 0	22. 55. 32	0·019897	68·2	0·031857	68·4	T D
5	44. 51	017623		031512			5	55. 51	020024		031884		
10	44. 16	017734		031510			10	56. 11	020290		031869		
15	44. 45	017623		031548			15	56. 32	020263		031861		
20	44. 32	017717		031558			20	56. 41	020440		031861		
25	45. 30	017628		031573			25	56. 36	020391		031867		T D
30	45. 30	017650		031542			30	56. 36	020611		031828		C T
35	45. 30	017828		031556			35	56. 57	020518		031855		T D
40	46. 11	017774		031605			40	57. 6	021005		031840		T D
45	45. 56	017922		031619			45	58. 0	021421		031911		H B
50	46. 26	017833		031602			50	58. 51	021243		031891		
55	45. 52	017922		031602			55	58. 1	021371		031879		
Aug. 28. 21. 0	22. 45. 38	0·017988	67·0	0·031612	66·7	C T	Aug. 29. 1. 0	22. 58. 49	0·021681	68·8	0·031893	69·0	H B
5	45. 59	018143		031602			5	59. 32	021836		031859		
10	45. 59	018381		031639			10	59. 37	021725		031885		
15	46. 39	018270		031678			15	59. 17	021327		031885		
20	46. 36	018110		031658			20	58. 32	020348		031883		
25	46. 36	018177		031629			25	57. 57	019905		031824		
30	46. 40	018083		031655			30	57. 15	019794		031826		
35	47. 32	018194		031655			35	56. 22	019861		031871		H B
40	47. 43	018304		031650			40	56. 8	019833		031900		C T
45	48. 34	018211		031650		C T	45	56. 22	020276		031950		
50	48. 40	018144		031662		G	50	56. 58	020476		031969		
55	48. 33	018117		031634			55	57. 32	020807		031025		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2m. 30s before, and 2m. 30s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 27s·5.

Aug. 28d. 18h. 14m. 44s. The western declination was 22°. 43′. 49″; the reduced reading of the Horizontal Force Magnet was 0·019650; and that of the Vertical Force Magnet was 0·031327.

Term-Day Observations of August 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Aug. 29. 2. 0	22. 58. 13	0·021029	69·0	0·032050	69·5	C T
5	57. 19	020952		032102		
10	55. 11	020344		032155		
15	55. 39	019802		032183		
20	55. 39	019615		032207		
25	55. 30	019914		032260		
30	55. 46	020458		032373		
35	56. 6	020763		032466		C T
40	56. 20	020509		032547		H B
45	56. 16	020322		032575		
50	56. 31	020201		032628		
55	55. 32	020744		032672		
Aug 29. 3. 0	22. 56. 15	0·020778	71·3	0·032734	72·0	H B
5	55. 17	020264		032809		
10	54. 23	020347		032786		
15	53. 56	019921		032740		
20	53. 56	019938		032789		
25	53. 8	019955		032756		
30	52. 54	020237		032774		
35	53. 26	020100		032834		
40	53. 15	021047		032845		
45	53. 32	021130		032896		
50	53. 31	020882		032898		
55	53. 2	021274		032874		
Aug. 29. 4. 0	22. 53. 43	0·021071	72·5	0·032877	73·0	H B
5	53. 23	021624		032877		
10	52. 27	021004		032887		
15	52. 27	020938		032803		
20	52. 15	020916		032829		
25	52. 7	021203		032771		
30	52. 7	021619		032800		
35	51. 47	021796		032795		H B
40	52. 10	022261		032855		C T
45	52. 11	022128		032880		
50	51. 52	022482		032890		
55	51. 33	022084		032851		
Aug. 29. 5. 0	22. 51. 22	0·022084	72·6	0·032880	73·2	C T
5	51. 1	021862		032869		
10	50. 46	021845		032854		
15	50. 18	021845		032828		
20	49. 36	022050		032843		
25	49. 36	022315		032830		
30	49. 36	022006		032843		
35	48. 16	022227		032814		
40	47. 26	022382		032802		
45	46. 18	022559		032816		
50	45. 44	023561		032819		
55	45. 29	023671		032878		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Aug. 29. 6. 0	22. 45. 31	0·024358	72·3	0·032857	72·5	C T
5	45. 56	024578		032864		
10	46. 6	024341		032913		
15	46. 20	023898		032877		
20	45. 37	023234		032845		
25	45. 37	023012		032826		
30	45. 20	022884		032800		
35	45. 45	022884		032759		
40	46. 14	023062		032769		T D
45	46. 10	022663		032742		
50	45. 25	022468		032706		
55	43. 6	022424		032730		
Aug. 29. 7. 0	22. 42. 57	0·022646	72·0	0·032728	71·7	T D
5	42. 57	022867		032762		
10	43. 9	023072		032777		
15	44. 10	022629		032777		
20	44. 55	022297		032702		
25	45. 3	021743		032653		
30	45. 10	021505		032604		
35	45. 10	021505		032579		
40	45. 14	021217		032529		
45	45. 43	021439		032529		
50	44. 45	021643		032529		
55	45. 40	021887		032529		
Aug. 29. 8. 0	22. 46. 54	0·021709	71·7	0·032529	71·5	T D
5	47. 7	021532		032529		
10	46. 51	021488		032481		
15	46. 38	021488		032442		
20	46. 11	021293		032422		
25	46. 7	021249		032432		
30	46. 7	021471		031994		T D
35	46. 8	021692		032383		G
40	46. 8	021675		032378		
45	46. 0	021742		032373		
50	45. 49	021764		032373		
55	45. 33	022118		032373		
Aug 29. 9. 0	22. 45. 9	0·021897	71·5	0·032363	71·5	G
5	45. 50	022383		032363		
10	46. 47	022383		032368		
15	47. 19	022339		032368		
20	47. 34	022229		032368		
25	47. 11	022162		032334		
30	46. 52	022118		032314		
35	46. 48	022118		032285		
40	46. 44	022206		032247		
45	46. 47	022229		032285		
50	44. 32	023601		032285		
55	41. 11	026103		032285		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.\ 30^s$ before, and $2^m.\ 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $27^s.5$.

Aug. $29^d.\ 9^h.\ 45^m$. The changes in the positions of the magnets being different from the ordinary change, and their motion being unusually agitated, extra observations were taken. (See Section of Extraordinary Observations.)

Term-Day Observations of September 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 23. 10. 0	22. 48. 21	0·020239	68·0	0·031688	68·0	G
5	48. 34	020239		031698		
10	48. 58	020239		031703		
15	49. 17	020261		031708		
20	49. 57	020526		031723		
25	49. 15	020681		031727		
30	49. 3	020881		031727		
35	48. 53	020903		031713		
40	49. 13	021080		031703		
45	49. 9	021124		031713		
50	49. 9	021124		031727		
55	49. 9	021191		031727		
Sep. 23. 11. 0	22. 49. 9	0·021191	68·0	0·031727	68·0	G
5	49. 9	021191		031727		
10	48. 21	021014		031727		
15	47. 34	021302		031713		
20	45. 42	021479		031713		
25	45. 32	021413		031713		
30	47. 37	021302		031703		
35	47. 49	021080		031732		
40	48. 12	020859		031762		
45	49. 55	020969		031727		
50	52. 47	021080		031727		
55	53. 53	021855		031727		
Sep. 23. 12. 0	22. 54. 37	0·022187	68·0	0·031727	68·0	G
5	54. 28	021771		031578		
10	52. 2	021472		031433		
15	51. 1	021012		031279		
20	47. 54	021261		031239		
25	45. 54	021294		031200		
30	45. 9	021321		031147		G
35	44. 39	021105		031121		L
40	43. 31	021226		031119		
45	43. 3	021319		031105		
50	43. 14	021125		031138		
55	42. 57	021047		031124		
Sep. 23. 13. 0	22. 42. 57	0·020852	66·4	0·031108	66·3	L
5	42. 29	020587		031108		
10	42. 8	020254		031108		
15	41. 43	020144		031108		
20	41. 43	020078		031108		
25	41. 44	019923		031146		
30	41. 36	019790		031182		
35	41. 25	019923		031211		
40	42. 6	020011		031255		
45	42. 59	020188		031280		
50	43. 42	020365		031314		
55	44. 0	020365		031378		
Sep. 23. 14. 0	22. 43. 57	0·020697	66·4	0·031402	66·4	L
5	44. 19	020587		031416		
10	44. 7	020543		031426		
15	43. 56	020697		031426		
20	43. 43	020808		031460		
25	43. 22	020764		031460		
30	42. 13	020714		031453		
35	40. 37	020604		031453		
40	41. 13	020560		031429		
45	39. 16	020493		031453		
50	38. 54	020604		031419		
55	38. 34	020560		031405		
Sep. 23. 15. 0	22. 38. 31	0·020560	66·5	0·031415	66·5	L
5	38. 22	020493		031405		
10	38. 22	020510		031405		
15	38. 31	020399		031395		
20	39. 2	020311		031405		
25	39. 34	020178		031405		
30	39. 40	020195		031376		
35	38. 29	020195		031376		L
40	37. 54	020195		031346		H B
45	38. 52	020594		031331		
50	40. 41	021584		031371		
55	39. 50	022316		031429		
Sep. 23. 16. 0	22. 39. 24	0·022714	66·8	0·031356	66·5	H B
5	39. 5	022980		031322		
10	38. 53	022647		031199		
15	40. 13	022299		031127		
20	39. 24	021679		031078		
25	38. 58	021479		030999		
30	38. 20	021014		031014		
35	37. 46	021081		031004		
40	38. 37	021081		031048		
45	38. 21	021285		031102		
50	39. 45	020842		031146		
55	39. 46	020665		031136		
Sep. 23. 17. 0	22. 37. 40	0·020842	66·6	0·031136	66·5	H B
5	37. 46	020975		031151		
10	38. 17	020953		031151		
15	38. 33	020815		031211		
20	39. 31	020682		031235		
25	40. 4	020682		031240		
30	40. 4	020638		031255		
35	41. 0	020594		031284		
40	40. 29	020748		031289		
45	41. 19	020743		031325		
50	41. 58	020655		031325		
55	42. 19	020611		031320		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m, 30^s$ before, and $2^m, 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

Term-Day Observations of September 23 and 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Sep. 23. 18. 0	22. 43. 4	0·020589	66·8	0·031334	66·7	H B	Sep. 23. 22. 0	22. 48. 14	0·018722	66·5	0·031317	66·5	G
5	43. 26	020433		031359			5	48. 10	018860		031290		
10	43. 33	020628		031393			10	48. 39	018910		031237		
15	43. 0	020716		031408			15	49. 9	019003		031211		
20	42. 43	020628		031432			20	50. 13	018986		031185		
25	42. 12	020623		031398			25	50. 11	019080		031256		
30	42. 25	020645		031450			30	50. 45	019046		031241		
35	42. 36	020467		031469			35	50. 20	019139		031210		
40	42. 11	020662		031455			40	51. 15	019233		031194		
45	42. 54	020772		031459			45	51. 42	019149		031157		
50	43. 59	020706		031469			50	51. 10	019088		031104		
55	43. 44	020723		031494		H B	55	51. 45	019027		031010		G
Sep. 23. 19. 0	22. 43. 24	0·020612	67·2	0·031474	66·8	C T	Sep. 23. 23. 0	22. 51. 53	0·018877	65·2	0·030999	65·0	L
5	43. 35	020501		031484			5	51. 38	019143		030901		
10	42. 11	020723		031386			10	51. 38	019497		030872		
15	43. 30	020706		031508			15	52. 16	019453		030886		
20	43. 53	020595		031459			20	52. 46	019541		030984		
25	43. 53	020595		031459			25	52. 32	019675		031009		
30	43. 53	020086		031474			30	53. 28	019736		031047		
35	42. 32	020263		031450			35	54. 4	019558		030984		
40	43. 23	020373		031450			40	54. 4	019514		030970		
45	43. 56	020025		031450			45	54. 28	019514		030999		
50	42. 51	019803		031425			50	54. 49	019603		031033		
55	43. 45	020069		031435			55	54. 56	019736		030935		
Sep. 23. 20. 0	22. 44. 39	0·020246	67·0	0·031435	66·8	C T	Sep. 24. 0. 0	22. 55. 31	0·019957	65·3	0·031009	65·0	L
5	44. 41	020069		031445			5	55. 52	020306		031035		
10	44. 40	019897		031432			10	55. 17	020168		031088		
15	44. 56	019786		031442			15	55. 56	019787		031152		
20	44. 3	019769		031432			20	55. 43	019782		031116		L
25	42. 21	019769		031447			25	56. 2	019821		031186		H B
30	42. 50	019930		031392			30	56. 6	020280		031215		
35	43. 48	019752		031382			35	56. 35	020054		031265		
40	43. 57	019730		031382			40	56. 35	020115		031283		
45	44. 32	019625		031382			45	56. 38	020331		031333		
50	43. 33	019514		031356			50	56. 45	020680		031390		
55	43. 28	019453		031356			55	56. 45	020808		031402		
Sep. 23. 21. 0	22. 43. 52	0·019453	66·5	0·031331	66·5	C T	Sep. 24. 1. 0	22. 56. 14	0·020626	66·5	0·031443	66·5	H B
5	45. 40	019275		031307			5	56. 20	020781		031415		
10	45. 46	019165		031331			10	56. 10	020510		031465		
15	45. 53	019054		031317			15	56. 15	020599		031460		
20	46. 0	019010		031307			20	56. 46	020748		031460		
25	46. 44	019165		031322			25	56. 54	020948		031465		
30	47. 39	018944		031331			30	56. 54	020987		031491		H B
35	47. 41	018833		031331			35	57. 18	020920		031491		C T
40	47. 16	018833		031331			40	57. 6	020655		031481		
45	47. 44	018611		031331		C T	45	56. 35	020628		031457		
50	48. 38	018678		031331		G	50	56. 53	020937		031459		
55	48. 38	018722		031317			55	56. 14	020910		031494		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $27^s \cdot 5$.

Term-Day Observations of September 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer	Observers.
d h m	° ′ ″		°		°	
Sep. 24. 2. 0	22. 56. 23	0·021088	67·0	0·031459	66·8	C T
5	56. 23	021193		031510		
10	56. 8	021072		031575		
15	55. 56	021200		031601		
20	54. 22	021239		031637		
25	55. 1	021123		031674		
30	54. 56	021046		031690		
35	54. 17	021617		031693		
40	55. 10	021678		031792		C T
45	54. 31	021540		031793		H B
50	53. 48	021397		031820		
55	53. 18	021259		031846		
Sep. 24. 3. 0	22. 53. 12	0·021276	68·5	0·031864	68·0	H B
5	53. 12	021625		031899		
10	53. 12	021708		031925		
15	53. 32	021991		031987		
20	53. 32	021924		031967		
25	52. 36	021481		032013		
30	52. 6	021095		031991		
35	51. 39	021156		032080		
40	51. 39	021240		032082		
45	51. 6	021345		032099		
50	51. 26	021190		032119		
55	51. 23	021163		032096		
Sep. 24. 4. 0	22. 50. 46	0·021224	69·5	0·032137	69·0	H B
5	50. 37	021269		032137		
10	50. 37	021357		032142		
15	50. 30	021446		032159		
20	50. 6	021446		032144		
25	50. 24	021645		032134		
30	50. 5	021645		032134		
35	50. 19	021668		032110		H B
40	49. 55	021778		032105		C T
45	49. 52	021889		032165		
50	49. 32	021446		032117		
55	49. 28	021335		032088		
Sep. 24. 5. 0	22. 49. 9	0·021335	69·5	0·032068	69·2	C T
5	49. 6	021335		032068		
10	49. 3	021352		032070		
15	48. 55	021352		032046		
20	48. 55	021419		032046		
25	48. 55	021530		032056		
30	48. 54	021480		032062		
35	48. 51	021635		032047		
40	48. 50	021768		032062		
45	49. 3	021702		032047		
50	48. 49	021608		032060		
55	48. 49	021608		032040		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Sep. 24. 6. 0	22. 48. 51	0·021719	69·8	0·032040	69·5	C T
5	49. 1	021940		032040		
10	48. 55	022144		032033		
15	48. 48	022255		032023		
20	48. 52	022365		032033		
25	47. 41	022348		032023		
30	47. 49	022348		031987		
35	47. 54	022393		031987		
40	47. 53	022331		031997		
45	48. 9	021999		031997		
50	48. 35	021557		031960		
55	48. 32	021274		031960		C T
Sep. 24. 7. 0	22. 48. 7	0·021097	69·4	0·031970	69·2	L
5	47. 36	021008		031985		
10	47. 10	021080		031990		
15	47. 23	021080		032008		
20	47. 41	021345		032017		
25	45. 32	021683		031983		
30	42. 36	022613		031944		
35	40. 45	023277		031944		
40	43. 1	023260		031968		
45	42. 41	022994		031952		
50	41. 57	022861		031933		
55	40. 20	023021		031889		
Sep. 24. 8. 0	22. 40. 9	0·023287	69·0	0·031879	69·0	L
5	41. 54	022911		031879		
10	43. 56	022269		031898		
15	44. 17	021472		031879		
20	43. 33	020985		031840		
25	43. 12	021139		031821		
30	43. 18	021472		031869		
35	44. 10	021516		031869		
40	45. 38	021472		031869		L
45	46. 20	021361		031869		G
50	46. 42	021294		031869		
55	47. 6	021250		031869		
Sep. 24. 9. 0	22. 47. 6	0·021250	69·0	0·031879	69·0	G
5	47. 6	021250		031869		
10	47. 8	021184		031869		
15	47. 8	021184		031869		
20	47. 9	021029		031869		
25	47. 9	020985		031869		
30	47. 6	020918		031869		
35	45. 26	020630		031869		
40	45. 6	020851		031869		
45	45. 14	021250		031884		
50	45. 13	021250		031893		
55	45. 13	021250		031908		G

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m. 30^s$ before, and $2^m. 30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s·8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s·6$; in Vertical Plane, $27^s·5$.

Term-Day Observations of October 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 21. 10. 0	22. 46. 9	0·025116	59·7	0·029808	58·5	D
5	46. 13	025315		029813		
10	46. 18	025404		029808		
15	46. 19	025231		029772		
20	46. 39	024810		029749		
25	47. 0	024346		029730		
30	46. 49	024124		029716		
35	46. 15	024324		029688		
40	46. 17	024324		029707		
45	47. 19	024749		029685		
50	48. 38	024815		029718		
55	48. 43	024572		029713		
Oct. 21. 11. 0	22. 47. 51	0·024063	59·5	0·029676	58·3	D
5	45. 53	023487		029602		
10	43. 1	023510		029583		
15	40. 28	023598		029564		
20	38. 25	023465		029555		
25	36. 45	023510		029574		
30	36. 0	023974		029589		
35	36. 1	024440		029658		
40	37. 41	024661		029687		
45	39. 27	024661		029696		
50	40. 52	024528		029696		
55	41. 41	024285		029696		
Oct. 21. 12. 0	22. 42. 9	0·023886	59·5	0·029682	58·2	D
5	42. 45	023559		029632		
10	43. 26	023431		029628		
15	43. 43	023321		029621		
20	43. 33	023215		029611		
25	43. 57	023265		029608		
30	44. 43	023248		029600		
35	44. 57	023336		029623		D
40	45. 6	023275		029615		H B
45	45. 32	023501		029642		
50	45. 56	023440		029616		
55	46. 32	023440		029621		
Oct. 21. 13. 0	22. 46. 36	0·023290	58·6	0·029609	57·5	H B
5	46. 24	023246		029613		
10	46. 28	023357		029618		
15	46. 31	023246		029623		
20	46. 50	023246		029632		
25	46. 48	023268		029656		
30	46. 28	023406		029672		
35	46. 48	023584		029683		
40	46. 40	023472		029701		
45	46. 28	023450		029711		
50	46. 50	023472		029711		
55	46. 57	023827		029725		
Oct. 21. 14. 0	22. 47. 20	0·023650	58·5	0·029758	57·5	H B
5	46. 50	023340		029758		
10	46. 7	023494		029758		
15	45. 44	023694		029767		
20	45. 13	023628		029767		
25	43. 29	023672		029758		
30	42. 37	023760		029744		
35	42. 10	023450		029758		
40	40. 50	023517		029721		
45	39. 37	023428		029711		
50	39. 2	023229		029697		
55	39. 31	023251		029695		
Oct. 21. 15. 0	22. 42. 11	0·023406	58·5	0·029744	57·5	H B
5	45. 7	023650		029804		
10	46. 33	023450		029784		
15	46. 20	023650		029718		
20	45. 9	023716		029675		
25	43. 19	023893		029633		
30	42. 9	024226		029614		
35	41. 58	024004		029568		
40	41. 18	023937		029568		H B
45	41. 10	023672		029570		L
50	41. 5	023672		029561		
55	40. 53	023716		029621		
Oct. 21. 16. 0	22. 40. 56	0·023716	58·5	0·029574	58·0	L
5	41. 35	023672		029606		
10	42. 9	023672		029597		
15	42. 19	023937		029623		
20	41. 52	024004		029623		
25	42. 13	024115		029595		
30	42. 18	024353		029577		
35	42. 3	024618		029577		
40	42. 3	024729		029549		
45	42. 15	024662		029603		
50	42. 22	024353		029565		
55	42. 11	024353		029556		
Oct. 21. 17. 0	22. 41. 50	0·024176	58·6	0·029556	58·2	L
5	41. 15	023910		029537		
10	40. 54	023927		029583		
15	40. 42	023861		029583		
20	41. 13	023706		029633		
25	42. 18	023657		029656		
30	42. 57	023501		029692		
35	43. 57	023501		029683		
40	44. 23	023297		029715		
45	44. 35	023164		029755		
50	45. 14	023120		029779		
55	45. 57	023093		029828		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$. before, and $2^m.30^s$. after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.2$.

Term-Day Observations of October 21 and 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 21. 18. 0	22. 46. 44	0·023093	59·0	0·029860	58·7	L
5	47. 21	022871		029860		
10	47. 25	022761		029874		
15	46. 6	023137		029874		
20	46. 53	023204		029883		
25	46. 33	023204		029897		
30	45. 47	023314		029871		L
35	46. 29	023314		029848		T D
40	46. 11	023314		029866		
45	46. 11	023314		029880		
50	46. 0	023314		029880		
55	45. 56	023314		029880		
Oct. 21. 19. 0	22. 45. 50	0·023314	59·0	0·029880	58·6	T D
5	45. 15	023314		029894		
10	45. 39	023314		029894		
15	45. 42	023314		029894		
20	45. 22	023314		029908		
25	46. 7	023314		029908		
30	45. 39	023314		029908		
35	45. 39	023314		029894		
40	45. 48	023314		029894		
45	45. 15	023314		029918		
50	45. 39	023425		029918		
55	45. 23	023425		029918		
Oct. 21. 20. 0	22. 46. 56	0·022317	59·0	0·029918	58·6	T D
5	44. 21	022606		029894		
10	43. 22	022854		029894		
15	44. 52	023120		029941		
20	45. 0	023120		029941		
25	45. 10	023120		029920		
30	45. 55	023103		029933		
35	44. 47	022948		029933		
40	45. 30	022837		029915		
45	45. 24	022616		029938		
50	45. 23	022599		029961		
55	45. 23	022599		029938		
Oct. 21. 21. 0	22. 45. 23	0·022466	58·7	0·029938	58·5	T D
5	44. 47	022377		029924		
10	45. 11	022360		029888		
15	46. 3	022693		029888		
20	46. 33	022516		029815		
25	46. 42	022343		029806		
30	46. 39	022232		029742		
35	46. 57	021901		029788		
40	46. 57	021618		029788		
45	47. 9	020666		029670		
50	48. 9	020334		029670		
55	47. 37	020051		029704		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Oct. 21. 22. 0	22. 48. 31	0·019764	58·3	0·029713	58·0	T D
5	49. 29	019542		029736		
10	48. 53	019670		029760		
15	49. 35	019847		029764		
20	50. 33	019847		029783		T D
25	49. 21	020290		029806		G
30	49. 27	020173		029876		
35	48. 46	020285		029871		
40	49. 0	020285		029876		
45	49. 11	020129		029876		
50	49. 15	020589		029876		
55	48. 36	021032		029876		G
Oct. 21. 23. 0	22. 48. 21	0·021696	58·6	0·029922	58·0	H B
5	48. 52	021874		029936		
10	49. 34	022073		029913		
15	49. 48	022205		029886		
20	49. 52	021874		029919		
25	49. 17	022095		029849		
30	52. 4	022676		029849		
35	54. 22	023052		029890		
40	52. 57	022786		029886		
45	52. 59	022454		029878		
50	53. 20	022299		029771		
55	54. 6	022720		029771		
Oct. 22. 0. 0	22. 54. 15	0·022676	58·5	0·029762	57·8	H B
5	54. 6	022609		029770		L
10	53. 50	022737		029747		
15	54. 3	022803		029778		
20	55. 18	022981		029774		
25	54. 17	023025		029795		
30	54. 37	022820		029786		
35	54. 19	023219		029802		
40	55. 6	023374		029881		
45	55. 36	022687		029913		
50	55. 8	023103		029853		
55	54. 59	023280		029906		
Oct. 22. 1. 0	22. 54. 59	0·023103	58·8	0·029906	58·4	L
5	55. 57	023120		029933		
10	57. 6	023253		029980		
15	57. 33	023314		030039		
20	57. 47	023226		030025		
25	56. 58	022844		030060		L
30	56. 29	022949		030027		H B
35	55. 46	022374		030087		
40	55. 46	022346		030087		
45	56. 12	022346		030085		
50	55. 33	022142		030122		
55	56. 32	022209		030131		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.2$.

Term-Day Observations of October 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Oct. 22. 2. 0	22. 55. 49	0·022358	59·5	0·030233	59·0	H B	Oct. 22. 6. 0	22. 33. 28	0·023137	59·0	0·030722	59·0	G
5	55. 49	022159		030233			5	30. 57	023204		030531		
10	56. 0	022253		030247			10	27. 13	023961		030508		
15	55. 32	022563		030220			15	27. 22	025511		030482		
20	55. 40	022501		030230			20	34. 15	025472		030455		
25	55. 40	022435		030244			25	38. 5	024387		030455		
30	54. 26	022551		030225			30	39. 14	024038		030499		
35	54. 26	022905		030276			35	40. 46	023684		030310		G
40	54. 49	022972		030346		H B	40	41. 8	021448		030310		H B
45	53. 46	022689		030334		L	45	38. 30	021143		030107		
50	53. 21	022711		030357			50	36. 42	021519		030104		
55	53. 32	022650		030371			55	37. 30	021458		030127		
Oct. 22. 3. 0	22. 53. 15	0·022716	59·0	0·030394	58·8	L	Oct. 22. 7. 0	22. 38. 1	0·021835	58·5	0·030161	58·2	H B
5	53. 4	022761		030311			5	38. 49	022166		030179		
10	53. 0	022428		030338			10	40. 27	022614		030181		
15	53. 59	022694		030384			15	43. 9	023124		030199		
20	54. 22	022915		030384			20	44. 33	023035		030178		
25	54. 41	023314		030436			25	45. 19	022614		030146		
30	55. 55	022495		030431			30	43. 57	022287		030077		
35	56. 0	022251		030331			35	44. 19	022110		030012		
40	56. 0	021476		030421			40	44. 22	022132		030003		
45	54. 6	021521		030343			45	44. 39	022198		029986		
50	53. 40	021897		030315			50	45. 9	022157		030009		
55	53. 40	022141		030320			55	45. 27	022071		030010		
Oct. 22. 4. 0	22. 54. 0	0·022207	59·0	0·030361	58·8	L	Oct. 22. 8. 0	22. 45. 47	0·022115	58·2	0·030006	57·7	H B
5	54. 0	022207		030412			5	46. 19	022248		030006		
10	53. 25	021875		030412			10	46. 11	022514		030047		
15	52. 49	021986		030457			15	47. 6	022669		030042		
20	53. 39	021808		030457			20	47. 27	022669		030047		
25	53. 39	021654		030457			25	47. 38	022802		030037		
30	53. 17	021543		030438			30	47. 11	022913		030068		
35	52. 47	021499		030438		L	35	46. 57	022913		030044		H B
40	52. 20	021100		030438		G	40	47. 7	023001		030035		T D
45	52. 21	021100		030442			45	46. 52	023178		030035		
50	52. 22	021100		030442			50	46. 23	023399		030062		
55	51. 9	021100		030558			55	45. 18	024440		030062		
Oct. 22. 5. 0	22. 45. 37	0·021875	59·0	0·030605	59·0	G	Oct. 22. 9. 0	22. 45. 18	0·024949	58·2	0·030100	58·0	T D
5	40. 57	022628		030633			5	47. 34	025375		030012		
10	40. 16	022428		030698			10	46. 59	026039		029949		
15	36. 5	022384		030740			15	46. 18	026022		029889		
20	31. 14	023314		030745			20	45. 50	026022		029889		
25	29. 29	024598		030833			25	48. 8	026403		029835		
30	28. 23	025085		030922			30	49. 31	025988		029744		
35	27. 58	025307		030922			35	48. 30	025767		029679		
40	28. 17	026303		030922			40	48. 18	025971		029598		
45	29. 41	026303		030815			45	46. 47	023757		029524		
50	30. 10	025971		030815			50	45. 45	023740		029496		
55	30. 10	025528		030791			55	46. 27	023740		029475		T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $28^s \cdot 2$.

Term-Day Observations of November 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 27. 10. 0	22. 46. 11	0·022693	51·7	0·029098	51·5	H B	Nov. 27. 14. 0	22. 45. 49	0·022677	52·0	0·028341	52·0	G H
5	46. 27	022538		029062			5	45. 10	022761		028350		
10	46. 11	022494		029043			10	43. 55	022822		028390		
15	46. 0	022494		029043			15	43. 31	022728		028372		
20	45. 39	022361		029020			20	43. 5	022485		028402		
25	45. 35	022361		029020			25	42. 57	022303		028462		
30	45. 45	022338		029020			30	43. 36	022430		028612		
35	45. 45	022316		029020			35	44. 16	022447		028489		
40	45. 15	022626		029020			40	44. 7	022464		028489		
45	44. 54	022560		029011			45	43. 25	022437		028638		
50	45. 56	022781		029011			50	43. 17	022150		028492		
55	45. 17	023047		029006			55	43. 7	022167		028665		
Nov. 27. 11. 0	22. 44. 48	0·023423	51·7	0·029011	51·5	H B	Nov. 27. 15. 0	22. 42. 25	0·022073	53 0	0·028519	52·5	G H
5	43. 54	024110		028955			5	42. 25	022073		028496		
10	42. 7	023667		028928			10	42. 10	022068		028691		
15	41. 32	023562		028837			15	44. 20	021824		028488		
20	38. 23	023229		028805			20	43. 52	021664		028594		
25	36. 45	023141		028755			25	45. 7	021664		028594		
30	36. 38	023384		028760			30	47. 27	021238		028739		
35	37. 9	024226		028765			35	50. 30	021128		028744		
40	38. 8	025112		028837			40	51. 24	020596		028744		
45	38. 46	025515		028811			45	52. 57	020591		028647		G H
50	40. 2	025625		028765			50	53. 26	020812		028624		L
55	39. 33	025028		028724			55	52. 52	021051		028637		
Nov. 27. 12. 0	22. 38. 20	0·024142	51·5	0·028637	51·3	H B	Nov. 27. 16. 0	22. 52. 25	0·021162	53·5	0·028628	53·0	L
5	36. 46	023545		028536			5	52. 25	021493		028628		
10	36. 44	023827		028477			10	54. 0	021732		028654		
15	38. 36	024602		028594			15	54. 0	021843		028654		
20	40. 48	024730		028617			20	53. 34	022236		028662		
25	41. 18	022316		028617			25	52. 44	022634		028643		
30	40. 21	024127		028480			30	50. 27	022873		028638		
35	38. 51	023728		028443		H B	35	49. 2	023138		028651		
40	38. 30	023308		028388		G H	40	48. 26	023316		028624		
45	41. 2	022439		028370			45	47. 9	023333		028641		
50	45. 19	022107		028370			50	45. 59	023333		028604		
55	48. 28	021571		028360			55	45. 59	023394		028658		
Nov. 27. 13. 0	22. 50. 18	0·021460	52·0	0·028347	51·5	G H	Nov. 27. 17. 0	22. 45. 59	0·023239	54·0	0·028691	53·5	L
5	50. 53	021460		028401			5	46. 12	023128		028714		
10	50. 5	021681		028304			10	46. 15	023128		028766		
15	49. 52	021681		028281			15	46. 28	023111		028769		
20	48. 55	021903		028266			20	46. 51	023111		028806		
25	47. 44	022345		028284			25	47. 38	023111		028806		
30	47. 30	022456		028311			30	47. 27	023111		028806		
35	48. 20	022677		028311			35	46. 47	023111		028915		
40	48. 7	022788		028311			40	47. 13	023111		028806		
45	47. 24	022899		028337			45	47. 7	023272		028806		
50	47. 15	022788		028337			50	46. 57	023382		028806		
55	46. 24	022567		028341			55	47. 9	023205		028929		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$.

Term-Day Observations of November 27 and 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 27. 18. 0	22. 47. 16	0·023050	53·8	0·028942	53·5	L	Nov. 27. 22. 0	22. 50. 27	0·021021	54·5	0·029025	54·0	H B
5	47. 16	023094		028806			5	51. 1	020911		029070		
10	47. 16	023094		028924			10	50. 23	020694		029030		
15	47. 16	023111		028929			15	50. 35	020429		029003		
20	47. 16	023111		028852			20	49. 57	020539		028957		
25	47. 24	023000		028852			25	49. 44	020583		028980		
30	46. 3	022934		028942			30	51. 10	020566		028980		
35	46. 43	022779		028861		L	35	50. 55	019969		028998		
40	45. 59	022890		028861		T D	40	50. 6	019703		028980		
45	46. 7	022841		028883			45	49. 26	019902		028940		
50	46. 11	022907		028898			50	48. 54	020218		028972		
55	46. 14	022973		028898			55	48. 54	020838		029022		
Nov. 27. 19. 0	22. 46. 30	0·022907	54·0	0·028875	53·5	T D	Nov. 27. 23. 0	22. 49. 49	0·020616	54·2	0·029058	53·8	H B
5	46. 29	023017		028861			5	50. 28	020488		029055		
10	46. 27	023128		028861			10	50. 35	020515		029924		
15	46. 25	023128		028901			15	50. 24	020498		029012		
20	46. 25	023128		028901			20	50. 39	020725		028985		
25	46. 37	023128		028924			25	50. 25	020686		028950		
30	46. 37	022685		028924			30	50. 46	020669		028909		
35	46. 20	022685		028887			35	52. 16	020652		028918		H B
40	46. 20	022464		028933			40	51. 39	020591		028915		G H
45	47. 2	022354		028959			45	51. 53	020795		028847		
50	47. 8	022619		028959			50	51. 47	021221		028876		
55	47. 8	022243		028972			55	52. 31	020983		028850		
Nov. 27. 20. 0	22. 47. 9	0·022243	54·0	0·028995	53·7	T D	Nov. 28. 0. 0	22. 51. 44	0·021408	53·0	0·028800	52·7	G H
5	47. 9	022260		029018			5	52. 10	021408		028800		
10	47. 25	022415		029018			10	51. 21	021297		028812		
15	47. 38	022260		029022			15	52. 12	021519		028774		
20	48. 21	022038		028977			20	52. 58	021541		028797		
25	48. 21	021861		029036			25	53. 3	021408		028797		
30	48. 43	021834		029077			30	52. 28	021187		028751		
35	47. 22	021679		028977			35	52. 32	021741		028751		
40	47. 36	021612		029031			40	52. 44	021763		028806		
45	47. 24	021612		029071			45	53. 3	021851		028771		
50	48. 5	021785		029094			50	53. 5	021785		028771		
55	48. 10	021851		029080			55	52. 18	021851		028771		
Nov. 27. 21. 0	22. 48. 32	0·022072	54·3	0·029048	53·9	T D	Nov. 28. 1. 0	22. 52. 58	0·021851	53·0	0·028771	52·5	G H
5	48. 38	021851		029025			5	53. 29	022073		028780		
10	47. 49	021851		029071			10	54. 36	022090		028843		
15	48. 5	021868		029071			15	55. 10	022267		028866		
20	46. 57	021757		029003			20	55. 3	022107		028869		
25	46. 57	021868		029048			25	54. 58	021885		028869		
30	48. 4	021868		029075			30	54. 33	021459		028896		
35	49. 1	021868		029139			35	53. 59	021459		028873		
40	48. 8	020982		029121		T D	40	53. 17	021459		028831		G H
45	48. 10	021420		029121		H B	45	52. 20	021299		028876		L
50	48. 58	021464		029144			50	51. 34	021299		028876		
55	49. 29	021552		029116			55	50. 55	021493		028935		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$.

Term-Day Observations of November 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Nov. 28. 2. 0	22. 51. 11	0·021649	53·5	0·028949	53·0	L	Nov. 28. 6. 0	22. 43. 32	0·022822	53·5	0·029122	53·0	H B
5	51. 11	021715		028958			5	45. 38	022357		029192		
10	50. 23	021272		028995			10	46. 34	021604		029146		
15	50. 2	021493		028975			15	46. 34	021228		029144		
20	50. 2	021493		029043			20	46. 3	020564		029107		
25	50. 2	021759		029066			25	37. 3	023221		029066		
30	49. 42	021732		029144			30	35. 55	025589		029148		
35	49. 26	021732		029089			35	41. 11	024992		029218		
40	49. 58	021909		029135			40	43. 49	024416		029158		
45	50. 11	021997		029174			45	46. 2	023663		029124		
50	50. 11	022086		029097			50	48. 3	022313		029069		
55	50. 0	022175		029042			55	45. 57	020873		029001		
Nov. 28. 3. 0	22. 49. 46	0·022396	53·6	0·029019	53·2	L	Nov. 28. 7. 0	22. 42. 12	0·021316	53·5	0·028918	53·5	H B
5	49. 29	022617		028927			5	42. 47	021759		028945		
10	50. 0	022617		028936			10	43. 27	021671		029001		
15	50. 0	022507		028914			15	43. 35	021471		028984		
20	50. 0	022396		029047			20	42. 57	021250		028984		
25	49. 50	022396		029056			25	42. 49	021007		028975		
30	49. 50	022352		029060			30	41. 45	020829		028975		
35	50. 0	022396		029060		L	35	40. 15	020940		029007		H B
40	50. 6	022396		029051		T D	40	40. 25	021715		029066		G H
45	50. 8	022219		029037			45	42. 10	021493		029086		
50	49. 46	021952		029037			50	42. 48	021382		029086		
55	49. 16	021732		029019			55	43. 9	021272		029109		
Nov. 28. 4. 0	22. 49. 12	0·021732	53·6	0·029019	53·2	T D	Nov. 28. 8. 0	22. 43. 9	0·021051	53·5	0·029109	53·0	G H
5	49. 12	021843		029001			5	41. 54	021515		029086		
10	49. 12	021953		029001			10	41. 57	021715		029109		
15	48. 50	021953		029001			15	42. 33	021693		029118		
20	48. 54	021953		029001			20	43. 13	021626		029113		
25	48. 54	021732		029001			25	42. 46	021715		029100		
30	48. 1	021444		028975			30	42. 7	021715		029109		
35	48. 1	021510		028998			35	41. 20	021715		029086		
40	47. 14	021510		028989			40	41. 54	021626		029086		
45	47. 14	021621		028989			45	42. 10	021382		029086		
50	46. 41	021510		028989			50	41. 43	021272		029095		
55	46. 46	021732		029021			55	40. 56	021162		029100		
Nov. 28. 5. 0	22. 46. 41	0·021732	53·6	0·029066	53·1	T D	Nov. 28. 9. 0	22. 40. 34	0·021272	53·5	0·029122	53·0	G H
5	46. 26	021953		029098			5	40. 23	021587		029105		
10	46. 42	021843		029112			10	41. 13	021598		029102		
15	46. 59	021843		029112			15	41. 52	021447		029075		
20	47. 15	021666		029112			20	42. 39	021187		029075		
25	47. 11	021422		029098			25	42. 0	021170		029031		
30	46. 46	021206		029086			30	41. 44	021557		029014		
35	46. 20	021272		029086		T D	35	42. 22	021584		029014		
40	45. 43	020785		029095		H B	40	42. 46	021212		028993		
45	45. 18	020829		029086			45	43. 19	021306		028961		
50	42. 25	021228		029100			50	43. 51	021715		028966		
55	40. 10	022423		029100			55	44. 44	021698		028945		G H

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the *Declination Magnetometer*.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 227°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $28^s.4$.

Term-Day Observations of December 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 23. 10. 0	22. 47. 34	0·026928	49·0	0·026408	48·5	G
5	48. 36	025488		026259		
10	46. 28	024935		026113		
15	46. 32	024890		026057		
20	46. 52	024492		026057		
25	48. 15	024271		026057		
30	48. 15	024093		026057		
35	47. 36	023496		026057		
40	46. 55	022832		025904		
45	44. 38	022057		025899		
50	41. 56	021393		025848		
55	37. 42	021282		025861		
Dec. 23. 11. 0	22. 35. 25	0·021991	49·0	0·025946	48·5	G
5	34. 43	022611		026057		
10	36. 29	022760		026178		
15	38. 13	022556		026199		
20	38. 36	022312		026194		
25	38. 51	022329		026210		
30	39. 55	022590		026231		
35	41. 29	022789		026278		
40	42. 51	022872		026278		
45	43. 36	022934		026313		
50	42. 59	023377		026339		G
55	42. 34	024151		026352		H B
Dec. 23. 12. 0	22. 43. 19	0·024544	49·7	0·026378	49·2	H B
5	43. 37	024212		026377		
10	45. 28	024102		026315		
15	46. 29	023991		026315		
20	46. 33	023947		026320		
25	46. 39	023770		026320		
30	47. 23	023726		026299		
35	47. 45	023526		026281		
40	47. 55	023460		026260		
45	48. 31	025718		026239		
50	47·0	026604		026068		
55	45. 32	026051		025982		
Dec. 23. 13. 0	22. 43. 3	0·025541	49·7	0·025774	49·5	H B
5	40. 56	024390		025658		
10	39. 9	023787		025624		
15	36. 58	024185		025602		
20	36. 3	024628		025624		
25	37. 50	024916		025667		
30	41. 2	024269		025795		
35	42. 58	023361		025795		
40	42. 19	023029		025816		
45	39. 43	023178		025816		
50	39. 5	023555		025795		
55	39. 27	023843		025881		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 23. 14. 0	22. 39. 34	0·023733	50·0	0·025924	49·5	H B
5	39. 34	023666		025924		
10	39. 29	023733		025945		
15	39. 29	023334		025945		
20	38. 52	022935		025945		
25	39. 13	022736		025945		
30	38. 50	022670		025993		
35	38. 16	023002		026035		
40	38. 35	023112		026078		
45	38. 43	023090		026099		
50	38. 41	023156		026099		
55	38. 23	023290		026125		
Dec. 23. 15. 0	22. 38. 3	0·023445	50·0	0·026125	49·7	H B
5	38. 47	023334		026155		L
10	39. 39	023267		026147		
15	39. 52	023267		026159		
20	40. 52	023112		026177		
25	43. 52	022891		026202		
30	45. 8	022670		026211		
35	45. 29	022714		026211		
40	46. 5	022670		026211		
45	41. 14	022736		026238		
50	45. 56	022670		026238		
55	45. 56	022714		026238		
Dec. 23. 16. 0	22. 45. 15	0·023002	50·0	0·026238	49·8	L
5	44. 6	023290		026238		
10	43. 47	023555		026238		
15	43. 41	023112		026238		
20	43. 22	023112		026238		
25	43. 3	022935		026243		
30	43. 24	022864		026230		
35	43. 51	022687		026264		
40	44. 34	022576		026286		
45	46. 24	022482		026320		
50	48. 11	022349		026376		
55	49. 13	022261		026402		
Dec. 23. 17. 0	22. 50. 29	0·022150	50·2	0·026419	50·0	L
5	51. 16	022039		026419		
10	51. 16	022150		026419		
15	50. 47	022261		026441		
20	50. 55	022660		026449		
25	50. 40	022925		026505		
30	50. 59	023036		026514		
35	50. 26	022991		026505		
40	50. 21	022925		026505		
45	50. 21	022898		026505		
50	49. 42	022898		026527		L
55	49. 11	023163		026514		T D

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $29^s.4$.

Term-Day Observations of December 23 and 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 23. 18. 0	22. 49. 3	0·023163	50·3	0·026548	50·0	T D
5	47. 46	023429		026548		
10	48. 44	023540		026590		
15	48. 53	023429		026590		
20	48. 53	023385		026590		
25	48. 53	023274		026590		
30	48. 22	023229		026590		
35	48. 16	023385		026590		
40	48. 28	023385		026624		
45	48. 34	023341		026633		
50	48. 44	023385		026633		
55	48. 37	023385		026633		
Dec. 23. 19. 0	22. 48. 28	0·023385	50·3	0·026646	50·0	T D
5	48. 35	023562		026646		
10	48. 29	023623		026702		
15	48. 25	023640		026728		
20	48. 19	023640		026685		
25	47. 38	023879		026699		
30	47. 38	023896		026695		
35	48. 29	023674		026756		
40	48. 42	023691		026765		
45	48. 50	023708		026808		
50	48. 48	023708		026817		
55	48. 44	023708		026817		
Dec. 23. 20. 0	22. 48. 44	0·023504	51·0	0·026844	50·8	T D
5	48. 44	023504		026844		
10	48. 44	023725		026844		
15	48. 44	023725		026878		
20	49. 3	023725		026866		
25	49. 3	023681		026870		
30	49. 14	023681		026870		
35	49. 14	023681		026870		
40	49. 7	023504		026870		
45	49. 21	023460		026870		
50	49. 16	023460		026897		
55	49. 16	023460		026897		T D
Dec. 23. 21. 0	22. 49. 28	0·023504	51·0	0·026897	51·0	G H
5	49. 42	023393		026833		
10	49. 42	023282		026854		
15	49. 59	023017		026854		
20	50. 44	023061		026841		
25	50. 24	023061		026812		
30	50. 39	022840		026841		
35	50. 29	023061		026820		
40	50. 21	023017		026841		
45	50. 29	022840		026825		
50	51. 0	022840		026820		
55	50. 54	022884		026812		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°	
Dec. 23. 22. 0	22. 50. 54	0·022840	51·0	0·026812	51·0	G H
5	51. 13	022951		026799		
10	51. 16	022840		026854		
15	51. 12	022729		026726		
20	51. 5	022729		026880		
25	51. 31	022397		026799		
30	51. 40	022441		026837		
35	51. 44	022397		026778		
40	51. 41	022507		026812		
45	52. 1	022441		026854		
50	52. 16	022618		026769		
55	52. 21	022397		026812		G H
Dec. 23. 23. 0	22. 52. 27	0·022219	51·0	0·026778	51·0	H B
5	52. 7	022441		026833		
10	52. 22	022331		026841		
15	52. 27	022353		026819		
20	51. 36	022175		026814		
25	51. 44	022397		026797		
30	50. 59	022557		026797		
35	51. 14	022757		026761		
40	51. 29	022934		026757		
45	51. 14	022717		026748		
50	51. 8	022961		026748		
55	51. 34	022983		026722		
Dec. 24. 0. 0	22. 52. 15	0·023054	50·7	0·026714	50·5	H B
5	52. 24	023165		026701		
10	52. 45	023187		026714		
15	53. 25	023275		026722		H B
20	52. 51	023231		026744		T D
25	52. 51	023054		026722		
30	53. 9	023231		026748		
35	52. 27	022944		026748		
40	52. 39	023010		026770		
45	52. 45	023165		026770		
50	52. 41	023342		026808		
55	52. 41	023453		026817		
Dec. 24. 1. 0	22. 52. 30	0·023470	50·8	0·026817	50·7	T D
5	52. 7	023453		026791		
10	52. 26	023436		026765		
15	52. 2	023463		026738		
20	52. 28	023402		026746		
25	52. 6	023368		026728		
30	52. 20	023195		026724		T D
35	52 26	023112		026719		L
40	52. 4	023095		026692		
45	51. 49	023300		026666		
50	51. 33	023222		026661		
55	51. 0	023205		026635		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively $2^m.30^s$ before, and $2^m.30^s$ after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°.3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s.8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s.6$; in Vertical Plane, $29^s.4$.

Term-Day Observations of December 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m	° ′ ″		°		°		d h m	° ′ ″		°		°	
Dec. 24. 2. 0	22. 51. 5	0·023232	49·4	0·026630	49·5	L	Dec. 24. 6. 0	22. 49. 28	0·023174	48·8	0·026405	48·0	G
5	50. 32	023076		026603			5	49. 48	022709		026401		
10	50. 56	022993		026577			10	49. 37	022067		026401		
15	50. 45	022915		026577		L	15	49. 4	021470		026427		
20	50. 52	023225		026529		H B	20	47. 48	021403		026427		
25	50. 32	023159		026571			25	46. 11	021248		026427		
30	50. 17	023319		026545			30	45. 48	021093		026479		
35	50. 17	023412		026566			35	44. 54	021071		026521		
40	50. 53	023241		026583		H B	40	44. 24	021137		026542		G
45	50. 36	023512		026549		L	45	43. 46	021580		026585		T D
50	50. 50	023445		026556			50	42. 52	021801		026585		
55	50. 50	023334		026599			55	42. 17	022466		026585		
Dec. 24. 3. 0	22. 50. 50	0·023334	48·7	0·026603	48·8	L	Dec. 24. 7. 0	22. 41. 50	0·022466	48·8	0·026642	48·3	T D
5	51. 22	023334		026530			5	41. 56	022687		026642		
10	51. 1	023334		026466			10	41. 50	022952		026771		
15	50. 51	023157		026445			15	43. 52	023241		026708		
20	51. 32	023113		026453			20	44. 38	023351		026708		
25	50. 44	023113		026496			25	45. 35	023351		026734		
30	50. 11	022952		026453			30	46. 29	023368		026734		
35	49. 37	023019		026492			35	46. 37	023546		026717		
40	49. 34	022908		026543			40	46. 59	023590		026744		
45	49. 6	022881		026556			45	47. 48	023607		026770		
50	48. 40	022704		026569			50	48. 23	023607		026757		
55	48. 0	022748		026556			55	49. 8	023607		026727		
Dec. 24. 4. 0	22. 47. 39	0·023164	49·0	0·026556	48·9	L	Dec. 24. 8. 0	22. 49. 30	0·023607	49·0	0·026754	49·0	T D
5	47. 50	023762		026621			5	49. 36	023607		026729		
10	48. 32	023590		026616			10	49. 10	023385		026712		
15	48. 28	023573		026616			15	48. 49	023634		026672		
20	50. 1	023395		026589			20	48. 24	023590		026672		
25	49. 51	023179		026619			25	48. 2	023368		026638		
30	48. 31	023096		026499			30	48. 2	023130		026598		
35	47. 29	023096		026528			35	48. 2	022908		026589		T D
40	47. 7	022432		026450		L	40	48. 6	022952		026576		H B
45	46. 42	022857		026573		G H	45	48. 19	022935		026550		
50	46. 52	022857		026542			50	48. 33	022935		026559		
55	47. 31	023300		026495			55	48. 45	022979		026514		
Dec. 24. 5. 0	22. 48. 41	0·023062	48·4	0·026452	48·0	G H	Dec. 24. 9. 0	22. 48. 42	0·023140	48·6	0·026506	48·3	H B
5	49. 12	023283		026490			5	48. 46	023140		026518		
10	49. 23	023062		026405			10	48. 49	023140		026517		
15	49. 23	023256		026405			15	48. 44	023207		026497		
20	48. 20	023522		026371			20	48. 17	023317		026497		
25	47. 59	023522		026427			25	48. 17	023273		026488		
30	48. 16	023539		026362		G H	30	47. 54	023251		026471		
35	49. 8	023561		026448		G	35	47. 54	023384		026484		
40	49. 25	023583		026379			40	47. 54	023384		026471		
45	49. 57	023334		026379			45	48. 10	023384		026475		
50	49. 29	023378		026392			50	47. 36	023344		026475		
55	49. 25	023445		026401			55	47. 47	023322		026450		

The times of Observation of the Vertical Force and Horizontal Force Magnetometers are respectively 2^m. 30^s before, and 2^m. 30^s after the time of Observation of the Declination Magnetometer.

Reading of Torsion-Circle of Meridional Magnet for Brass Bar resting in Magnetic Meridian, 220°.
Reading of Torsion-Circle for Horizontal Force Magnetometer, 317°. Reading for Brass Bar in the same position, 358°. 3′.
Time of Vibration of Horizontal Force Magnetometer, $20^s \cdot 8$.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, $24^s \cdot 6$; in Vertical Plane, $29^s \cdot 4$.

ROYAL OBSERVATORY, GREENWICH.

EXTRAORDINARY OBSERVATIONS

OF

MAGNETOMETERS.

1846.

Extraordinary Observations of January 24 and February 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Jan. 24. 5. 57. 30				0·033909	57·0	T D
6. 0. 0	22. 50. 53					
6. 2. 30		0·037876	57·4			
7. 57. 30				033953	57·5	
8. 0. 0	49. 23					
2. 30		039698	57·7			
8. 19	39. 54	039919		033979		
10. 19	40. 43	039477		033931		
12. 29	40. 15	039255		033931		
14. 29	39. 38	039255		033892		
16. 29	40. 10	039715		033931		
18. 29	40. 33	039715		033931		
22. 29	42. 56	039671		033916		
25. 29	43. 19	039715		033882		
28. 29	43. 51	039162		033794		
31. 29	43. 34	038829		033859		
34. 29	43. 12	038763		033820		
37. 29	43. 45	038718		033810		
42. 19	44. 10	037656		033747		
46. 19	42. 38	037280		033737		
49. 19	42. 0	037280		033740		
54. 19	41. 49	037297		033740		
8. 59. 19	42. 40	037075		033788		
9. 4. 19	42. 7	036854		033814		
14. 19	42. 15	036676		033814		
19. 19	44. 8	036632		033863		
24. 19	44. 35	036411		033863		
29. 19	45. 22	036428		033863		
39. 19	44. 54	036693		033890		
49. 19	45. 38	037092		033890		
54. 19	46. 24	037092		033939		
9. 57. 30				033915	58·0	
10. 0. 0	45. 24					
10. 2. 30		037092	58·0			T D
Feb. 16. 5. 57. 30				0·033797	51·0	T D
6. 0. 0	22. 48. 23					
6. 2. 30		0·038846	51·0			
7. 57. 30				033588	51·5	
8. 0. 0	40. 13					
2. 0	40. 13	039972		033588		
2. 30		039972	51·5			
4. 0	40. 13	039972		033588		
6. 0	39. 54	039751		033554		
8. 0	39. 36	039618		033530		
10. 0	39. 34	039547		033556		
12. 0	39. 15	039547		033522		
14. 0	39. 25	039547		033493		
16. 0	42. 27	039768		033566		
18. 0	43. 31	039768		033614		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Feb. 16. 8. 20. 0	22. 43. 19	0·039680		0·033614		T D
22. 0	43. 59	039768		033614		
24. 0	44. 19	039768		033576		
26. 0	44. 42	039878		033614		
28. 0	45. 21	039878		033566		
30. 0	46. 21	039895		033582		
32. 0	46. 39	039785		033494		
34. 0	47. 32	039652		033494		
36. 0	47. 47	039674		033519		
38. 0	48. 15	039564		033533		
40. 0	48. 59	039430		033494		
42. 0	49. 22	039564		033494		
44. 0	49. 22			033465		
46. 0	49. 32			033479		
48. 0	49. 40			033445		
53. 0	49. 28	039403		033443		
55. 0	49. 4	039248		033423		
8. 59. 0	48. 18					
9. 1. 0	47. 49	039315				
3. 0	47. 3	039359				
5. 0	47. 3					
7. 0	46. 35					
9. 0	46. 35	039138				
12. 0	44. 15	038031				T D
9. 57. 30				033462	52·0	H B
10. 0. 0	44. 13					
10. 2. 30		037290	52·0			
11. 57. 30				033131	52·5	
12. 0. 0	38. 2					
2. 30		037891	52·8			
8. 30	38. 17	037492		033121		
15. 15	40. 16	037332		033186		
17. 15	41. 8	037288		033220		
19. 15	42. 2	037244		033234		
21. 15	42. 17	037066		033225		
23. 15	43. 22	036779		033206		
26. 15	44. 46	036535		033225		
28. 15	45. 26	036624		033269		
31. 15	46. 35	036685				
32. 45	46. 49	036752		033339		
34. 45	47. 22	036818				
36. 15	47. 37	036796		033319		
38. 45	48. 14	036862				
42. 15	49. 21	036884		033358		
44. 15	50. 3	037083		033363		
46. 45	50. 45	037106		033353		
48. 45	51. 4	037172		033371		
51. 30	51. 2	037145		033351		
12. 53. 15	50. 55	037123		033346		
13. 24. 15	50. 51	037272		033323		
13. 57. 30				033253	53·0	

Jan. $24^d.8^h.8^m.19^s$. A change of $9'.29''$ having taken place in the position of the Declination Magnet since 8^h, extra observations were commenced.

Feb. 16^d. A change of $8'.10''$ having taken place in the position of the Declination Magnet between 6^h and 8^h, extra observations were commenced.

Extraordinary Observations of February 16, 17, 18, and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Feb. 16. 14. 0. 0	22. 52. 54					H B
14. 2. 30		0·037594	53·4			H B
Feb. 17. 5. 57. 30				0·033597	51·7	H B
6. 0. 0	22. 49. 3					
6. 2. 30		0·038467	51·5			
7. 57. 30				033462	51·8	
8. 0. 0	50. 39					
2. 30		038451	51·8			
39. 15	40. 36	039919		033502		
48. 45	38. 56	040268		033473		
50. 45	38. 53	040313		033468		
52. 45	38. 40	040595		033459		
54. 45	38. 43	040706		033449		
57. 15	39. 14	040817		033439		
8. 58. 45	39. 33	040861		033480		
9. 0. 45	39. 53	040949		033456		
2. 45	40. 3	040971		033431		
4. 45	40. 29	040728		033426		
6. 45	40. 22	040595		033402		
8. 45	40. 22	040479		033419		
10. 45	40. 49	040324		033419		
12. 45	41. 14	040147		033409		
14. 45	41. 20	039860		033375		
19. 15	40. 52	039505		033375		
21. 45	40. 56	039505		033375		
23. 45	41. 8	039478		033370		
28. 45	42. 44	039279		033381		
30. 45	43. 10	039101		033371		
32. 45	43. 41	038969		033366		
34. 45	44. 6	038770		033371		
36. 45	44. 14	038415		033352		
38. 45	44. 1	038167		033337		
40. 45	43. 58	038144		033332		
42. 45	43. 54	038167		033327		
50. 15	44. 27	038499		033369		
9. 57. 30				033335	52·5	
10. 0. 0	44. 35					
10. 2. 30		038028	52·7			H B
Feb. 18. 3. 57. 30				0·033580	51·8	L
4. 0. 0	22. 53. 36					
4. 2. 30		0·036924	51·8			
5. 57. 30				033657	52·5	
6. 0. 0	50. 37					
2. 30		038721	52·6			
23. 44	44. 41	038610		033673		
25. 44	44. 57	038721		033683		
28. 44	45. 52	038738		033683		
30. 44	46. 6	038738		033683		
32. 44	46. 22	038627		033673		
Feb. 18. 6. 34. 44	22. 46. 51	0·038627		0·033659		L
35. 44	46. 55	038671		033663		
38. 44	47. 44	038405		033634		
39. 44	47. 54	038405		033634		
40. 44	47. 54	038405		033634		
41. 44	48. 1	038405		033624		
43. 44	48. 8	038582		033650		
44. 44	48. 8	038582		033650		
46. 44	48. 34	038071		033636		
48. 44	48. 57	037962		033636		
50. 44	49. 10	037918		033636		
52. 44	48. 58	037741		033622		
54. 44	48. 58	037741		033612		
6. 56. 44	48. 51	037675		033612		
7. 57. 30				033615	52·8	
8. 0. 0	48. 51					
8. 2. 30		037315	52·8			L
Feb. 25. 9. 57. 30				0·033565	58·8	L
10. 0. 0	22. 52. 23					
10. 2. 30		0·037671	58·8			L
11. 57. 30				033087	57·5	T D
12. 0. 0	43. 30					
2. 30		034793	57·5			
3. 20	43. 55	034998		033741		
5. 20	43. 55	034998		033731		
7. 20	43. 55	034998		033868		
10. 20	43. 47	035467		033852		
18. 20	43. 29	035628		033873		
28. 20	45. 4	037144		033855		
33. 20	45. 45	037365		033831		
38. 20	44. 59	036479		033811		
43. 20	44. 41	036020		033784		
48. 20	44. 1	035471		033720		
53. 20	42. 49	035338		033705		
12. 58. 19	41. 58	035100		033644		
13. 3. 19	41. 40	035304		033618		
8. 19	42. 20	035083		033667		
13. 19	42. 37	035066		033660		
18. 19	43. 33	034933		033675		
23. 19	44. 27	034784		033648		
28. 19	45. 57	036139		033578		
33. 19	49. 54	036360		033515		
38. 19	51. 0	036676		033473		
43. 19	49. 56	037008		033219		
48. 19	46. 47	036370		033095		
53. 19	44. 48	036769		033095		
13. 57. 30				033069	56·0	
14. 0. 0	42. 10					
2. 30		036088	56·0			
3. 49	41. 50	037195		033313		

Feb. 17d. 8h. 39m. 15s. A change of 10′. 3″ having taken place in the position of the Declination Magnet since 8h, extra observations were commenced.

Feb. 18d. 6h. 23m. 44s. A change of 5′. 56″ having taken place in the position of the Declination Magnet since 6h, extra observations were commenced.

Feb. 25d. 11h. 10m. A faint yellow light was seen towards the N. bearing a strong resemblance to an Aurora, and the position of the Declination Magnet having changed 8′. 53″ since 10h, extra observations were commenced.

Feb. 25d. 12h. 20m. The light has become very faint, being scarcely visible.

Extraordinary Observations of February 25 and 27, and of March 13 and 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Feb. 25. 14. 5. 49	22. 40. 18					T D
7. 49	40. 34					
9. 49	41. 0					
11. 49	41. 28	0·037129		0·033275		
13. 49	41. 32	036974		033265		
15. 49	41. 45	036708		033241		
17. 49	41. 45	036486		033241		
19. 49	40. 29	036088		033177		
21. 49	39. 53	035822		033167		
23. 49	39. 33	035867		033192		
25. 49	39. 33	035645		033313		
27. 49	39. 54					
38. 49	39. 54			033362		
43. 49	40. 22	035734		033401		
45. 49	40. 56	035822		033411		
47. 49	40. 44	035911		033421		
49. 49	41. 17	035867		033445		
51. 49	42. 34	035867		033543		
53. 49	43. 35	036044		033509		
55. 49	44. 33	035867		033543		
14. 57. 49	44. 33					
15. 2. 49	45. 41	035689		033537		
7. 49	47. 49	035867		033557		
15. 57. 30				033557	56·0	
16. 0. 0	50. 18					
16. 2. 30		036309	56·0			T D
Feb. 27. 5. 57. 30				0·033995	61·0	H B
6. 0. 0						
6. 2. 30	22. 50. 30	0·037480	60·8			
7. 57. 30				033944	61·2	
8. 0. 0						
2. 30	42. 25	037909	61·5			
11. 45	43. 49	037665		033925		
16. 15	44. 31	037626		033957		
18. 15	44. 47	037626		033952		
22. 45	45. 42	037561		033962		
24. 45	46. 6	037537		033947		
26. 45	46. 26	037493		033938		
29. 15	46. 47	037493		033938		
30. 46	46. 57	037493		033928		
32. 45	47. 4	037515		033923		
34. 45	47. 0	037560		033928		
35 45	47. 0	037560				
8. 39. 45	47. 18	037515		033909		H B
9. 57. 30				033996	61·5	G
10. 0. 0	48. 14	037149	61·2			
10. 2. 30						G
Mar. 13. 9. 17. 30				0·033764	56·6	T D
10. 0. 0	22. 53. 20					

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Mar. 13. 10. 2. 30		0·034430	56·8			T D
11. 57. 30				0·033387	56·0	G H
12. 0. 0	22. 44. 55					
2. 30		033244	56·2			
18. 34	47. 26					
21. 34	47. 47					
23. 34	48. 17					
28. 34	49. 25					
12. 38. 34	50. 36					
13. 38. 34	50. 36					
13. 57. 30				033216	56·0	
14. 0. 0	49. 33					
14. 2. 30		034461	56·2			G H
Mar. 14. 5. 57. 0				0·034861	58·5	T D
6. 0. 0	22. 47. 55					
6. 2. 30		0·033856	58·5			T D
7. 54. 0	38. 48	034963		034061		G
57. 0	36. 42	034941		034061		
57. 30				034061	58·0	
7. 59. 0	36. 39	034941		034061		
8. 0. 0	37. 17	035007		034051		
1. 0	37. 45	035074		034047		
2. 30	38. 0	034963	58·5	034037		
4. 0	38. 14	034786		034037		
6. 0	38. 48	034503		034037		
8. 0	39. 0	033861		034037		
9. 0	38. 58	033839		034037		
10. 0	38. 58	033839		034042		
12. 0	39. 8	033729		034037		G
14. 0	39. 8	033463		034020		
20. 0	38. 44	033158		034034		
25. 0	38. 28	033269		034058		
8. 30. 0	38. 15	033362		034058		
9. 10. 0	43. 51	035924		034044		
12. 0	43. 54	036034		034054		
13. 0	44. 44	036145		033976		
15. 0	45. 12	036168		033976		
17. 0	45. 55	035902		033976		
19. 0	46. 33	035951		033928		
23. 0	47. 40	035730		033976		
30. 0	47. 34	035049		033769		
35. 0	47. 2	035027		033755		
40. 0	45. 22	034628		033711		
45. 0	44. 39	035851		033769		
45. 30	45. 37	036139		033784		
50. 0	46. 24	036360		033709		
55. 0	47. 0	036122		033685		
57. 30				033685	57·5	
9. 58. 0	47. 37	036077		033685		
10. 0. 0	46. 59	036077		033685		

Feb. 27d. A change of 8′. 5″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

March 13d. A change of 8′. 25″ having taken place in the position of the Declination Magnet between 10h and 12h, extra observations were commenced.

March 14d. 7h. 54m. A change of 9′. 7″ having taken place in the position of the Declination Magnet since 6h, extra observations were commenced.

Extraordinary Observations of March 14 and 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Mar. 14. 10. 2. 30		0·036100	57·5			G
10. 5. 0	22. 46. 33	035839		0·033585		G
11. 57. 30				033079	56·0	L
12. 0. 0	42. 1					
2. 30		035253	56·3			L
Mar. 16. 7. 57. 30				0·033557	56·0	L
8. 0. 0	22. 44. 48					
8. 2. 30		0·034572	56·2			
9. 57. 30				033143	55·5	
10. 0. 0	44. 37					
10. 2. 30		035959	55·5			L
11. 43. 44	38. 45	035867		032310		H B
48. 44	36. 52	036465		032237		
51. 44	36. 9	036354		032227		
11. 57. 30				032176	54·5	
12. 0. 0	35. 53					
1. 45	36. 50					
2. 30		035629	54·6			
3. 15	38. 14	035390		032130		
4. 45	38. 57	034991		032145		
7. 45	39. 25	034969		032149		
9. 15	39. 43	034726		032184		
10. 15	39. 49	034660		032188		
15. 45	43. 38	034089		032133		
17. 15	45. 30	034266		032148		
18. 15	46. 9	034444		032182		
19. 15	47. 7	034333		032119		
20. 15	48. 1	034444		032143		
21. 15	48. 46	034421		032133		
22. 15	49. 14	034377		032114		
23. 15	50. 7	034471		032096		
24. 15	50. 36	034183		032087		
25. 15	50. 56	034205		032024		
26. 15	51. 23	034028		031985		
27. 15	51. 38	034005		031950		
28. 15	51. 38	033740		031911		
29. 15	52. 3	033850		031936		
30. 15	52. 3	033696		031926		
32. 15	52. 16	033585		031877		
33. 15	52. 33	033408		031812		
34. 15	52. 11	033280		031759		
35. 15	52. 7	032970		031715		
36. 15	52. 7	032904		031705		
37. 15	51. 30	032948		031700		
38. 15	51. 18	032793		031715		
39. 15	50. 52	032726		031719		
40. 15	50. 21	032771		031700		
41. 15	49. 45	032970		031690		
44. 15	47. 40	033152		031640		
45. 15	46. 38	033219		031630		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Mar. 16. 12. 46. 15	22. 46. 4	0·033374		0·031679		H B
47. 15	45. 16	033485		031684		
48. 15	44. 37	033794		031698		
49. 15	44. 14	033994		031723		
50. 15	43. 55	034348		031728		
51. 15	43. 37	034658		031747		
52. 15	43. 47	034702		031776		
53. 15	43. 39	035039		031783		
54. 15	43. 39	035172		031798		
55. 15	43. 39	035283		031837		
56. 15	43. 55	035349		031842		
57. 15	44. 1	035460		031832		
12. 58. 15	44. 1	035638		031842		
13. 0. 14	44. 26	035814		031940		
1. 14	44. 44	035792		031919		
2. 14	44. 58	035726		031919		
13. 44	43. 58	034735		031940		
18. 14	43. 46	034624		031974		
22. 44	43. 20	034386		031982		
24. 44	43. 3	034474		032012		
26. 44	43. 10	034497		032071		
28. 44	43. 16	034607		032108		
30. 44	43. 21	034607		032132		
32. 44	43. 39	034784		032156		
34. 44	44. 6	034701		032191		
36. 44	44. 41	034590		032188		
38. 44	44. 47	034413		032188		
41. 14	44. 35	034302		032246		
43. 14	44. 22	034130		032285		
45. 14	44. 8	034174		032295		
47. 14	44. 8	034108		032293		
49. 14	44. 8	034108		032308		
51. 14	44. 8	034086		032322		
53. 14	44. 32	034047		032346		
13. 57. 30				032329	53·2	
14. 0. 0	44. 59					
2. 30		033714	53·5			
5. 44	44. 50	033764		032430		
11. 14	45. 8	033830		032489		
13. 14	45. 38	033813		032497		
16. 44	45. 18	033813		032516		
19. 44	45. 22	033858		032531		
21. 44	45. 16	033858		032536		
24. 14	45. 16	033858		032509		
32. 44	43. 55	033730		032563		
34. 44	43. 24	033730		032542		
14. 46. 44	42. 8	033696		032613		
15. 6. 44	44. 31	033507		032682		
15. 44	45. 44	033667		032729		
18. 44	45. 44	033733		032719		
20. 44	45. 59	033778		032753		

March 16^{d}. 11^{h}. 40^{m}. There was an unusually strong light of an auroral kind near the horizon, and the position of the Declination Magnet having changed 5′. 52″ since 10^{h}, extra observations were commenced: at 12^{h} the auroral light extended from the N. E. to the N. N. W.

Extraordinary Observations of March 16, 17, and 31, and of April 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Mar. 16. 15. 23. 44	22. 45. 42	0·033739		0·032703		H B
25. 44	45. 15	033628		032688		
27. 44	44. 53	033561		032727		
29. 44	44. 52	033650		032747		
31. 44	44. 32	033628		032727		
34. 14	44. 17	033722		032700		
37. 14	44. 39	033744		032710		
39. 14	44. 36	033722		032739		
41. 14	44. 36	033633		032700		
44. 14	44. 44	033505		032723		
50. 14	44. 51	033660		032752		
15. 57. 30				032735	52·0	
16. 0. 0	45. 24					
2. 30		033643	52·3			H B
Mar. 17. 3. 57. 30				0·033863	53·0	H B
4. 0. 0	22. 52. 29					
4. 2. 30		0·035833	53·2			
5. 57. 30				033759	53·7	
6. 0. 0	43. 11					
2. 30		035068	54·3			
9. 45	43. 34	035179		033680		
19. 45	43. 48	035179		033664		
21. 45	43. 48	035268		033644		
23. 45	43. 48	035246		033639		
31. 45	43. 32	035246		033595		
47. 15	42. 54	035135		033625		
6. 55. 15	43. 36	035312		033595		
7. 0. 45	43. 20	035329		033587		
3. 45	42. 20	035152		033573		
5. 45	42. 54	035351		033568		
7. 45	42. 46	035439		033563		
13. 15	42. 46	035639				
20. 45	42. 35					
7. 57. 30				033512	54·0	
8. 0. 0	41. 37					
8. 2. 30		034576	54·4			
9. 27. 49	30. 57	039305		033020		
31. 13	31. 10	040125		032956		
34. 13	32. 8	040280		032934		
35. 43	33. 0	040213		032899		
37. 14	34. 13	040108		032895		
39. 15	35. 29	039709		032832		
40. 45	37. 11	039222		032793		
42. 15	38. 19	038824		032798		
44. 15	40. 12	038602		032773		
46. 15	41. 47	037850		032734		
48. 15	42. 38	037185		032714		
49. 45	42. 33	036676		032641		
51. 15	42. 12	036283		032581		
52. 45	41. 32	035928		032552		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Mar. 17. 9. 57. 30				0·032586	53·3	H B
10. 0. 0	22. 38. 55					
2. 30		0·035220	53·5			
4. 45	38. 22	035331		032610		
6. 45	38. 22	035442		032625		
9. 15	38. 46	035553		032634		
10. 45	39. 6	035663		032674		
11. 45	39. 27	035597		032708		
12. 45	39. 46	035553		032688		
13. 45	40. 9	035553		032674		
15. 15	40. 38	035420		032664		
18. 15	41. 37	034999		032622		
21. 45	41. 46	034362		032607		
24. 15	41. 6	033941		032627		
26. 45	40. 8	033764		032627		
29. 45	38. 51	033697		032647		
33. 15	37. 32	033830		032705		
35. 45	36. 56	034030		032696		
37. 15	36. 43	034207		032730		
38. 45	36. 36	034318		032779		
40. 45	36. 36	034495		032769		
10. 42. 45	36. 51	034583		032769		H B
11. 57. 30				032956	53·0	T D
12. 0. 0	40. 28					
2. 30		034250	53·0			T D
Mar. 31. 21. 57. 30				0·033196	54·0	T D
22. 0. 0	22. 48. 47					
22. 2. 30		0·033447	54·4			
23. 57. 30				033729	58·0	
Apr. 1. 0. 0. 0	32. 37					
2. 30		032443	58·0			
25. 0	50. 33					
26. 0	50. 1					
27. 0	50. 34					
28. 0	50. 34					
29. 0	50. 50					
31. 0	50. 50					
34. 0	51. 19					
36. 0	52. 19					
0. 37. 0	52. 32					
1. 47. 30				033809		
50. 0	54. 23					
52. 30		034768				
1 57. 30				033818	59·5	
2. 0. 0	54. 32					
2. 30		034946	59·7			
7. 30				033823		
10. 0	54. 16					
2. 12. 30		034946				T D

March 17d. A change of 9′. 18″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

April 1d. 0h. A change of 16′. 10″ having taken place in the position of the Declination Magnet since the preceding ordinary observation, extra observations were commenced.

Extraordinary Observations of April 6, 7, 10, 11, and 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Apr. 6. 5. 57. 30				0·034890	58·0	T D
6. 0. 0	22. 57. 0					
6. 2. 30		0·034878	58·0			
7. 57. 30				034302	56·7	
8. 0. 0	39. 50					
2. 30		033424	57·0			
4. 14	41. 42	033823		034229		
6. 14	43. 46	033650		034229		
8. 14	43. 46	033407		034203		
10. 14	44. 27	033474		034189		
12. 14	45. 10	033474		034203		
14. 14	46. 0	033141		034165		
19. 14	46. 37	033014		034106		
22. 14	47. 12	032239		034016		
25. 14	46. 4	032239		034031		
27. 14	46. 35	031420		033909		
29. 14	46. 14	031159		033909		
31. 14	46. 14	031115		033933		
33. 14	46. 45	031447		033933		
35. 14	47. 31	031602		033933		
37. 14	47. 31	031558		033933		
39. 14	46. 56	030982		033877		
41. 14	44. 55	030390		033834		
43. 14	42. 24	030212		033794		
45. 14	40. 39	030611		033785		
47. 14	39. 53	030655		033760		
49. 14	38. 52	031098		033701		
51. 14	38. 52	031098		033662		
53. 14	39. 48	031014		033636		
55. 14	40. 39	030638		033636		
57. 14	41. 2	030239		033636		
8. 59. 13	41. 11	029974		033636		
9. 1. 13	40. 51	029796		033622		
3. 13	40. 31	029531		033626		
5. 13	39. 46	029514		033626		
7. 13	38. 51	029426		033599		
9. 13	37. 59	029514		033599		
11. 13	37. 59	029514		033571		
13. 13	38. 42	029514		033546		
15. 13	39. 24	029514		033512		
17. 13	38. 19	029276		033512		
22. 13	36. 36	029276		033512		
27. 13	37. 49	029608		033488		
32. 13	38. 34	029701		033427		
37. 13	41. 30	029701		033218		
42. 13	44. 36	029286		033144		
47. 13	49. 26	029176		032998		
52. 13	51. 55	029242		032943		
9. 57. 30				032582	56·0	
10. 0. 0	52. 11					
10. 2. 30		028450	56·0			T D
Apr. 6. 11. 57. 30				0·033436	56·0	L
12. 0. 0	22. 50. 20					
12. 2. 30		0·031439	56·0			
13. 57. 30				032972	55·0	
14. 0. 0	47. 23					
14. 2. 30		031456	54·8			
15. 57. 30				032664	52·8	
16. 0. 0	47. 22					
16. 2. 30		031116	52·8			
17. 57. 30				032461	51·2	
18. 0. 0	45. 7					
18. 2. 30		031331	51·2			
19. 57. 30				032805	50·2	
20. 0. 0	46. 55					
20. 2. 30		032002	50·2			L
21. 57. 30				033390	51·6	H B
22. 0. 0	57. 12					
2. 30		029577	51·3	033390		
12. 45	57. 0	030280		033484		
22. 15	54. 47	030674		033474		
39. 15	53. 20	031172				
22. 57. 15	53. 23	031782		033589		
23. 19. 15	53. 15	031966		033571		
23. 57. 30				033565	52·3	
7. 0. 0. 0	56. 16					
0. 2. 30		031636	52·6			H B
Apr. 10. 19. 57. 30				0·032692	51·8	L
20. 0. 0	22. 48. 27					
20. 2. 30		0·029746	51·9			L
21. 57. 30				032986	52·3	H B
22. 0. 0	48. 59					
2. 30		026544	52·6			
29. 45	50. 44	026509		033086		
36. 45	51. 21	026610		033124		
22. 55. 15	53. 8	026313		033152		
23. 11. 14	54. 7	026730		033183		
27. 15	54. 26	026389		033230		
23. 57. 30				033285	55·6	
11. 0. 0. 0	55. 36					
0. 2. 30		026626	56·6			H B
Apr. 13. 5. 57. 30				0·034806	63·5	H B
6. 0. 0	23. 0. 10					
6. 2. 30		0·028745	63·6			
7. 57. 30				034755	63·2	
8. 0. 0	22. 50. 11					
2. 30		027882	63·6			
13. 45	50. 20	027953		034637		

April 6d. A change of 17′. 10″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

April 10d. A change equivalent to 0·003202 parts of the whole force having taken place in the position of the Horizontal Force Magnet between 20h and 22h, extra observations were commenced.

April 13d. A change of 9′. 59″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Extraordinary Observations of April 13, 15, and 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Apr. 13. 8.21.15	22.50.22	0·027914		0·034628		H B
26.45	50.44	027826		034582		
8.32.45	50.48	027985		034543		
9. 1.44	49.33	027907		034411		
9.57.30				033742	62·5	
10. 0. 0	52.12					
2.30		030186	62·7			
5.44	51.37	029726		033595		
7.14	51.41	029726		033568		
8.44	51.31	029726		033573		
10.44	51.33	029749		033578		
16.44	52. 4	029444		033598		
20.44	51.51	029157		033533		
24.14	51.26	028763		033508		
26.14	51.25	028475		033491		
29.14	50.31	028099		033491		
31.14	49.53	027899		033501		
33.14	49. 7	027700		033511		
34.44	48.38	027573		033520		
36.44	47.31	027461		033530		
38.14	46.55	027461		033545		
40.15	46.14	027550		033574		
42.45	45.49	027815		033592		
44.45	45.55	027865		033632		
10.46.45	46. 6	027909		033641		H B
11.57.30				033669	61·5	L
12. 0. 0	48.36					
2.30		028388	61·5			L
Apr. 15. 5.57.30				0·033920	59·0	T D
6. 0. 0	22.57. 6					
6. 2.30		0·028716	59·0			
7.57.30				033993	59·0	
8. 0. 0	48.17					
2.30		028229	59·0			
4.21	47.48	028229		033993		
7.21	46.51	028389		034030		
9.21	45.45	028389		034127		
11.21	44.37	028721		034020		
13.21	43. 9	028898		033942		
16.21	41. 1	028389		033981		
19.21	38.42	028389		033980		
22.21	42.11	028721		034052		
25.21	47.55	028815		034101		
28.21	49.10	028815		034001		
31.21	49.30	028815		033928		
34.21	48.57	029080		033913		
37.21	45.55	029462		033904		
40.21	44. 1	029905		033879		
43.21	42.37	030237		033918		
46.21	44.51	030569		033814		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Apr. 15. 8.49.21	22.45.56	0·030724		0·033887		T D
52.21	46.14	030791		033912		
55.21	47.16	030951		033852		
8.58.21	48.12	030375		033852		
9. 1.21	49. 1	030220		033729		
4.21	49. 1	030043		033729		
7.21	49. 1	029871		033741		
12.21	49. 1	029982		033727		
9.57.30				033597	58·0	
10. 0. 0	48. 8					
10. 2.30		028465	58·3			T D
11.57.30				033370	57·6	H B
12. 0. 0	44.53					
12. 2.30		027615	57·6			
13.57.30				033319	57·0	
14. 0. 0	44.18					
14. 2.30		028161	57·3			
15.57.30				033266	56·8	
16. 0. 0	53.17					
2.30		028374	56·6			
8.45	53.35	028330		033246		
12.15	52.58	028131		033239		
14.15	52.38	028042		033229		
17.45	52. 0	027998		033181		
19.45	51.21	027932		033156		
21.45	51. 6	027910		033215		
23.15	50.51	027888		033181		
25.15	50.42	027888		033171		
27.45	50.20	027821		033171		
16.42.15	49.52	027954		033219		
17.57.30				033187	56·5	
18. 0. 0	50. 3					
2.30		028768	56·7			H B
Apr. 16. 3.57.30				0·035005	62·5	H B
4. 0. 0	23. 2.41					
4. 2.30		0·027468	62·6			
5.57.30				035083	63·5	
6. 0. 0	22.56.13					
6. 2.30		026907	63·6			
7. 3.47		030787		034974		
5.14	47.22	030278		034857		
6.14	47.15	030278		034866		
9.14	46.49	030146		034789		
10.44	46.52	030168		034779		
12.14	47.15	030101		034731		
13.44	47.33	029991		034755		
15.14	47.33	030124		034755		
16.44	48.13	030234		034697		
18.14	48.58	030367		034658		
19.44	49.36	030456		034707		

April 15d. A change of 8′.49″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

April 16d. 7h.5m. Considerable changes having taken place in the position of the Declination and Horizontal Force Magnets since 6h, extra observations were commenced.

Extraordinary Observations of April 16 and May 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Apr. 16. 7. 21. 14	22. 50. 44	0·030456		0·034711		H B
22. 44	51. 47	030434		034672		
24. 14	52. 47	030234		034618		
25. 44	53. 44	029968		034594		
29. 14	55. 31	028684		034509		
30. 44	55. 40	028086		034499		
32. 15	55. 12	027577		034485		
33. 45	54. 40	027090		034427		
35. 15	53. 59	026603		034427		
36. 45	52. 47	026249		034392		
38. 15	51. 39	026050		034402		
40. 45	50. 2	025917		034402		
45. 45	47. 38	026558		034437		
52. 45	46. 40	027355		034475		
53. 15	46. 45	027577		034480		
54. 15	46. 45	027621		034495		
7. 57. 30				034499	63·3	
8. 0. 0	47. 17					
2. 30		027665	63·5			
4. 45	47. 56	027621		034490		
6. 15	48. 13	027511		034444		
7. 45	48. 28	027338		034424		
9. 15	48. 41	027073		034419		
10. 45	48. 52	026940		034419		
12. 15	49. 1	026763		034410		
13. 45	49. 5	026630		034385		
16. 45	48. 47	026431		034344		
18. 15	48. 23	026325		034335		
19. 45	47. 39	026325		034300		
21. 15	47. 15	026414		034339		
22. 45	46. 42	026480		034318		
24. 15	46. 38	026635		034343		
25. 45	46. 54	026790		034309		
27. 45	47. 4	026839		034299		
29. 45	47. 12	026906		034284		
31. 15	46. 57	026795		034294		
32. 45	46. 34	026795		034260		
34. 45	46. 16	026861		034260		
8. 36. 15	45. 55	026906		034245		
9. 13. 15	53. 58	028405		034106		
14. 45	56. 54	028670		034034		
15. 45	58. 32	028582		034058		
16. 45	59. 27	027851		033998		
17. 45	59. 27	027922		033900		
20. 15	59. 38	027082		033802		
22. 15	58. 41	027236		033836		
24. 45	57. 44	027502		033698		
26. 45	57. 48	027812		033689		
28. 15	58. 2	027883		033610		
30. 15	22. 59. 25	028216		033591		
31. 45	23. 0. 6	028150		033532		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Apr. 16. 9. 33. 15	23. 0. 57	0·027729		0·033459		H B
34. 45	1. 5	027663		033420		
36. 15	1. 19	027308		033391		
37. 45	23. 1. 15	026821		033316		
39. 45	22. 59. 52	026556		033286		
41. 15	58. 24	026245		033175		
42. 15	57. 43	025958		033248		
43. 15	56. 53	026029		033199		
44. 45	56. 5	025764		033175		
47. 15	53. 59	025298		033091		
49. 15	50. 55	024590		033112		
50. 45	48. 25	024479		033121		
52. 15	45. 17	024590		033075		
54. 15	42. 23	025127		033173		
55. 45	40. 32	025680		033256		
9. 57. 30				033260	62·3	
10. 0. 0	38. 27					
2. 30		028602	62·5			
3. 45	41. 9	029267		033467		
5. 15	42. 27	029223		033501		
6. 45	43. 49	029360		033491		
8. 15	45. 11	029360		033486		
9. 15	45. 48	029294		033462		
10. 15	46. 32	029250		033462		
11. 45	47. 8	029184		033462		
13. 45	47. 38	028984		033414		
14. 45	47. 18	028984		033448		
16. 15	47. 46	028962		033353		
17. 15	48. 4	028829		033363		
25. 45	47. 11	028148		033339		
10. 28. 45	47. 11	028082		033288		H B
11. 57. 30				032635	61·0	L
12. 0. 0	44. 14					
2. 30		026975	61·0			L
May 2. 5. 57. 30				0·033970	64·4	L
6. 0. 0	22. 54. 34					
6. 2. 30		0·026463	64·5			
7. 57. 30				034105	65·0	
8. 0. 0	46. 32					
2. 30		026659	65·0			
5. 14	47. 23	026725		034105		
7. 14	47. 59	026769		034105		
8. 14	48. 54	026769		034105		
9. 14	49. 6	026725		034114		
11. 14	49. 6	026769		034105		
12. 14	49. 10	026769		034105		
14. 14	49. 19	026769		034105		
16. 14	49. 30	026769		034105		
17·14	49. 50	026769		034105		
18. 14	49. 53	026725		034105		

May 2d. A change of 8′. 2″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Extraordinary Observations of May 2, 3, and 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 2. 8. 19. 14	22. 49. 58	0·026681		0·034105		L
21. 14	49. 58	026659		034105		
22. 14	50. 0	026636		034105		
24. 14	50. 14	026592		034105		
25. 14	50. 14	026659		034105		
26. 14	50. 19	026703		034105		
29. 14	50. 34	026725		034090		
8. 31. 14	50. 50	026769		034090		
9. 57. 30				033935	65·0	
10. 0. 0	51. 48					
2. 30		026105	65·0			L
May 3. 15. 57. 30				0·033924	63·0	H B
16. 0. 0	22. 42. 46					
16. 2. 30		0·022511	62·8			
17. 57. 30				032962	61·7	
18. 0. 0	52. 43					
2. 30		023690	61·6			
7. 0	52. 42	023867		032848		
9. 0	52. 50	023977		032843		
11. 0	52. 46	023977		032843		
16. 0	50. 50	024088		032804		
29. 0	49. 47	025909		032755		
34. 0	49. 36	026064		032750		
38. 0	49. 26	026108		032750		
41. 0	49. 1	026130		032750		
43. 0	49. 1	026174		032741		
45. 0	49. 1	026174		032736		
47. 0	48. 32	026218		032741		
49. 0	48. 32	026196		032736		
51. 0	48. 16	026241		032746		
53. 0	48. 34	026241		032755		
54. 30	48. 34	026285		032750		
56. 0	48. 34	026307		032755		
18. 58. 0	48. 34	026352		032755		
19. 0. 0	48. 34	026312		032765		
2. 0	48. 34	026201		032765		
3. 30	48. 21	026113		032785		
5. 30	48. 21	026113		032775		
11. 0	48. 0	025737		032804		
27. 0	46. 32	025383		032819		
19. 57. 30				032980	61·7	
20. 0. 0	47. 33					
2. 30		025144	61·3			H B
May 4. 3. 57. 30				0·034676	68·3	H B
4. 0. 0	23. 6. 49					
4. 2. 30		0·027381	68·6			
5. 57. 30				034810	68·5	
6. 0. 0	22. 58. 23					
2. 30		025340	68·7			

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 4. 6. 5. 0	22. 58. 7	0·025228		0·034781		H B
7. 0	57. 44	024963		034795		
9. 0	57. 48	025140		034805		
15. 0	57. 28	025323		034798		
17. 0	57. 34	025433		034788		
21. 0	57. 24	025455		034783		
24. 0	57. 8	025411		034773		
30. 0	56. 49	025389		034739		
34. 0	56. 24	025389		034724		
6. 50. 0	55. 27	025992		034644		
7. 14. 0	55. 47	027281		034583		
22. 0	56. 5	027303		034583		
7. 57. 30				034712	68·0	
8. 0. 0	51. 49					
8. 2. 30		025210	68·2			
9. 39. 2		023677		034383		
9. 57. 30				033623	66·5	
10. 0. 0	39. 25					
2. 30		021872	66·8			
5. 0	37. 16	021584		033467		
7. 0	37. 44	021567		033467		
10. 0	37. 56	021523		033462		
11. 0	37. 56	021590		033450		
13. 0	37. 44	021745		033440		
14. 0	38. 0	021966		033425		
15. 0	37. 47	021900		033425		
17. 0	36. 59	021966		033401		
18. 0	36. 42	021745		033391		
19. 0	36. 25	021656		033352		
20. 0	36. 0	021523		033318		
21. 0	35. 26	021192		033255		
22. 0	35. 8	020953		033245		
23. 0	34. 42	020842		033206		
24. 0	34. 26	020665		033162		
25. 0	34. 26	020443		033133		
26. 0	34. 11	020244		033133		
28. 0	34. 11	020134		033123		
29. 0	33. 48	020001		033119		
30. 0	33. 27	019957		033109		
31. 0	33. 23	019957		033114		
32. 0	33. 2	020023		033123		
33. 0	33. 13	020001		033123		
39. 0	33. 54	021224		033229		
40. 0	34. 44	021533		033229		
41. 0	35. 15	021777		033229		
42. 0	35. 7	021932		033204		
43. 0	35. 51	022043		033180		
44. 0	36. 10	021999		033132		
45. 0	36. 53	022220		033107		
46. 0	37. 36	022220		033097		
47. 0	38. 15	022265		033093		

May 3d. A change of 10′. 3″ having taken place in the position of the Declination Magnet between 16h and 18h, extra observations were commenced.

May 4d. A change of 8′. 26″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of May 4 and 12.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 4. 10. 48. 0	22. 38. 45	0·022198		0·033083		H B
49. 0	39. 28	022242		033073		
50. 0	39. 46	022198		033039		
51. 0	40. 16	022154		033020		
52. 0	40. 37	021954		032971		
53. 0	41. 1	021799		033010		
54. 0	41. 16	021667		032990		
55. 0	41. 16	021533		032986		
56. 0	41. 6	021533		032986		
58. 0	40. 49	021379		033025		
10. 59. 0	40. 31	021423		033044		
11. 0. 0	40. 18	021423		033044		
1. 0	40. 18	021556		033044		
2. 0	40. 21	021645		033044		
3. 0	40. 26	021689		033059		
5. 0	39. 47	021777		033073		
6. 0	39. 47	021866		033073		
11. 0	39. 38	022137		033017		
12. 0	39. 38	022137		033017		
11. 57. 30				033642	66·0	
12. 0. 0	39. 8					H B
2. 30		022246	66·0			D
May 12. 3. 57. 30				0·034804	65·8	H B
4. 0. 0	22. 58. 55					
4. 2. 30		0·022099	66·7			
5. 57. 30				035138	66·7	
6. 0. 0	54. 53					
2. 30		028208	67·6			
6. 1	56. 26	026703		035324		
7. 1	55. 34	026375		035348		
8. 1	54. 16	025910		035259		
9. 1	53. 31	025822		035224		
10. 0	52. 33	025844		035283		
11. 0	51. 58	026242		035322		
12. 0	51. 53	026574		035361		
13. 0	52. 8	026818		035366		
14. 0	52. 40	026890		035322		
16. 0	53. 35	027177		035293		
17. 0	53. 35	027067		035257		
18. 0	53. 0	026978		035193		
19. 0	52. 32	026934		035174		
20. 0	52. 10	026934		035149		
21. 0	51. 55	026978		035149		
22. 0	51. 55	027133		035144		
23. 0	51. 57	027204		035135		
24. 0	51. 58	027227		035135		
6. 25. 0	51. 58	027249		035125		
7. 4. 0	48. 7					
14. 0	41. 53	029538		034883		
16. 0	43. 11	030269		034883		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 12. 7. 17. 0	22. 43. 43	0·030180		0·034793		H B
18. 0	44. 19	030269		034783		
20. 0	45. 54	030202		034783		
22. 0	45. 54	030207		034759		
23. 0	46. 45	030074		034759		
24. 0	47. 8	030008		034744		
25. 0	47. 28	029964		034744		
26. 0	47. 41	029698		034744		
28. 0	48. 45	029571		034707		
29. 0	48. 57	029216		034659		
30. 0	48. 57	029017		034659		
31. 0	49. 13	028884		034669		
32. 0	49. 31	028752		034649		
33. 0	49. 56	028640		034635		
34. 0	50. 21	028529		034586		
35. 0	51. 10	028685		034644		
36. 0	51. 49	028507		034659		
37. 0	52. 13	028048		034635		
38. 0	52. 55	027893		034551		
39. 0	53. 24	027517		034507		
40. 0	54. 3	027229		034478		
41. 0	54. 20	026764		034463		
42. 0	54. 8	026078		034423		
43. 0	53. 50	025502		034365		
44. 0	53. 19	025125		034306		
45. 0	52. 32	024793		034257		
46. 0	51. 42	024462		034267		
47. 0	50. 44	024267		034272		
48. 0	49. 37	024112		034325		
49. 0	48. 36	024002		034301		
50. 0	47. 30	023847		034291		
51. 0	46. 38	023847		034330		
52. 0	45. 38	023825		034338		
53. 0	44. 43	023780		034352		
54. 0	44. 4	023869		034352		
7. 57. 30				034391	65·7	
8. 0. 0	43. 35					
2. 30		025380	66·2			
3. 0	45. 17	025185		034418		
7. 0	47. 6	024853		034399		
8. 0	47. 28	024654		034399		
9. 0	47. 40	024521		034394		
10. 0	47. 34	024455		034389		
11. 0	47. 23	024256		034384		
12. 0	47. 6	024061		034368		
13. 0	46. 35	023840		034383		
8. 17. 0	45. 34	024017		034397		
9 57. 30				033329	64·5	
10. 0. 0	47. 4					
2. 30		022750	64·8			
13. 0	50. 28	023441		033130		

May 12d. A considerable change having taken place in the position of the Horizontal Force Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of May 12, and July 5, 6, 10, and 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 12. 10. 16. 0	22. 51. 57	0·023840		0·033110		H B
19. 0	53. 57	023823		033018		
21. 0	54. 41	023447		032896		
22. 30	55. 11	023159		032771		
25. 0	54. 39	022606		032713		
27. 0	54. 22	022300		032652		
29. 0	53. 45	022367		032697		
31. 0	52. 10	022699		032735		
33. 0	51. 49	022544		032764		
35. 0	51. 36	022256		032798		
37. 0	50. 44	021925		032772		
39. 0	49. 1	021614		032758		
41. 0	47. 5	021481		032812		
43. 0	44. 12	021531		032851		
45. 0	42. 35	021442		032866		
47. 0	41. 36	021575		032868		
49. 0	40. 24	021575		032883		
51. 0	39. 10	021575		032883		
53. 0	38. 4	021558		032897		
55. 0	37. 27	021558		032892		
57. 0	36 40	021558		032896		
10. 59. 0	36. 0	021691		032954		
11. 2. 0	36. 33	021691		032988		H B
11. 57. 30				032167	63·2	T D
12. 0. 0	46. 57					
2. 30		023509	63·4			
4. 0	46. 54	023337		032106	63·2	
6. 0	49. 13	023337		032087		
8. 0	53. 17	022938		032067		
10. 0	54. 4	022872		032052		
12. 0	55. 57	022855		032026		
14. 0	57. 3	022766		031992		
16. 0	57. 3	022766		031992		
18. 0	57. 54	022766		032061		
20. 0	58. 44	022766		032100		
22. 0	59. 10	022749		032097		
24. 0	22. 59. 51	022749		032083		
26. 0	23. 1. 3	022749		032063		
28. 0	1. 42	022732		032063		
30. 0	1. 7	022732		032063		
32. 0	0. 41	022732		032062		
34. 0	23. 0. 16	022732		032086		
36. 0	22. 59. 14	023020		032169		
38. 0	57. 56	023135		032183		
40. 0	54. 48	023091		032232		
42. 0	53. 8	023269		032312		
47. 0	52. 48	023313		032370		
52. 0	51. 48			032407		
12. 57. 0	50. 41			032442		
13. 2. 0	49. 52	023262		032445		
7. 0	48. 27	022907		032581		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
May 12. 13. 57. 30				0·032669	62·0	T D
14. 0. 0	22. 49. 13					
2. 30		0·022318	62·0			T D
July 5. 21. 57. 30				0·032150	65·5	T D
22. 0. 0	22. 47. 7					
22. 2. 30		0·017855	67·0			
23. 57. 30				031799	65·8	
6. 0. 0. 0	23. 0. 19					
1. 29	1. 3	014271		031779		
2. 30		014404	67·8			
3. 29	1. 3	014492		031828		
5. 29	0. 9	014797		031903		
7. 29	23. 0. 1	014886		031918		
11. 29	22. 58. 59	014930		031894		
13. 29	56. 34	014908		031928		
15. 29	55. 4	014704		032078		
17. 29	54. 53	014991		032078		
19. 29	54. 53	016186		032078		
21. 29	55. 19	016962		032163		
23. 29	55. 22	017073		032163		
25. 29	55. 14	017443		032329		
29. 29	56. 6	018440		032348		
34. 29	56. 6	018568		032375		
0. 39. 29	56. 6	018679		032375		
1. 47. 30				032665		
50. 0	59. 9					
52. 30		020790				
1. 57. 30				032665	67·4	
2. 0. 30	22. 59. 21					
2. 30		020901	68·9			
7. 30				032641		
10. 0	23. 0. 13					
12. 30		021167				T D
July 10. 21. 57. 30				0·031624	61·2	H B
22. 0. 0	22. 46. 12					
22. 2. 30		0·018928	62·5			
23. 57. 30				031797	63·0	
11. 0. 0. 0	22. 53. 36					
0. 2. 30		020286	64·5	032849		
1. 47. 30						
50. 0	23. 1. 28					
52. 30		022835		032537	66·3	
57. 30						
1. 58. 30		018833				
2. 0. 0	23. 0. 17					
0. 30		017366		032424		
2. 30		017011	66·6			
2. 34		016701				
3. 30	22. 59. 58	016785		032450		

July 6d. 0h. Considerable changes having taken place in the positions of the Declination and Horizontal Force Magnets since the preceding observations, extra observations were commenced.

Extraordinary Observations of July 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
July 11. 2. 4.15	23. 0.14	0·016696		0·032499		H B
4.45	0.14	016607		032524		
5.15	0.37	016674		032524		
6.40		016830				
7.30				032498		
7.45		016785				
8.45		017205		032551		
9. 4		017139				
10. 0	1.24					
11. 5	2. 2	017799		032667		
12.30		017854				
14.46	2.20	018928		032760		
15.46	3. 8	019791		032819		
16.16	3.50	020168		032858		
16.46	4. 9	020522		032892		
17.46	4.24	020611		032902		
18.31	6.12	021004		032928		
19.31	5.12	021801		032942		
20.31	5.22	022000		032967		
21.31	5.48	022531		032991		
22.31	6.23	022842		032967		
23.31	6.35	023594		033055		
24.31	6.17	023815		033040		
26.31	5.55	024325		033016		
27.31	5. 7	023788		032993		
28.31	4.45	023268		032954		
29.31	5. 5	023080		032934		
30.31	4.33	022859		032900		
31.31	3.53	021929		032847		
32.31	4. 0	021574		032807		
33.31	3.45	021547		032825		
34.31	3.33	021149		032776		
36.31	3.33	020684		032756		
37.31	3.40	020440		032741		
38.31	3.51	019555		032679		
39.31	3.53	019421		032590		
40.31	3.48	019421		032664		
41.31	3.49	019616		032767		
43.31	5.51	019394		032787		
44.31	6.25	019394		032782		
45.31	6.43	019063		032743		
47.31	6.26	017845		032656		
48.31	6. 1	016197		032683		
49.31	6.13	016843		032683		
51.31	5.14	015913		032594		
52.31	5.23	015581		032634		
54.31	4.30	015249		032683		
55.31	4.30	015709		032758		
2.58.31	5.20	016550		032796		
3. 0.31	6.40	017214		032904		
3.31	9.22	019778		032134		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
July 11. 3. 5.31	23. 8.16	0·019268		0·033086		H B
6.31	8.16	019047		033032		
7.31	7.56	018781		032983		
12.31	6.29	019750		033217		
14.31	6.24	020016		033276		
16.31	6.34	020613		033212		
17.31	6.47	020835		033202		
18.31	7. 6	021317		033227		
19.31	7.32	021915		033310		
20.31	7.23	022025		033387		
21.31	7. 5	022092		033397		
24.31	6. 3	021295		033180		
25.31	6. 8	021029		033205		
26.31	5. 1	020382		033254		
27.31	4.29	020117		033244		
28.31	4.22	019939		033175		
29.31	4.22	019718		033206		H B
3.57.30				033576	68·0	L
4. 0. 0	23. 0. 2					
4. 2.30		020538	68·2			
5.57.30				033995	69·0	
6. 0. 0	22.56.39					
6. 2.30		020851	69·0			
7.57.30				033748	69·0	
8. 0. 0	46.43					
2.30		019856	69·0			
4.30	46.38	019922		033757		
6.30	45.35	020010		033772		
7.30	45.18	020099		033772		
8.30	45.18	020143		033791		
9.30	44.52	020276		033796		
10.30	44.52	020082		033759		
11.30	44.58	020215		033779		
12.30	45.20	020348		033793		
13.30	46.23	020348		033793		
14.30	46.43	020414		033783		
15.30	46.58	020392		033793		
16.30	47.24	020348		033783		
17.30	48. 8	020348		033769		
18.30	48.25	020282		033769		
19.30	49.24	020259		033774		
20.30	49.25	020215		033745		
21.30	49.36	019727		033730		
22.30	49.36	019794		033706		
23.30	49.31	019839		033696		
24.30	49.29	019949		033672		
25.30	49.29	019905		033672		
26.30	49.19	019772		033672		
27.30	49.19	019683		033672		
28.30	49. 9	019727		033657		
29.30	49. 5	019639		033637		

July 11d. 0h. Considerable changes in the positions of the three magnets having taken place since the preceding observations, extra observations were commenced.

Extraordinary Observations of July 11 and 24, and of August 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
July 11. 8. 30. 30	22. 49. 43	0·019683		0·033647		L
31. 30	48. 39	019816		033647		
32. 30	48. 32	019949		033647		
33. 30	48. 32	020016		033647		
34. 30	48. 47	020104		033647		
35. 30	48. 34	020126		033647		
36. 30	49. 1	020043		033621		
37. 30	49. 1	020065		033621		
8. 38. 30	49. 1	020109		033621		
9. 57. 30				033229	68·5	
10. 0. 0	48. 26					
2. 30		020722	68·5			L
July 24. 5. 57. 30	22. 53. 11			0·032789	70·4	L
6. 0. 0						
6. 2. 30		0·023719	70·5			
7. 57. 30				032667	69·0	
8. 0. 0	43. 59					
2. 30		021727	69·2			
3. 59	44. 5	021533		032669		
5. 59	44. 7	021644		032659		
6. 59	44. 13	021710		032644		
7. 59	44. 18	021600		032654		
8. 59	44. 22	021445		032635		
9. 59	44. 49	021445		032630		
10. 59	45. 0	021311		032630		
12. 59	45. 20	021250		032614		
13. 59	45. 37	021383		032594		
14. 59	45. 45	021294		032594		
15. 59	46. 21	021206		032594		
16. 59	46. 25	021250		032609		
17. 59	46. 25	021206		032594		
19. 59	46·25	021139		032609		
20. 59	46. 25	021139		032594		
8. 23. 59	46. 25	021012		032577		
9. 57. 30				032330	67·8	
10. 0. 0	47. 32					
2. 30		021080	68·0			L
Aug. 6. 11. 57. 30				0·032734	78·0	L
12. 0. 0	22. 47. 48					
12. 2. 30		0·023002	78·0			
13. 57. 30				032079	77·0	
14. 0. 0	22. 55. 12					
2. 30		023540	77·0			
13. 30	23. 1. 53	023971		031710		
15. 30	2. 18	024347		031637		
16. 30	2. 31	024569		031612		
18. 30	3. 32	024680		031612		
19. 30	3. 46	024790		031583		
20. 30	4. 49	025233		031514		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 6. 14. 21. 30	23. 5. 38	0·025233		0·031524		L
22. 30	6. 38	025343		031524		
23. 30	7. 23	025437		031439		
24. 30	7·51	025349		031356		
25. 30	8. 38	025659		031337		
26. 30	10. 19	025836		031317		
27. 30	11. 34	025703		031283		
28. 30	12. 34					
29. 30	14. 4	025642		031193		
30. 30	14. 37	025642		031096		
31. 30	16. 5	025863		031145		
32. 30	16. 42	026041		031071		
33. 30	17. 34					
34. 30	18. 11					
35. 30	18. 39					
37. 30	18. 59	026527		030901		
38. 30	18. 3	026333		030703		
39. 30	16. 50	025957		030557		
41. 30	14. 27	026068		030388		
42. 30	12. 35	025625		030314		
43. 30	10. 39	025625		030314		
44. 30	9. 22	025559		030241		
45. 30	7. 45	025182		030144		
46. 30	8. 27	024917		030144		
47. 30	6. 14	024230		030144		
48. 30	5. 17	024279		030068		
49. 30	4. 34	023837		030068		
50. 30	3. 8	023682		029970		
51. 30	2. 35	023394		029960		
52. 30	1. 10	023062		029945		
53. 30	0. 48	022619		029921		
54. 30	23. 0. 1	022065		029931		
55. 30	22. 58. 32	021623		029897		
56. 30	57. 57	021401		029945		
57. 30	56. 55	021534		029980		
58. 30	56. 17	021384		030017		
14. 59. 30	55. 15	021473		030091		
15. 0. 30	54. 17	021606		030139		
1. 30	53. 43	021562		030139		
2. 30	52. 57					
3. 30	51. 53	021700		030234		
4. 30	51. 53	022031		030308		
5. 30	51. 15	022075		030327		
6. 30	50. 49	022253		030356		
7. 30	49. 29	022363		030405		
8. 30	49. 3	022474		030443		
9. 30	49. 3	022474		030453		
10. 30	48. 41	022363		030477		
11. 30	48. 3	022297		030551		
12. 30	48. 3	022209		030551		
13. 30	47. 9	022058		030525		

July 24d. A change of 9′. 12″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Aug. 6d. Considerable changes having taken place in the positions of the Declination and Vertical Force Magnets between 12h and 14h, extra observations were commenced.

Extraordinary Observations of August 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°		d h m s	° ′ ″		°		°	
Aug. 6. 15. 14. 30	22. 47. 9	0·022014		0·030525		L	Aug. 6. 18. 39. 30	22. 41. 57	0·020064		0·031985		L
15. 30	47. 9	022014		030573			40. 30	42. 44	020108		032019		
16. 30	47. 26	022014		030593			41. 30	42. 59	020108		032068		
17. 30	46. 53	022236		030622			42. 30	42. 30	020108		032053		
18. 30	47. 22	022662		030645			18. 43. 30	43. 3	020329		032092		
19. 30	48. 21	022440		030596			19. 28. 56	45. 20	019784		032007		
20. 30	48. 6	022374		030596			19. 57. 56				031902	73·0	
21. 30	47. 10						20. 0. 0	49. 52					
22. 30	46. 4	022175		030571			20. 2. 30		018831	73·0			L
23. 30	45. 33	022440		030596			21. 57. 30				031960	72·8	H B
24. 30	44. 59	022484		030620			22. 0. 0	51. 39					
25. 30	44. 59	022440		030645			2. 30		016177	72·5			
26. 30	44. 59	022440		030669			8. 0	55. 13	016282		032009		
27. 30	44. 39	022329		030694			10. 0	54. 51	016880		032018		
28. 30	44. 38	023087		030716			10. 45	57. 43					
29. 30	45. 0	023087		030716			11. 0		017434		032018		
30. 30	45. 12	023087		030716			11. 15	55. 39					
31. 30	45. 33	023087		030716			12. 0	55. 6	017213		032018		
32. 30	45. 46	023070		030690			14. 0	55. 4	017146		032102		
15. 57. 30				030537	75·5		16. 0	53. 37	017323		032155		
16. 0. 0	53. 55						18. 0	54. 11	017168		032179		
2. 30		021801	75·5				19. 0	54. 30	017168		032160		
13. 56	54. 27						20. 30	54. 16	017921		032137		
16. 18. 56	53. 0						22. 0	53. 29	617921		032147		
17. 57. 30				031370	74·5		24. 30	53. 8	017938		032142		
18. 0. 0	45. 9						26. 0	53. 50	018403		032177		
2. 30		020525	74·5				28. 0	54. 22	018115		032137		
12. 30	41. 57	019733		031577			29. 0	53. 33	018381		032162		
13. 30	41. 23	019827		031571			30. 0	54. 24	019045		032162		
14. 30	42. 4	019937		031708			31. 0	55. 22	018913		032177		
15. 30	42. 31	019937		031767			32. 0	52. 54	017783		032099		
16. 30	41. 42	019871		031854			33. 0	52. 18	018647		032089		
18. 30	42. 15	019937		031874			34. 0	53. 25	018957		032113		
19. 30	42. 38	019920		031866			35. 0	54. 28	018935		032123		
21. 30	41. 1	019743		031851			36. 0	55. 36	018913		032113		
22. 30	41. 1	019588		031817			37. 0	53. 35	018137		032113		
23. 30	41. 1	019433		031827			38. 0	52. 47	018176		032113		
24. 30	40. 12	019566		031900			39. 0	53. 8	018531		032103		
25. 30	39. 54						40. 0	53. 33	018531		032079		
26. 30	40. 23	019699		031827			41. 0	53. 47	018642		032079		
27. 30	40. 36	019699		031998			42. 0	53. 47	018465		032103		
28. 30	40. 36	019903		031874			43. 0	53. 47	018398		032099		
30. 30	41. 10	019726		031874			44. 0	55. 24	019062		032123		
31. 30	40. 48	019682		031909			45. 0	55. 55	018731		032099		
32. 30	40. 26	019726		031948			46. 0	55. 14	017977		032079		
33. 30	40. 40	019859		031923			47. 0	54. 43	018309		032099		
34. 30	41. 7	019903		031986			48. 0	55. 21	018465		032113		
35. 30	41. 33	019903		031972			49. 0	55. 52	017955		032123		
36. 30	41. 33						50. 0	55. 32	017955		032079		
37. 30	40. 44	019997		031970			51. 0	55. 58	017911		032055		H B
38. 30	41. 43	019886		031946			53. 0	56. 26	018104		032113		C T

Aug. $6^d.18^h.19^m.30^s$; $21^m.30^s$; and $22^m.30^s$. The scale readings for the Horizontal Force at these times were recorded two divisions greater than those used in deducing the above results; had the observations as taken been correct, the results would have been 0·024348, 0·024171, and 0·024016 respectively.

Extraordinary Observations of August 6 and 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 6. 22. 55. 0	22. 56. 2	0·018259		0·032103		C T
57. 0	57. 7	018259		032065		
22. 59. 0	57. 16	017928		032123		
23. 1. 0	57. 54	017595		032077		
3. 0	56. 23	017374		032049		
5. 0	56. 46	017661		032039		
7. 0	56. 33	017595		032014		
9. 0	56. 20	017440		032063		
11. 0	56. 7	016997		031941		
13. 0	55. 48	017264		032014		
15. 0	56. 2	017817		031990		
17. 0	58. 2	017595		032039		
18. 0	58. 3	017972		032077		
19. 0	57. 49	018055		032097		
20. 0	58. 27	018055		032087		
21. 0	58. 1	018166		032029		
22. 0	57. 31	018055		031931		
23. 0	57. 8	017723		031990		
24. 0	55. 56	017325		032039		
25. 0	55. 58	017678		032029		
26. 0	56. 13	017723		031980		
27. 0	55. 34	017878		031941		
28. 0	55. 56	017612		031941		
29. 0	56. 26	017612		031990		
30. 0	55. 58	017325		032039		
31. 0	55. 53	017723		032000		
32. 0	55. 54	017546		031893		
33. 0	56. 22	017059		031917		
34. 0	56. 38	017103		031990		
35. 0	56. 55	016634		032039		
36. 0	57. 12	016522		032029		
37. 0	57. 28	016146		031883		
38. 0	57. 40	016456		031941		
39. 0	58. 16	016634		032049		
41. 0	58. 52	016855		032051		
43. 0	58. 18	016744		031954		
44. 0	59. 26	016678		032071		
45. 0	59. 42	016810		032100		
46. 0	59. 22	016456		032071		
47. 0	58. 43	016634		032051		
48. 0	58. 55	016855		032061		
49. 0	23. 0. 12	017187		032085		
50. 0	22. 59. 58	017519		032134		
51. 0	23. 1. 5	017076		032159		
52. 0	0. 19	016872		032023		
53. 0	0. 28	016695		032037		
54. 0	2. 14	016695		032159		
55. 0	1. 34	016651		032208		
23. 57. 0				032188	72·5	
7. 0. 0. 0	0. 38					
2. 30		017315	73·2			

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 7. 0. 5. 0	23. 0. 54	0·017491		0·032247		C T
7. 0	1. 23	017270		032267		
9. 0	1. 27	017868		032218		
11. 0	1. 26	018377		032329		
13. 0	0. 14	018865		032307		
15. 0	0. 38	019130		032293		
17. 0	1. 9	019418		032360		
19. 0	0. 9	019529		032258		
21. 0	2. 12	020210		032380		
23. 0	1. 18	019767		032370		
25. 0	1. 18	019745		032390		
27. 0	23. 1. 28	019590		032468		
29. 0	22. 59. 41	018616		032283		
31. 0	23. 0. 5	019723		032331		
33. 0	22. 59. 45	018771		032419		
35. 0	57. 49	017774		032185		
37. 0	58. 31	018394		032367		
39. 0	22. 58. 34	017818		032211		
41. 0	23. 0. 14	019103		032260		
43. 0	2. 16	019767		032406		
45. 0	1. 46	019103		032299		
47. 0	2. 5	018926		032299		
49. 0	2. 0	019103		032357		
51. 0	2. 7	019590		032260		
53. 0	1. 59	019524		032309		
55. 0	1. 47	019945		032309		C T
57. 0	2. 49	020475		032367		H B
0. 58. 0	3. 3	020431		032260		
1. 0. 0	2. 40	020448		032262		
1. 0	3. 0	020293		032248		
2. 0	2. 9	019962		032189		
3. 0	3. 3	020117		033262		
4. 0	3. 51	019940		032238		
5. 0	2. 9	019784		032213		
7. 0	2. 41	019563		032238		
8. 0	2. 50	019385		032262		
9. 0	3. 5	019674		032262		
10. 0	2. 54	019452		032189		
11. 0	2. 56	019541		032213		
12. 30	2. 46	018833		032189		
14. 0	1. 52	018389		032189		
15. 0	2. 36	018721		032179		
16. 0	2. 36	018677		032164		
17. 0	2. 36	019408		032174		
18. 30	3. 54	019784		032262		
19. 0	4. 22	019940		032336		
20. 0	4. 30	019674		032346		
21. 0	4. 30	019519		032213		
22. 0	3. 47	019186		032204		
23. 0	4. 10	019010		032189		
24. 0	4. 32	019120		032239		

Extraordinary Observations of August 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 7. 1. 25. 0	23. 3. 54	0·018677		0·032264		H B
26. 0	4. 7	019120		032249		
29. 30	4. 31	019341		032205		
30. 30	5. 37	019231		032176		
31. 0	5. 1	018921		032181		
32. 0	5. 31	018899		032190		
33. 0	4. 26	017991		032166		
34. 0	4. 29	018411		032166		
35. 0	4. 52	018567		032328		
36. 0	6. 10	018456		032313		
37. 0	5. 43	018522		032313		
38. 30	5. 18	018411		032337		
39. 30	5. 13	018344		032362		
41. 30	4. 50	018251		032293		
45. 0	3. 51	017986		032205		
47. 30	4. 4	017963		032301		
50. 0	3. 50	018251		032315		
52. 30		018251				
54. 30	2. 55	018738		032315		
1. 57. 30				032315	73·0	
2. 0. 0	2. 31					
1. 0	2. 34	019602		032355		
2. 30		019845	73·5			
7. 30				032408		
10. 0	1. 58					
11. 1	1. 46	020261		032415		
12. 30		020288				
17. 1	1. 24	021606		032513		
18. 31	1. 47	021828		032587		
20. 1	1. 4	021495		032636		
22. 1	0. 15	021120		032562		
23. 1	0. 7	020809		032516		
24. 31	0. 7	021181		032516		
26. 31	0. 59	021181		032599		
28. 1	0. 26	021579		032630		
29. 31	0. 18	021358		032615		
31. 1	0. 18	021690		032615		
32. 1	0. 32	021468		032606		
33. 1	0. 32	021419		032591		
34. 1	0. 32	021419		032601		
35. 1	0. 38	021529		032596		
36. 31	1. 5	021242		032591		
37. 31	0. 58	021176		032591		
39. 1	0. 35	020799		032618		
40. 1	0. 28	020755		032618		
42. 31	23. 0. 5	020866		032628		
45. 1	22. 59. 36	020816		032623		
46. 31	59. 44	021104		032633		
50. 1	58. 49	020993		032654		
52. 1	59. 34	021835		032703		
53. 1	59. 27	021718		032791		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 7. 2. 56. 1	22. 59. 41	0·022339		0·032815		H B
2. 58. 31	59. 43	022560		032846		
3. 4. 1	58. 46	022798		032846		
13. 31	57. 37	021597		032810		
16. 31	57. 37	021708		032894		
17. 1	57. 37	021642		032894		
20. 31	57. 45	021708		032904		
23. 1	57. 41	021903		032918		
25. 1	57. 51	021725		032935		
30. 30	58. 58	022008		032961		
35. 30	58. 36	021477		032971		
37. 30	58. 20	021361		032971		
39. 0	58. 43	021693		032957		
41. 30	58. 43	021693		032973		H B
3. 57. 30				033050	74·4	L
4. 0. 0	57. 12					
2. 30		021572	74·8			
14. 30	54. 57	021119		033103		
4. 29. 30	55. 3	021180		033129		
5. 57. 30				033508	75·8	
6. 0. 0	53. 3					
6. 2. 30		023547	76·0			
7. 57. 30				033552	77·0	
8. 0. 0	49. 43					
8. 2. 30		024271	77·0			
9. 57. 30				032944	76·4	
10. 0. 0	48. 26					
10. 2. 30		022321	76·6			L
11. 57. 30				032482	75·7	H B
12. 0. 0	51. 6					
12. 2. 30		022909	75·5			
13. 57. 30				031890	73·7	
14. 0. 0	48. 13					
14. 2. 30		022082	73·5			
15. 57. 30				031673	72·3	
16. 0. 0	55. 13					
2. 30		020261	72·3			
18. 1	50. 19	020476		031296		
22. 0	49. 45	020254		031262		
24. 30	49. 9	020033		031306		
27. 0	49. 17	019989		031293		
29. 0	48. 53	019972		031318		
31. 0	48. 48	020016		031328		
33. 0	48. 16	019955		031342		
34. 30	47. 41	019955		031342		
36. 0	47. 17	019999		031341		
37. 30	46. 55	019955		031341		
46. 30	46. 10	020558		031494		
53. 0	46. 31	020585		031546		
55. 0	49. 5	020585		031556		
16. 57. 0	49. 5	020585		031595		

Extraordinary Observations of August 7 and 12.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 7. 17. 0. 0	22. 46. 49	0·020568		0·031666		H B
3. 0	48. 5	020662		031671		
4. 30	48. 1	020795		031671		
6. 0	48. 18	020773		031675		
13. 0	50. 15	021331		031648		
16. 0	50. 15	021464		031622		
19. 0	49. 58	021624		031622		
34. 0	51. 6	021945		031584		
44. 30	51. 33	022127		031594		
17. 57. 30				031510	70·8	
18. 0. 0	51. 28					
18. 2. 30		022225	70·7			
19. 57. 30				031438	69·4	
20. 0. 0	54. 10					
2. 30		019896	69·5			
22. 0	50. 16	020378		031552		
23. 30	49. 48	020467		031562		
25. 0	49. 48	020289		031562		
26. 0	49. 10	020334		031537		
27. 0	49. 10	020068		031513		
28. 0	47. 31	020267		031513		
29. 0	48. 19	020135		031513		
30. 30	48. 49	020423		031537		
31. 30	49. 45	020666		031537		
33. 0	50. 30	020289		031523		
34. 0	49. 15	020090		031513		
35. 0	48. 43	020135		031528		
36. 0	50. 18	019797		031552		
37. 0	49. 30	019709		031591		
38. 0	48. 1	019819		031577		
39. 0	48. 18	019841		031572		
40. 0	47. 54	019465		031562		
41. 0	46. 24	019975		031562		
42. 0	47. 40	020373		031626		
43. 0	48. 25	019819		031621		
44. 0	47. 42	019155		031586		
45. 0	46. 45	019997		031562		
46. 0	48. 51	020351		031660		
47. 0	49. 9	020152		031577		
49. 0	49. 55	020262		031611		
50. 0	51. 2	020218		031611		
51. 0	50. 48	020218		031611		
52. 0	48. 41	019642		031586		
53. 0	48. 38	019797		031601		
54. 0	50. 20	020041		031611		
55. 0	51. 13	019686		031601		
56. 0	51. 13	019664		031635		
57. 0	53. 14	019819		031635		
58. 0	52. 41	019421		031635		
20. 59. 0	51. 26	019266		031660		
21. 0. 0	51. 42	019549		031701		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 7. 21. 1. 0	22. 52. 50	0·018951		0·031710		H B
2. 0	52. 43	019039		031710		
3. 0	52. 25	019438		031735		
4. 0	52. 46	019438		031735		
5. 0	53. 5	019681		031759		
6. 0	50. 53	019328		031769		
7. 0	49. 31	018773		031661		
8. 0	48. 28	018840		031598		
9. 0	49. 11	019328		031627		
10. 0	50. 25	019438		031735		
11. 0	50. 54	019615		031759		
12. 0	50. 15	019416		031759		
13. 0	49. 54	019615		031720		
14. 0	51. 2	019416		031696		
15. 0	50. 38	019239		031710		
16. 0	51. 25	019172		031612		
17. 0	50. 41	019172		031720		
18. 0	50. 17	019172		031701		
19. 0	49. 18	019172		031661		
20. 30	51. 17	018995		031563		
22. 0	50. 45	018021		031563		
23. 0	49. 43	018309		031588		
24. 0	51. 19	018968		031627		
25. 0	51. 30	018924		031652		
26. 0	52. 5	018746		031652		
27. 0	52. 47	019189		031749		
28. 0	52. 47	019189		031686		
29. 30	53. 8	019034		031710		
32. 0	51. 49	018946		031720		H B
21. 57. 30				031614	69·7	T D
22. 0. 0	52. 7					
2. 30		016992	70·0			T D
Aug. 12. 1. 47. 30				0·032068		T D
50. 0	22. 56. 10					
52. 30		0·021339				
1. 57. 30				032078	68·5	
2. 0. 0	56. 59					
2. 30		021405	69·0			
7. 30				032127		
10. 0	57. 26					
2. 12. 30		021693				
3. 57. 30				032791	69·2	
4. 0. 0	49. 36					
2. 30		022642	69·5			T D
10. 0	50. 26	023167		033016		H B
26. 0	52. 16	023184		033018		
30. 0	53. 26	022914		033064		
33. 0	53. 46	022781		033069		
38. 0	53. 46	022338		033089		
42. 0	53. 31	021829		033094		

Aug. 12d. A change of 7′. 50″ having taken place in the position of the Declination Magnet between 2h. 10m and 4h, extra observations were commenced.

Extraordinary Observations of August 12, 13, 14, 15, and 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 12. 4. 46. 0	22. 53. 2	0·020916		0·033085		H B
50. 0	51. 56	020452		033100		
54. 0	52. 12	020933		033209		
57. 0	52. 18	021531		033262		
4. 59. 0	52. 38	021708		033262		
5. 1. 30	52. 24	021863		033262		
44. 0	51. 48	022839		033393		
5. 57. 30				033394	70·2	
6. 0. 0	51. 34					
2. 30		022768	70·5			H B
Aug. 12. 21. 57. 30				0·031332	63·7	H B
22. 0. 0	22. 53. 24					
2. 30		0·016987	64·5			
23. 57. 30				031964	65·5	
13. 0. 0. 0	53. 42					
2. 30		020047	65·7			
9. 0	54. 21	020042		031956		
11. 0	54. 34	020042		031956		
19. 0	54. 50	019860		031972		
30. 0	55. 23	019700		031997		
0. 46. 30	55. 17	019224		032048		
1. 3. 0	55. 52	018417		032025		
30. 30	55. 57	018978		032250		
47. 30				032361		
50. 0	54. 54					
52. 30		019360				
1. 57. 30				032365	66·3	
2. 0. 0	54. 20					
2. 30		019604	67·0			
7. 30				032390		
10. 0	54. 10					
12. 30		019360				H B
Aug. 14. 13. 57. 30				0·031646	66·7	H B
14. 0. 0	22. 48. 18					
14. 2. 30		0·021482	67·5			
15. 57. 30				030902	65·3	
16. 0. 0	54. 22					
2. 30		022460	65·7			
6. 0	56. 2	022571		030844		
10. 0	57. 33	022156		030680		
13. 0	57. 23	021846		030631		
18. 0	54. 54	021336		030585		
19. 0	54. 41	021336		030610		
21. 0	54. 58	021492		030585		
22. 30	55. 3	021292		030547		
25. 30	55. 20	021098		030557		
16. 28. 30	55. 20	021098		030571		
17. 57. 30				031046	64·5	
18. 0. 0	47. 11					

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 14. 18. 2. 30		0·021124	65·0			H B
14. 30	22. 46. 30	020725		0·031163		
24. 0	45. 3	020393		031232		
35. 0	44. 17	020570		031315		
37. 0	44. 29	020415		031315		
49. 30	42. 59	020016		031398		
18. 54. 30	43. 9	020305		031412		
19. 10. 30	46. 9	020725		031495		
21. 30	46. 30	019796		031476		
19. 57. 30				031422	64·5	
20. 0. 0	45. 19					
2. 30		020349	65·0			H B
Aug. 15. 7. 57. 30				0·033018	74·0	H B
8. 0. 0	22. 48. 42					
8. 2. 30		0·021776	74·7			
9. 57. 30				032638	73·5	
10. 0. 0	43. 14					
2. 30		023166	73·5			
16. 0	44. 30					
19. 30	46. 19	022601		032536		
22. 0	46. 19	022535		032536		
23. 30	46. 27	022363		032530		
25. 0	46. 40	022119		032530		
26. 0	46. 40	022008		032530		
27. 0	46. 40	021920		032476		
10. 28. 30	46. 40	021836		032454		H B
11. 57. 30				031105	71·0	T D
12. 0. 0	58. 57					
2. 30		021206	72·0			
12. 0	56. 22	021206		031081		
13. 30	56. 17	021206		030788		
16. 0	55. 24	021268		030745		
17. 30	54. 7	020670		030706		
20. 0	53. 18	020227		030716		
21. 30	53. 28	019940		030716		
24. 0	53. 13	019674		030716		
25. 30	53. 37	019674		030742		
28. 0	53. 56	019563				
29. 30	54. 10	019359		030742		
32. 0	54. 34	019004		030742		
33. 30	54. 44	018806		030769		
36. 0	54. 55	018695		030769		
37. 30	54. 41	018472		030769		
40. 0	54. 6	018030				
41. 30	53. 41	017963		030769		T D
Aug. 22. 7. 57. 30				0·032359	70·3	H B
8. 0. 0	22. 48. 47	0·022283	71·3			
8. 2. 30						
9. 57. 30				031775	68·7	

Aug. 13d. 0h. A considerable change having taken place in the position of the Horizontal Force Magnet since the preceding observation, extra observations were commenced.

Aug. 14d. A change of 6′.4″ having taken place in the position of the Declination Magnet between 14h and 16h, extra observations were commenced.

Aug. 15d. A change of 5′.28″ having taken place in the position of the Declination Magnet between 8h and 10h, extra observations were commenced.

Extraordinary Observations of August 22, 24, and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 22. 10. 0. 0	22. 52. 48					H B
2. 30		0·023522	69·6			
6. 0	47. 36	023948		0·031402		
11. 0	45. 6	024213		031427		
13. 0	44. 39	024307		031417		
14. 30	44. 39	024240		031381		
16. 0	44. 39	024240		031381		
17. 0	44. 26	024329		031347		
18. 30	44. 41	024401		031352		
20. 0	44. 57	024512		031357		
21. 30	45. 27	024512		031362		
23. 30	46. 24	024512		031320		
25. 30	47. 15	024534		031310		
27. 30	48. 2	024273		031310		
29. 0	48. 2	023941		031251		
31. 0	47. 56	023786		031208		
33. 0	47. 45	023592		031208		
36. 0	47. 2	022883		031148		
10. 38. 30	47. 2	022707		031158		H B
11. 57. 30				031446	67·4	T D
12. 0. 0	45. 19					
2. 30		021235	68·0			T D
Aug. 24. 7. 57. 30				0·032406	70·0	T D
8. 0. 0	22. 47. 7					
8. 2. 30		0·021826	70·3			
9. 57. 30				031828	69·4	
10. 0. 0	45. 18					
10. 2. 30		021785	69·8			T D
11. 40. 0	36. 29	022450		031131		G
45. 0	36. 41	022759		031121		
50. 0	36 27	023269		031085		
55. 0	37. 55	023379		031143		
11. 57. 30	39. 3	023379		031122	68·0	
12. 0. 0	39. 57	023357		031107		
2. 30		023379	68·5			
5. 0	41. 23	023313		031107		
10. 0	42. 54	023074		031085		
12. 30	43. 27	023074		031085		
15. 0	43. 54	023074		031085		
20. 0	44. 40	022282		031054		
25. 0	45. 12	021795		031064		
30. 0	45. 6	021734		031037		
37. 30	40. 22	020915		030960		
40. 0	39. 43	020915		030960		
45. 0	39. 13	020898		030934		
12. 47. 30	37. 57	020942		030987		
13. 0. 0	38. 23	021523		031034		
15. 0	39. 6	020842		031105		
30. 0	40. 57	021029		031198		
45. 0	43. 50	021566		031319		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 24. 13. 57. 30	22. 45. 27	0·021925		0·031293	67·0	G
14. 0. 0	46. 33	021991		031283		
2. 30	46. 8	022102	67·5	031229		
15. 0	48. 20	022095		031117		
20. 0	48. 34	021985		031117		
30. 0	47. 13	021353		031040		
14. 40. 0	47. 24	021098		030965		
15. 0. 0	51. 47	020604		030912		
15. 0	52. 22	020952		030840		
30. 0	48. 13	022113		030768		
45. 0	44. 50	022482		030802		
15. 57. 30	44. 32	022443		030784	65·5	
16. 0. 0	44. 16	022426		030784		
16. 2. 30	43. 57	022426	65·5	030784		
17. 0. 0	43. 58	020707		030974		
45. 0	47. 41	020571		031054		
17. 57. 30	48. 30	020493		031026	63·5	
18. 0. 0	48. 55	020537		031026		
2. 30	49. 16	020426	63·5	031061		
15. 0	49. 28	019988		031051		
45. 0	46. 53	020281		031194		
18. 50. 0	45. 57	020370		031219		
19. 10. 0	43. 39	019821		031190		
20. 0	42. 41	020043		031125		
24. 0	43. 5					
30. 0	43. 8					
35. 0	43. 8	020026		031320		
36. 0	42. 34					
19. 57. 30				031314	63·0	
20. 0. 0	42. 25					
20. 2. 30		020274	63·0			G
21. 57. 30				031053	61·7	H B
22. 0. 0	49. 1					
22. 2. 30		018396	62·5			
23. 57. 30				031226	62·5	
25. 0. 0. 0	58. 46					
0. 2. 30		019818	63·7			
1. 47. 30				031801		
50. 0	57. 50					
52. 30		022208				
1. 57. 30				031808	65·5	
2. 0. 0	56. 47					
2. 30		021234	66·3			
7. 30				031759		
10. 0	56. 19					
2. 12. 30		021013				H B
3. 57. 30				032706	67·0	T D
4. 0. 0	53. 33					
4. 2. 30		021523	68·0			T D
5. 57. 30				032523	68·8	G
6. 0. 0	49. 41					

Aug. 22d. 10h. 6m. A change of 5′. 12″ having taken place in the Declination Magnet since 10h, extra observations were commenced.

Aug. 24d. 11h. 40m. A change of 8′. 49″ having taken place in the position of the Declination Magnet since the preceding observation, extra observations were commenced.

Extraordinary Observations of August 25, 26, 27, and 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 25. 6. 2. 30		0·022885	69·5			G
7. 57. 30				0·032478	69·0	
8. 0. 0	22. 42. 1					
2. 30		023350	69·5			
15. 0	47. 3					
8. 40. 0	46. 51					
9. 0. 0	47. 3					
40. 0	49. 4					
9. 57. 30				031814	67·5	
10. 0. 0	49. 21					
10. 2. 30		021922	68·0			G
11. 57. 30				031323	67·3	H B
12. 0. 0	48. 22					
12. 2. 30		020840	67·5			
13. 57. 30				031292	66·5	
14. 0. 0	43. 57					
2. 30		023416	66·5			
8. 0	42. 57	023355		031282		
15. 0	42. 0	023178		031197		
23. 0	41. 9	022341		031148		
29. 0	40. 20	021876		031098		
36. 0	39. 36	021367		031098		
45. 0	40. 15	020841		031047		
14. 53. 30	41. 58	020801		031081		
15. 0. 0	43. 25	021355		031113		
6. 0	45. 26	022064		031216		
7. 30	45. 37	022290		031201		
9. 0	45. 44	022489		031199		
14. 0	46. 27	022910		031190		
19. 30	46. 27	022689		031116		
24. 0	45. 41	022561		031092		
25. 0	45. 28	022561		031092		
30. 0	44. 44	022494		031084		
35. 30	43. 44	022384		031099		
44. 30	43. 26	021880		031097		
50. 0	42. 45	021857		031137		
15. 57. 30				031186	65·8	
16. 0. 0	43. 42					
2. 30		021575	65·7			H B
Aug. 26. 5. 57. 30				0·032234	68·0	H B
6. 0. 0	22. 51. 12					
6. 2. 30		0·022467	68·6			
7. 57. 30				032191	68·8	
8. 0. 0	44. 23					
2. 30		022945	69·2			
5. 30	41. 23	022989		032109		
8. 0	40. 4	023038		032094		
9. 0	40. 4	023193		032094		
11. 0	39. 5	023371		032092		
12. 0	39. 14	023393		032072		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 26. 8. 14. 0	22. 39. 14	0·023503		0·032111		H B
16. 30	39. 17	023703		032140		
18. 0	39. 17	023747		032154		
8. 58. 30	44. 49	022562		031981		
9. 0. 0	45. 1	022562		031981		
3. 0	45. 21	022584		031981		
4. 30	45. 37	022673		032005		
6. 30	46. 3	022739		031981		
7. 30	46. 14	022611		031964		
12. 30	47. 10	022523		031964		
15. 30	47. 47	022523		031964		
46. 30	49. 6	022306		031930		
9. 57. 30				031843	68·2	
10. 0. 0	49. 26					
2. 30		022002	68·6			H B
Aug. 27. 9. 57. 30				0·032255	73·7	T D
10. 0. 0	22. 42. 1					
10. 2. 30		0·019886	74·0			T D
11. 57. 30				031213	71·5	G
12. 0. 0	35. 25					
2. 30		022067	72·5			
5. 0	37. 30	022050		031235		
10. 0	39. 47	021811		031245		
15. 0	41. 59	021507		031228		
20. 0	42. 31	020931		031267		
30. 0	43. 37	020897		031351		
12. 40. 0	41. 58	021106		031398		
13. 0. 0	46. 23	021232		031476		
10. 0	47. 8	020977		031527		
20. 0	47. 42	021070		031533		
30. 0	47. 53	021191		031579		
13. 57. 30	47. 37	021062		031592	70·0	
14. 0. 0	47. 37	021062		031597		
2. 30	47. 42	021062	70·5	031597		
5. 0	48. 12	021089		031570		
14. 30. 0	47. 42	021199		031635		
15. 0. 0	47. 47	021070		031587		
15. 57. 30				031459	68·0	
16. 0. 0	47. 24					
16. 2. 30		021387	68·5			
17. 57. 30				031366	66·5	
18. 0. 0	46. 38					
18. 2. 30		021375	67·0			
19. 0. 0	43. 33	020799		031424		
15. 0	42. 35	020954		031507		
19. 57. 30				031550	66·5	
20. 0. 0	42. 35					
2. 30		021132	67·0			G
Aug. 28. 7. 57. 30				0·032951	75·0	T D

Aug. 26d. A change of 6′.49″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Aug. 27d. A considerable change having taken place in the positions of the three Magnets between 10h and 12h, extra observations were commenced.

Extraordinary Observations of August 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 28. 8. 0. 0	22. 48. 40					
8. 2. 30		0·021163	75·0			
9. 57. 30				0·032047	73·0	G
10. 0. 0	49. 19					
2. 30		022059	73·5	031982		
5. 0	52. 7					
7. 30		021351		031631		
10. 0	58. 15					
12. 30		021113		031631		
13. 0	58. 59	021002		031631		
15. 0	59. 57	022618		031459		
17. 0	58. 11					
17. 30	57. 1	022552		031414		
19. 0	57. 25	021782		031375		
20. 0	55. 13	021317		031263		
21. 0	51. 13	021096		031224		
22. 0	48. 38	021096		031224		
22. 30	47. 47	021118		031224		
23. 0	46. 12	021118		031224		
24. 0	44. 9	021560		031283		
24. 30	43. 2					
25. 0	42. 13	021782		031263		
26. 0	40. 50	021981		031263		
27. 0	39. 27	022247		031287		
27. 30	38. 15	022490		031285		
28. 30	35. 46	020874		031334		
29. 0	36. 50	021079		031382		
30. 0	36. 7	021410		031421		
30. 30	35. 59	021898		031529		
31. 0	35. 52	022142		031441		
31. 30	35. 53	022341		031529		
32. 0	35. 53	022341		031529		
32. 30	35. 49	022451		031529		
33. 0	35. 46	022628		031588		
33. 30	35. 46	022784		031588		
34. 0	35. 53	023027		031563		
35. 0	35. 51	020968		031563		
35. 30	35. 55	021101		031583		
36. 0	36. 1	021256		031583		
37. 0	36. 5	023735		031602		
37. 30	36. 24	023846		031602		
39. 0	37. 7	023957		031675		
40. 0	37. 36	024178		031675		
41. 0	38. 20	024444		031675		
42. 30	39. 28	024621		031649		
45. 0	41. 13	024383		031624		
47. 30	42. 22	024383		031624		
50. 0	43. 20	024161		031610		
52. 30	44. 2	023718		031562		
55. 0	45. 10	023037		031531		
10. 57. 30	45. 7	022926		031564		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 28. 11. 0. 0	22. 44. 16	0·022174		0·031511		G
2. 30	43. 58	021819		031487		
5. 0	43. 58	021514		031467		
7. 30	44. 11	021072		031450		
10. 0	44. 18					
12. 30		020457		031450		
15. 0	42. 58					
17. 30		019444		031424		
20. 0	41. 40	019001		031424		
22. 30		018979		031424		
25. 0	40. 23	018984		031424		
27. 30		019095		031421		
30. 0	39. 2					
32. 30		019188		031504		
35. 0	37. 55					
37. 30	38. 36	019171		031543		
40. 0	38. 56					
42. 30		019420		031590		
45. 0	39. 6					
47. 30		020266		031702		
50. 0	40. 22					
52. 30		020134		031696		
55. 0	41. 9					
11. 57. 30		020006		031745	72·0	
12. 0. 0	42. 4					
2. 30		019879	72·0	031807		
5. 0	43. 31					
7. 30		019879		031807		
10. 0	43. 46					
12. 30		019945		031812		
15. 0	44. 25					
17. 30		020033		031842		
20. 0	44. 54					
22. 30		020410		031881		
25. 0	45. 12					G
27. 30		020432		031886		T D
30. 0	44. 43					
32. 30		020210		031881		
35. 0	44. 43					
37. 30		020254		031915		
40. 0	44. 51					
42. 30		020210		031944		
45. 0	45. 14					
47. 30		020210		031978		
50. 0	45. 21					
52. 30		020210		032012		
55. 0	45. 39					
12. 57. 30		020366		032037		
13. 0. 0	45. 39					
2. 30		020520		032034		
5. 0	46. 26					

Aug. 28^{d}. 10^{h}. 10^{m}. A change of 6′. 8″ having taken place in the position of the Declination Magnet since 10^{h}. 5^{m}, extra observations were commenced.

Extraordinary Observations of August 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 28. 13. 7. 30		0·020592		0·032008		T D
10. 0	22. 46. 1					
12. 30		020636		031981		
15. 0	45. 13					
17. 30		020708		031996		
20. 0	45. 17					
22. 30		020885		031970		
25. 0	45. 0					
27. 30		020824		031944		
30. 0	45. 12					
32. 30		020824		031917		
35. 0	45. 14					
37. 30		020741		031930		
40. 0	45. 32					
42. 30		020807		031913		
45. 0	45. 48					
47. 30		020768		031913		
50. 0	45. 43					
52. 30		020701		031935		
55. 0	46. 48					
13. 57. 30		020928		031909	71·0	
14. 0. 0	47. 32					
2. 30		021104	71·4	031861		
5. 0	47. 42					
7. 30		020928		031802		
10. 0	47. 5					
12. 30		020994		031763		
15. 0	46. 32					
17. 30		020817		031724		
20. 0	46. 11					
22. 30		020640		031699		
25. 0	47. 19					
27. 30		020374		031665		
30. 0	48. 34					
32. 30		019870		031602		
35. 0	50. 40					
36. 30	51. 21					
37. 30	52. 6	019471		031568		
38. 30	53. 3					
40. 0	53. 16					
42. 30		019206		031471		
45. 0	53. 16					
47. 30		018984		031519		
50. 0	53. 33					
52. 30		019250		031422		
55. 0	56. 18					
56. 30	56. 50					
57. 30	57. 34	020756		031276		
58. 30	58. 35					
14. 59. 30	59. 5					
15. 0. 0	59. 32					

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 28. 15. 1. 30	22. 57. 36					T D
2. 30		0·021420		0·031149		
5. 0	23. 1. 9					
7. 30		021386		031048		
10. 0	1. 28					
12. 30		021335		030824		
15. 0	1. 14					
17. 30		021079		030708		
20. 0	0. 52					
22. 30		020824		030485		
25. 0	23. 0. 0					
27. 30		020596		030380		
30. 0	22. 58. 41					
32. 30		020452		030270		
35. 0	57. 34					
37. 30		019819		030183		T D
40. 0	54. 22					H B
42. 30		019215		030178		
42. 45	52. 15	019243		030238		
43. 45	51. 59	019203		030224		
45. 0	51. 44					
45. 45	51. 17					
47. 30		019425		030169		
47. 45	50. 28	019734		030223		
50. 0	49. 48					
50. 45	50. 28	020276		030282		
52. 15	49. 22	020365		030329		
52. 30		020365		030278		
53. 15	49. 14	020569		030302		
55. 0	48. 49					
15. 57. 30		020934		030260	68·5	
16. 0. 0	47. 32					
2. 30		021010	68·5	030284		
2. 45	46. 36	020988		030274		
5. 0	45. 21	020944		030274		
6. 15	44. 27	021165		030274		
6. 45	44. 27	021099		030289		
7. 30		021099		030262		
8. 15	43. 49	021165		030291		
10. 0	43. 53					
10. 45	43. 53	021054		030369		
12. 30	44. 5	020944		030296		
15. 0	42. 46					
17. 30	43. 37	021054		030368		
20. 0	42. 22	020307		030392		
22. 30		020263		030417		
23. 45	40. 31	020041		030451		
25. 0	40. 38					
25. 45	41. 15	020550		030499		
27. 30		020374		030472		
28. 15	39. 43	020152		030511		

Extraordinary Observations of August 28 and 29, and of September 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 28. 16. 28. 45	22. 39. 15	0·020219		0·030516		H B
30. 0	39. 40					
31. 15	40. 15	020484		030658		
32. 30		020484		030600		
32. 45	39. 57	020197		030668		
33. 45	39. 40	020108		030668		
35. 0	39. 17	020041		030668		
35. 45	39. 6	020041		030672		
37. 30		019931		030697		
40. 0	38. 35	019759		030755		
41. 45	39. 0					
42. 30		019869		030836		
45. 0	38. 49	019847		030841		
45. 45	39. 18	019980		030938		H B
Aug. 29. 9. 45. 0	22. 46. 47					G
47. 30		0·022229		0·032285		
49. 0	46. 57					
50. 0	44. 32					
52. 30	41. 32	023601		032285		
53. 0	40. 46					
54. 0	40. 4	024111		032271		
54. 30	40. 19	025240				
55. 0	41. 11	025240		032309		
56. 0	41. 43	025660		032285		
57. 0	42. 40					
9. 57. 30	43. 22	026103		032334	71·5	
10. 0. 0	44. 56	026347		032309		
1. 0	45. 32	026325		032271		
2. 0	46. 28	026347		032222		
2. 30		026502	71·5			
5. 0	47. 51	026640		032210		
5. 30	48. 20	026706		032195		
6. 0	48. 35	026728		032195		
6. 30	48. 48	026662		032181		
7. 0	48. 53	026573		032135		
7. 30	49. 2	026556		032135		
8. 0	49. 12	026335		032110		
8. 30	49. 23	026091		032037		
9. 30	49. 58	026003		032015		
10. 30	50. 8	025848		031961		
11. 0	50. 19	025670		031961		
11. 30	50. 28	025670		031961		
12. 0	50. 39	025670		031951		
13. 0	50. 32	025388		031906		
14. 0	50. 32	025388		031906		
15. 0	50. 37	024989		031887		
16. 0	50. 46	024768		031882		
17. 0	50. 53	024724		031872		
20. 0	50. 52	024043		031802		
23. 30	50. 24	023184		031748		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Aug. 29. 10. 25. 0	22. 49. 59	0·022941		0·031667		G
30. 0	49. 22	022680		031614		
10. 35. 0	48. 38	022127		031588		G
11. 57. 30				031264	68·5	H B
12. 0. 0	46. 13					
2. 30		022458	69·2			
12. 0	43. 14	022518		031162		
13. 0	43. 9	022606		031131		
16. 0	42. 36	022717		031101		
18. 0	41. 57	022744		031096		
21. 0	41. 40	022722		031061		
23. 0	41. 30	022589		031026		
25. 0	41. 7	022439		031026		
27. 0	40. 44	022373		031000		
29. 0	40. 30	022289		030968		
31. 0	40. 11	022289		030947		
33. 0	40. 18	022356		030977		H B
Sep. 3. 19. 57. 30				0·030191	60·8	T D
20. 0. 0	22. 45. 12					
20. 2. 30		0·021661	61·0			T D
21. 57. 30				030391	60·3	H B
22. 0. 0	59. 3					
2. 30		019197	60·7			
5. 0	58. 37	018927		030388		
8. 0	57. 56	018306		030378		
13. 0	56. 57	018146		030378		
16. 0	58. 23	018717		030380		
19. 0	22. 59. 46	018872		030454		
21. 0	23. 0. 7	019049		030518		
23. 0	23. 0. 34	019204		030547		
25. 0	22. 59. 59	019066		030578		
26. 0	59. 51	018645		030568		
28. 0	59. 16	018690		030588		
30. 0	59. 3	018707		030602		
32. 0	58. 51	018751		030612		H B
38. 0	58. 30	019083		030691		T
45. 0	58. 59	019294		030826		
47. 0	58. 47	019471		030802		
49. 0	59. 1	019559		030826		
51. 0	59. 8	019576		030851		
53. 0	58. 39	019311		030802		
55. 0	58. 0	019488		030818		
57. 0	58. 2	019488		030891		
22. 59. 0	58. 18	019688		030896		
23. 1. 0	57. 56	019771		030837		
3. 0	58. 23	019549		030877		
5. 0	58. 24	019699		030928		
7. 0	58. 23	019766		030923		
9. 0	58. 36	019766		030928		
11. 0	58. 33	019739		030928		

Aug. 28d. 16h. 45m. 45s. For continuation of this series of observations see the section of Term-day Observations.

Aug. 29d. 9h. 45m. 0s. The changes in the positions of the Magnets being frequent, the above additional observations were taken after the completion of the Term-day Observations.

Sep. 3d. A change of 13′. 51″ having taken place in the position of the Declination Magnet between 20h and 22h, extra observations were commenced.

Extraordinary Observations of September 3 and 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 3. 23. 13. 0	22. 58. 4	0·019805		0·030904		T
15. 0	58. 3	019932		030944		
19. 0	58. 16	020043		030954		
20. 0	58. 14	020087		030939		
23. 0	58. 21	020154		030905		
37. 0	59. 4	020299		030899		
40. 0	22. 59. 34	020520		030885		
46. 0	23. 0. 1	020665		030896		T
23. 57. 30				030869	61·5	H B
4. 0. 0. 0	1. 35					
2. 30		019371	62·5			H B
40. 0	6. 29	018855		031356		G
45. 0	7. 17	019626		031384		G
0. 55. 0	7. 8	020468		031515		H B
1. 5. 0	5. 46	020785		031749		
15. 0	3. 58	020171		031746		
35. 0	5. 8	019139		031986		
47. 30				032250		
50. 0	3. 9					
52. 30		019896				
1. 57. 30				032241	65·7	
2. 0. 0	1. 4					
2. 30		019762	66·5			
7. 30				032241		
10. 0	0. 58					
12. 30		020560				H B
Sep. 4. 7. 57. 30				0·032417	72·0	T D
8. 0. 0	22. 49. 56					
8. 2. 30		0·019590	72·0			
9. 57. 30				032153	71·0	
10. 0. 0	43. 39					
2. 30		021812	71·0			
7. 0	39. 14	021812		032153		
9. 0	38. 50	022254		032153		
11. 0	38. 50	022963		032153		
13. 0	38. 50	023627		032153		
15. 0	39. 11	024247		032187		
17. 0	40. 39	024911		032187		
19. 0	41. 36	025177		032187		
21. 0	43. 27	025133		032153		
23. 0	45. 7	025066		032153		
25. 0	46. 19	024911		032129		
27. 0	47. 25	024911		032105		
29. 0	47. 51	024911		032056		
31. 0	48. 53	024557		032031		
33. 0	49. 8	024468		031968		
35. 0	49. 27	024468		031909		
37. 0	50. 19	024468		031909		
39. 0	50. 41	024402		031871		
41. 0	51. 43	024247		031861		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 4. 10. 43. 0	22. 52. 50	0·024159		0·031851		T D
45. 0	54. 9	024026		031763		
47. 0	54. 58	023694		031748		
49. 0	55. 22	023361		031763		
51. 0	55. 10	022697		031729		
53. 0	54. 59	022298		031689		
55. 0	54. 31	022077		031689		
57. 0	53. 41	021923		031704		
10. 59. 0	52. 49	022033		031704		
11. 1. 0	51. 25	022033		031763		
3. 0	50. 17	021679		031724		
5. 0	49. 14	022188		031763		
7. 0	48. 27	022033		031763		
9. 0	47. 57	022210		031822		
11. 0	47. 28	022254		031797		
13. 0	46. 42	022321		031812		
15. 0	46. 15	022077		031773		
17. 0	45. 45	022254		031787		
20. 0	45. 2	022188		031812		
22. 0	44. 39	022144		031763		
24. 0	44. 19	022188		031763		
27. 0	43. 47	021590		031763		
30. 0	43. 3			031763		T D
34. 0	41. 35	021147		031763		G
36. 0	40. 41	021103		031763		
39. 0	39. 36	021103		031787		
43. 0	38. 38	021258		031797		
45. 0	38. 8	021347		031787		
46. 0	38. 15	021391		031787		
50. 0	37. 53	021524		031787		
54. 0	37. 56	021590		031787		
55. 0	38. 10	021612		031792		
11. 57. 30	38. 8	021590		031797	71·0	
12. 0. 0	38. 16	021546		031797		
2. 30	38. 48	021568	71·0	031846		
6. 0	41. 32	021352		031834		
9. 0	42. 7	021352		031834		
19. 0	42. 43	020415		031745		
30. 0	42. 54	020381		031692		
12. 45. 0	42. 54	020994		031710		
13. 0. 0	41. 28	021209		031592		
13. 57. 30	53. 22	020280		031220	68·5	
14. 0. 0	53. 21	020236		031220		
2. 0	53. 14					
2. 30	53. 15	020236	68·5	031220		
10. 0	53. 46	020285		031222		
13. 0	54. 28	020329		031242		
15. 0	54. 54	020467		031220		
20. 0	55. 4	020467		031235		
25. 0	55. 52	020450		031242		
30. 30	56. 18	020521		031226		

Sep. 4d. Considerable changes having taken place in the positions of the Declination and Horizontal Force Magnets between 8h and 10h, extra observations were commenced.

Extraordinary Observations of September 4 and 5.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 4. 14. 32. 30	22. 56. 45					G
35. 0	56. 50	0·020721		0·031246		
40. 0	56. 12	020793		031239		
45. 0	55. 23	020815		031254		
50. 0	54. 4	020952		031237		
53. 0	52. 52	021085		031252		
14. 55. 0	52. 7	021263		031252		
15. 0. 0	51. 5	021445		031252		
10. 0	50. 15	021516		031208		
40. 0	47. 53	021227		031377		
45. 0	49. 29	020767		031393		
50. 0	48. 42	021038		031367		
55. 0	48. 26	021171		031382		
15. 57. 30				031356	67·0	
16. 0. 0	48. 27	021132		031356		
16. 2. 30		021132	67·0			
17. 0. 0	46. 26	021031		031435		
30. 0	43. 54	021462		031679		
17. 57. 30				031672	66·5	
18. 0. 0	47. 21	021733		031672		
2. 30		021733	66·5			
50. 0	49. 14	021166		031596		
18. 55. 0	46. 11	021166		031596		
19. 0. 0	47. 46	020485		031468		
5. 0	48. 20	020468		031484		
7. 0	50. 29	020667		031484		
10. 0	51. 11	020911		031523		
15. 0	52. 57	020783		031507		
25. 0	51. 53	020766		031481		
30. 0	51. 55	020417		031429		
35. 0	50. 20	019780		031379		
45. 0	49. 6	018944		031523		
19. 57. 30	51. 37	019153		031349	65·0	
20. 0. 0	52. 26	019153		031349		
2. 30	53. 37	018954	65·0	031349		
20. 6. 0	54. 5	020127		031373		G
21. 57. 30				031412	64·0	H B
22. 0. 0	56. 28					
2. 30		017054	64·5			
7. 0	54. 36	016755		031330		
8. 0	53. 28	016512		031292		
11. 0	53. 2	016484		031298		
12. 0	53. 50	016329		031335		H B
15. 0	58. 4	016479		031385		T D
17. 0	57. 17	017011		031566		
19. 0	59. 25	017471		031656		
21. 0	59. 14	017072		031627		
23. 0	59. 36	017045		031608		
25. 0	58. 41	016690		031546		
27. 0	58. 31	016397		031585		
29. 0	57. 3	016220		031629		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 4. 22. 31. 0	22. 56. 31	0·016592		0·031562		T D
33. 0	57. 35	016636		031650		
38. 0	58. 3	016891		031648		
40. 0	58. 3	016891		031737		
45. 0	56. 21	016354		031668		
50. 0	55. 22	016942		031709		
52. 0	57. 11	017607		031938		
54. 0	58. 27	017889		031990		
22. 57. 0	58. 11	017624		032024		T D
23. 19. 0	56. 16	018855		031952		H B
22. 0	55. 12	018296		031894		
23. 0	54. 54	018341		031830		
24. 0	56. 18	019558		031857		
25. 0	56. 57	019846		031994		
26. 0	57. 6	018911		031994		
28. 0	57. 26	019531		032004		
30. 0	59. 2	019393		032030		
31. 0	22. 58. 33	019659		032040		
33. 0	23. 0. 23	019526		032040		
35. 0	22. 58. 49	019321		032022		
37. 0	57. 51	019012		031997		
38. 0	58. 41	018364		031982		
40. 0	58. 27	018586		032005		
42. 0	58. 3	019112		032049		
43. 0	58. 47	018979		032024		
45. 0	58. 29	019421		032043		
49. 0	58. 11	019151		032010		
51. 0	22. 58. 49	019256		031981		
23. 57. 30				032058	66·8	
5. 0. 0. 0	23. 0. 56					
2. 30		018825	67·5			
38. 0	4. 33	018051		032285		
52. 0	8. 8	021173		032618		
54. 0	8. 41	021589		032642		
56. 0	6. 28	021207		032669		
57. 0	6. 42	021207		032630		
58. 0	6. 17	020875		032616		
0. 59. 0	5. 21	020610		032607		
1. 1. 0	5. 35	020693		032602		
2. 30	4. 49	020312		032571		
4. 0	5. 0	020267		032566		
6. 0	5. 14	019333		032602		
8. 0	3. 42	019199		032623		
10. 0	4. 21	019637		032665		
12. 0	3. 11	019455		032660		
13. 0	3. 51	019211				
14. 0	3. 39	018830		032665		
18. 0	4. 9	018581		032718		
19. 0	4. 29	018891		032753		
25. 0	2. 51	017530		032816		
27. 0	4. 18	018875		032989		

Extraordinary Observations of September 5.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 5. 1.29. 0	23. 4.37	0·018517		0·032881		H B
31. 0	7.11	019402		033079		
32. 0	7.18	020083		033074		
33. 0	5.22	019530		033061		
35. 0	4. 3	019281		033027		
36. 0	1.33	019060		033032		
38. 0	23. 0.42	018457				
39. 0	22.59.46					
41. 0	58.35	018496		033041		
43. 0	58.35	018806		033101		
45. 0	56.22	019332		033167		
47.30				033229		
48. 0	59.54	020766		033218		
50. 0	59.50					
51. 0	58.35	020296		033195		
52.30	59.20	020679		033261		
57.30				033175	71·0	
58. 0	58.32	021082		033258		
1.59. 0	22.59.53	021410		033290		
2. 0. 0	23. 0.54					
2.30		021388	71·5			
4. 0	22.58.15	021520		033265		
6. 0	59.42	021692		033291		
7.30				033206		
9. 0	59.30	021958				
10. 0	59.49					
11. 0	22.59.57	022506		033310		
12.30		022162				
14. 0	23. 0.13	022457		033325		
15. 0	0.35	022717		033341		
18. 0	1.28	022673		033329		
20. 0	1.52	022380		033315		
22. 0	1. 5	022093		033272		
25. 0	23. 0.17	021290		033264		
27. 0	22.59.55	021113		033276		
30. 0	23. 0.11	021020		033292		
2.36. 0	23. 0.55	021103		033324		H B
3.15. 0	22.59.18	021190		033611		G
30. 0	22.59.49	021412		033770		
45. 0	23. 2.21	025648		034068		
50. 0	22.58.52	023871		034021		
50.30	56.58	023584		034045		
51. 0	56.28	023871		034080		
51.30	56.27	024314		034168		
52. 0	56.59	024558		034243		
53. 0	55.33	024757		034243		
54. 0	54.54	024580		034269		
55. 0	52.42	024575		034269		
56. 0	51.49	023888		034231		
57. 0	50.38	024132		034264		
57.30	50.13	024154		034330	74·5	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 5. 3.59. 0	22.48.59	0·023485		0·034350		G
4. 0. 0	46.56	023684		034355		
2.30	44.45	023130	74·2	034396		
4. 0	42.17	023441		034469		
4.30	41.37	023485		034494		
5. 0	41. 3	022701		034518		
6.30	40.18	023701		034518		
7. 0	39.29	023502		034508		
7.30	39.10	023369		034495		
8. 0	38.47	023258		034490		
8.30	38.42	023258		034446		
9. 0	39. 4	023519		034480		
9.30	40. 7	023541		034495		
10. 0	39.57	023541		034495		
10.30	40.27	023497		034480		
11. 0	41.16	023497		034480		
12. 0	41.20	023386		034495		
13. 0	41.18	023142		034473		
14. 0	42. 1	023142		034473		
20. 0	43.58	023536		034449		
25. 0	45.42	024239		034475		
30. 0	47. 5	024655		034477		
35. 0	47.20	024611		034430		
4.45. 0	49.27	023232		034317		
5. 0. 0	50.14	022531		034185		
15. 0	51. 9	023007		033981		
50. 0	54.52	024416		034137		
5.57.30				034273	76·5	
6. 0. 0	53. 8					
6. 2.30		023924	76·0			
7.45. 0	41.18	021066		033275		
50. 0	41. 2	020584		033182		
55. 0	40.51	019920		033121		
7.57.30	40.51	020252		033131	75·5	
8. 0. 0	41.56	020252		033131		
2.30	42.11	020584	75·5	033121		
5. 0	43.36	020474		033097		
8.20. 0	46.29	020440		033020		
9. 0. 0	51.28	018949		032191		
5. 0	53.33	018728		031898		
10. 0	48.22	018046		031920		
15. 0	49. 6	018378		031963		
20. 0	50. 3	019026		031840		
35. 0	42. 4	020448		031959		
40. 0	43.46	021002		031959		
45. 0	44.35	020985		031884		
50. 0	45.37	020874		031884		
55. 0	45.50	020414		031810		
9.57.30	46.41	020304		031810	74·5	
10. 0. 0	47.24	020082		031810		
2.30	47. 0	019572	74·5	031810		G

Extraordinary Observations of September 5, 6, and 8.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 5. 10. 24. 0	22. 39. 18	0·019333		0·032129		T
10. 50. 0	42. 32	019502		031954		T
11. 57. 30				030573	71·5	H B
12. 0. 0	50. 24					
2. 30		019539	71·7			
4. 0	51. 48	019584		030544		
6. 30	53. 48	019230		030456		
8. 0	54. 13	018544		030408		
10. 0	53. 15	017680		030369		
12. 0	49. 20	017680		030369		
14. 0	48. 41	017834		030418		
15. 0	48. 1	017834		030418		
16. 0	47. 29	017834		030408		
17. 0	47. 1	017989		030384		
18. 0	46. 21	018055		030364		
19. 0	45. 28	018388		030369		
20. 0	44. 39	018544		030384		
21. 0	43. 27	018831		030394		
22. 30	42. 22	019252		030408		
24. 0	41. 17	019495		030466		
25. 0	41. 5	019872		030456		
26. 0	40. 46	020226		030491		
27. 30	41. 2	020802		030481		
29. 0	41. 33	021023		030535		
30. 0	42. 7	021200		030544		
31. 0	42. 27	021183		030564		
32. 0	43. 3	021271		030578		
33. 0	43. 18	021360		030593		
34. 0	43. 36	021338		030588		
35. 0	43. 29	021227		030588		
36. 30	42. 54	020829		030578		
37. 30	42. 45	020541		030588		
39. 0	42. 15	020209		030602		
40. 0	41. 33	020231		030612		
41. 30	41. 11	019965		030676		
45. 0	38. 33	019877		030808		
46. 0	37. 56	020032		030822		
47. 0	37. 32	020164		030851		
49. 0	37. 8	020475		030930		
51. 0	37. 8	020984		031008		
53. 0	37. 34	021249		031018		
54. 0	38. 14	021427		031066		
55. 30	38. 50	021581		031056		
56. 30	38. 50	021559		031061		
57. 30	38. 50	021581		031061		H B
Sep. 6. 3. 50. 0	22. 53. 51	0 021827		0·033129		T D
4. 55. 0	48. 20	019326		033292		
5. 45. 0	46. 43	021759		033349		
5. 55. 0	46. 43	021555		033361		
9. 0. 0	43. 27	021776		032630		
12. 0. 0	48. 36	021285	73·5	031785	73·3	
Sep. 8. 3. 57. 35				0·033500	72·5	L
4. 0. 0	22. 55. 4					
4. 2. 30		0·023225	72·8			
5. 57. 30				033887	73·8	
6. 0. 0	48. 46					
2. 30		023982				
2. 45	51. 39		74·0			
4. 45	52. 55					
6. 45	54. 24					
8. 45	55. 11					
10. 45	54. 58					
18. 0	53. 27	020772		033623		
20. 0	51. 3	020219		033550		
22. 0	51. 34	019886		033575		
24. 0	49. 55	019842		033560		
26. 0	48. 18	019886		033526		
28. 0	47. 8	019886		033526		
30. 0	45. 58	019953		033649		
34. 0	43. 32	019886		033669		
36. 0	42. 17	020108		033678		
38. 0	40. 47	020108		033649		
39. 0	40. 3	019930		033649		
40. 0	39. 6	019753		033659		
41. 0	37. 22	019886		033678		
42. 0	36. 48	019665		033625		
43. 0	35. 59	019842		033615		
47. 0	34. 12	021037		033611		
48. 0	34. 36	021326		033601		
49. 0	35. 15	021701		033698		
50. 0	35. 53	021813		033708		
51. 0	36. 42	021923		033708		
52. 0	37. 27	022100		033698		
53. 0	38. 1	022100		033620		
54. 0	38. 38	022144		033649		
55. 0	39. 31	022278		033683		
56. 0	39. 46	022322		033673		
57. 0	40. 27	022278		033601		
58. 0	41. 6	022144		033571		
6. 59. 0	41. 20	022056		033527		
7. 0. 0	40. 52	022100		033562		
1. 0	40. 32	022056		033479		
2. 0	40. 34	022322		033455		
3. 0	40. 56	022499		033455		
4. 0	41. 32	022322		033440		
5. 0	41. 32	022167		033416		
6. 0	42. 1	022100		033455		
7. 0	42. 1	022012		033455		
9. 0	43. 5	021657		033406		
10. 0	44. 9	021480		033406		
11. 0	44. 9	021392		033406		
12. 0	43. 57	021215		033377		

Sep 8d. A change of 6′. 18″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of September 8 and 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 8. 7. 13. 0	22. 43. 46	0·020905		0·033319		L
14. 0	43. 36	020772		033309		
18. 0	42. 37	019997		033211		
19. 0	41. 48	019886		033211		
20. 0	41. 17	019930		033226		
21. 0	40. 49	020064		033284		
22. 0	40. 31	020108		033221		
23. 0	40. 31	020219		033235		
24. 0	40. 24	020550		033211		
25. 0	40. 37	020772		033250		
26. 0	40. 59	020949		033260		
27. 0	41. 32	020949		033260		
28. 0	42. 0	020883		033250		
29. 0	42. 8	020772		033211		
30. 0	42. 11	020728		033238		
41. 0	43. 0	020550		033092		
51. 0	42. 9	020108		032994		
7. 57. 30				032945	74·0	
8. 0. 0	42. 20					
8. 2. 30		019886	74·0			
9. 57. 30				032257	73·0	
10. 0. 0	44. 43					
10. 2. 30		019672	73·0			L
11. 30. 0	49. 27	020619		032005		G
35. 0	49. 52	020619		031959		G
11. 57. 30				031895	71·5	T D
12. 0. 0	50. 31					
2. 30		020558	71·7			T D
Sep. 10. 9. 57. 30				0·032551	71·8	H B
10. 0. 0	22. 44. 20					
10. 2. 30		0·021067	71·7			H B
11. 57. 30				031350	70·4	L
12. 0. 0	39. 41					
2. 30		023481	70·4			
10. 0	33. 5	025678		031383		
11. 0	33. 42	025899		031422		
12. 0	34. 17	026010		031432		
13. 0	34. 51	026121		031393		
14. 0	35. 27	026148		031249		
15. 0	36. 2	026148		031210		
16. 0	36. 49	026148		031259		
17. 0	37. 24	025993		031210		
18. 0	37. 53	025838		031259		
19. 0	38. 26	025838		031200		
20. 0	38. 55	025661		031162		
21. 0	39. 12	025550		031196		
22. 0	39. 12	025439		031259		
23. 0	39. 29	025218		031210		
24. 0	39. 43	025201		031174		
25. 0	39. 59	025046		031077		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 10. 12. 26. 0	22. 40. 13	0·024758		0·031062		L
27. 0	40. 29	024648		031174		
28. 0	40. 42	024315		031134		
29. 0	40. 54	024382		031036		
30. 0	41. 13	024227		031022		
31. 0	41. 28	024094		031036		
32. 0	41. 35	023917		031061		
33. 0	41. 49	023695		031110		
34. 0	42. 1	023457		031012		
35. 0	42. 10	023302		031012		
36. 0	42. 30	023191		031100		
37. 0	42. 42	023058		031061		
38. 0	43. 0	022749		031036		
39. 0	43. 0	022749		031083		
40. 0	43. 10	022527		031009		
41. 0	43. 28	022483		031083		
42. 0	43. 41	022195		031083		
43. 0	43. 41	022306		031083		
44. 0	44. 4	022067		031083		
47. 0	44. 39	021846		031034		
48. 0	45. 2	021581		031057		
52. 0	45. 24	020827		031057		
54. 0	45. 13	020390		031037		
55. 0	44. 58	020279		031086		
56. 0	44. 47	020014		031057		
57. 0	44. 21	019925		031057		
58. 0	43. 45	019836		031057		
12. 59. 0	43. 22	019836		031078		
13. 0. 0	42. 47	019819		031127		
1. 0	42. 16	019819		031107		
2. 0	41. 47	019930		031078		
3. 0	41. 21	020041		031127		
4. 0	41. 1	020152		031173		
5. 0	40. 45	020262		031198		
6. 0	40. 41	020373		031222		
7. 0	40. 37	020506		031198		
8. 0	40. 37	020705		031198		
9. 0	40. 30	020705		031218		
13. 57. 30				031333	69·0	
14. 0. 0	43. 23					
14. 2. 30		020841	69·2			
15. 57. 30				031587	69·0	
16. 0. 10	44. 57					
16. 2. 30		021804	69·0			
17. 57. 30				031557	68·0	
18. 0. 0	44. 12					
18. 2. 30		022520	68·0			
19. 57. 30				031473	67·5	
20. 0. 0	46. 4					
20. 2. 30		019352	67·6			L
21. 57. 30				031331	67·0	T D

Sep. 10d. Considerable changes having taken place in the positions of the three Magnets between 10h and 12h, extra observations were commenced.

Extraordinary Observations of September 10 and 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 10. 22. 0. 0	22. 59. 5					T D
1. 0	58. 43	0·019445		0·031331		
2. 30		019445	67·5			
3. 0	58. 47	019180		031331		
5. 0	58. 9	019020		031341		
7. 0	57. 30	019020		031341		
9. 0	57. 33	019285		031353		
11. 0	57. 16	019462		031416		
13. 0	57. 42	019506		031475		
15. 0	57. 2	019280		031416		
22. 0	56. 56	019701		031530		
27. 0	57. 7	019674		031530		
32. 0	57. 1	019408		031479		
22. 37. 0	57. 19	019718		031479		
23. 4. 0	57. 44	020118		031556		
19. 0	57. 31	019914		031506		
29. 0	57. 21	019488		031552		
43. 0	22. 59. 36	018951		031650		
45. 0	23. 0. 1	018968		031666		
47. 0	0. 23	018968		031710		
50. 0	1. 59	020186		031700		
52. 0	2. 7					
23. 57. 30				031752	68·0	
11. 0. 0. 0	1. 1					
2. 30		018321	68·7			
7. 0	0. 16	017385		031583		
10. 0	0. 9	017026		031609		
19. 0	3. 51	016822		031684		
24. 0	4. 5	016839		031710		
32. 0	4. 31	016662		031825		
43. 0	4. 24	016635		031975		
0. 58. 0	0. 44	017820		032072		
1. 11. 30	4. 34	019266		032194		
15. 0	3. 41	018381		032192		
21. 0	1. 23	017179		032095		
24. 0	0. 31	017594		032082		
27. 0	1. 15	018304		032184		
31. 0	1. 35	018099		032197		
34. 0	2. 0	018321		032223		
41. 0	2. 1	023493		032268		
47. 30				032329		
50. 0	1. 17					
52. 30		019761				
1. 57. 30				032508	70·0	
2. 0. 0	23. 0. 58					
2. 30		020714	70·4			
7. 30				032426		
10. 0	22. 59. 5					
12. 30		020204				
14. 0	58. 31	019972		032478		
16. 0	58. 14	019795		032502		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 11. 2. 18. 0	22. 57. 41	0·019419		0·032516		T D
24. 0	57. 3	019325		032592		
27. 0	56. 8	019148		032602		
29. 0	56. 8	018899		032662		
34. 0	55. 23	019403		031909		
38. 0	55. 23	019581		032665		
41. 0	55. 22	019957		032640		
2. 44. 0	55. 58	020705		032730		T D
3. 3. 0	54. 5	021624		032865		H B
10. 0	53. 39	021841		032886		
16. 30	53. 52	021924		032972		
26. 0	53. 27	021587		032872		
32. 0	54. 14	021028		032888		
34. 0	54. 9	021067		032888		
35. 30	54. 33	021222		032888		
36. 30	55. 31	021621		032912		
38. 0	55. 44	021997		032965		
40. 0	56. 41	022750		033134		
41. 0	56. 41	022745		033134		
42. 30	56. 38	022656		033012		H B
3. 57. 30				032870	71·5	L
4. 0. 0	54. 48					
2. 30		019103	72·0			
4. 0	54. 19	019325		032848		
7. 0	52. 48	018329		032848		
11. 0	52. 48	019010		032932		
13. 0	53. 2	019342		032946		
20. 0	54. 9	021728		033047		
21. 0	54. 17	022016		033095		
24. 0	54. 4	022348		033057		
25. 0	53. 16	022193		033095		
27. 0	53. 16	022458		033115		
4. 29. 0	52·57	022653		033121		
5. 57. 30				033842	73·2	
6. 0. 0	31. 40	019716		033942		
2. 30		019716	73·0			
8. 0	7. 42	022926		034196		
11. 0	8. 29	024587		034245		
13. 0	10. 38	025362		034099		
14. 0	11. 59	025473		034099		
15. 0	13. 17	025694		034099		
16. 0	15. 0	025871		034060		
17. 0	16. 52	025738		034040		
18. 0	18. 15	025473		034001		
19. 0	19. 18	025473		033928		
20. 0	19. 57	025251		033952		
21. 0	20. 31	024986		033942		
24. 0	21. 28	024366		033757		
25. 0	22. 1	024366		033731		
27. 0	24. 3	024587		033804		
29. 0	27. 3	024697		033731		

Extraordinary Observations of September 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 11. 6. 31. 0	22. 29. 40	0·024144		0·033731		L
34. 0	31. 46	022373		033526		
36. 0	31. 46	021487		033487		
40. 0	30. 49	020270		033458		
43. 0	29. 5	019827		033379		
47. 0	27. 55	020203		033438		
49. 0	27. 55	020602		033390		
52. 0	28. 38	021222		033428		
54. 0	30. 14	021443		033390		
56. 0	30. 57	021443		033390		
6. 58. 0	31. 34	021376		033351		
7. 0. 0	31. 41	021487		033316		
4. 0	32. 13	021487		033316		
9. 0	31. 56	021266		033244		
12. 0	30. 53	021310		033244		
26. 0	30. 53	021045		033072		
41. 0	33. 32	020491		032949		
50. 0	34. 51	021001		032887		
7. 57. 30				032803	73·0	
8. 0. 0	36. 35					
2. 30		021045	73·0			
8. 0	37. 31	021376		032730		
11. 0	37. 56	021249		032654		
13. 0	37. 31	021359		032703		
15. 0	37. 48	021514		032654		
19. 0	38. 0	021581		032654		
28. 0	48. 38	021736		032616		
30. 0	48. 38	021913		032580		
32. 0	48. 45	021913		032580		
34. 0	48. 51	021913		032516		
36. 0	48. 46	021785		032531		
38. 0	48. 3	021675		032482		
40. 0	47. 51	021675		032506		
8. 42. 0	47. 35	021564		032443		
9. 57. 30				032058	72·4	
10. 0. 0	46. 59					
2. 30		025609	72·5			
10. 25. 0	50. 11	025415		031884		L
11. 44. 0	47. 7	021113		031487		T D
49. 0	47. 2	020875		031521		
11. 57. 30				031519	71·7	
12. 0. 0	45. 57					
2. 30		020919	72·0			
9. 0	44. 31	020875		031532		
47. 0	51. 3	020619		031332		
50. 0	52. 54	019955		031269		
52. 0	54. 3	018627		031186		
54. 0	54. 29	018627		031101		
57. 0	55. 53	019069		031111		
12. 59. 0	56. 8	019052		031111		
13. 1. 0	58. 48	019338		031072		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 11. 13. 3. 0	22. 59. 7	0·019274		0·031052		T D
5. 0	59. 19	019274		030955		
7. 0	58. 32	019274		030867		
9. 0	58. 32	019495		030791		
11. 0	57. 48	019894		030791		
13. 0	57. 29	020093		030776		
15. 0	57. 3	020381		030742		
17. 0	57. 3	020425		030742		
19. 0	56. 40	020602		030742		
21. 0	55. 53	020602		030742		
23. 0	55. 26	020807		030742		
25. 0	54. 52	020807		030742		
27. 0	54. 29	021249		030801		
29. 0	54. 5	021427		030834		
34. 0	54. 10	021471		030814		
39. 0	52. 15	021338		030814		
44. 0	51. 26	021471		030902		
49. 0	48. 58	021454		030896		
54. 0	47. 51	021631		030934		
13. 57. 30				031032	71·0	
14. 0. 0	45. 13					
2. 30		022074	71·5			
6. 0	44. 57	022256		031054		
11. 0	45. 59	022305		031067		
16. 0	45. 59	022271		031060		
14. 21. 0	45. 44	022321		031062		
15. 57. 30				030640	68·5	
16. 0. 0	51. 12					
2. 30		021199	68·7			
4. 0	52. 20	021315		030638		
9. 0	52. 20	021315		030638		
16. 14. 0	52. 40	021298		030612		
17. 57. 30				030531	67·0	
18. 0. 0	45. 18					
2. 30		019871	67·4			
4. 0	45. 46	019650		030609		
6. 0	44. 43	019650		030805		
8. 0	44. 36	019650		030853		
24. 0	44. 59	019871		031293		
29. 0	45. 23	019871		031234		
39. 0	45. 22	019871		031268		
18. 49. 0	44. 5	019871		031293		T D
19. 57. 30				031341	67·0	H B
20. 0. 0	48. 32					
20. 2. 30		019224	67·5			
21. 57. 30				031723	67·0	
22. 0. 0	52. 16					
2. 30		017253	67·5			
8. 0	54. 43	017896		031758		
9. 30	54. 37	017847		031795		
11. 0	54. 19	017802		031800		

Extraordinary Observations of September 11 and 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°		d h m s	° ′ ″		°		°	
Sep. 11. 22. 13. 30	22. 53. 54	0·017869		0·031785		H B	Sep. 13. 14. 49. 0	22. 47. 53	0·021591		0·030718		H B
16. 0	53. 45	018112		031785			51. 0	47. 33	021348		030699		
21. 0	54. 57	018068		031776			53. 0	47. 16	021287		030733		
26. 0	55. 2	017908		031797		H B	14. 58. 0	46. 18	021265		030731		
31. 0	54. 50	017886		031879		G	15. 0. 0	46. 2	021353		030766		
41. 0	54. 55	017725		031860		G	7. 0	45. 17	021663		030744		
51. 0	53. 47	018628		031912		H B	9. 0	45. 4	021752		030749		
52. 0	54. 29	018562		031814			15. 0	44. 54	021757		030768		
57. 0	55. 38	018584		031843			16. 30	44. 57	021757		030753		
22. 59. 0	55. 13	018539		031824			24. 0	44. 47	021031		030742		
23. 4. 0	55. 50	018517		031838			36. 0	45. 50	021302		030797		
11. 0	55. 37	018379		031855		H B	38. 0	45. 50	021302		030812		
15. 0	55. 51	018401		031927		C T	41. 0	46. 11	021457		030846		
19. 0	55. 27	018202		031840		H B	43. 0	46. 3	021435		030837		
23. 0	55. 26	018950		031840		C T	45. 0	45. 45	021329		030811		
28. 0	55. 44	018330		031792			48. 0	45. 25	021263		030825		
38. 0	58. 11	018330		031850			50. 0	45. 15	021285		030825		
40. 0	57. 39	018015		031808			15. 57. 30				030843	66·5	
48. 0	57. 18	018900		031856		C T	16. 0. 0	45. 15					
23. 57. 30				031808	67·7	H B	2. 30		021334	66·5			
12. 0. 0. 0	55. 27						7. 0	43. 48	021334		030843		
2. 30		018364	68·3				9. 0	43. 39	021334		030843		
8. 0	55. 27	019079		031885			15. 0	42. 33	021450		030807		
0. 34. 0	56. 5	019198		032145			17. 0	41. 49	021516		030807		
1. 47. 30				032782			19. 0	41. 46	021650		030816		
50. 0	56. 26						21. 0	41. 23	021583		030812		
52. 30		020686					28. 0	40. 59	021411		030816		
1. 57. 30				032777	71·7		47. 0	42. 13	022103		030936		
2. 0. 0	57. 0						50. 0	42. 43	022191		030946		
2. 30		021549	71·8				53. 0	43. 4	022214		030946		
7. 30				032820			16. 55. 0	43. 33	022241		030951		
10. 0	57. 40						17. 0. 0	44. 36	022307		030956		
12. 30		021615				H B	2. 0	45. 15	022307		030956		
							3. 0	45. 28	022395		030956		
Sep. 13. 13. 57. 30				0·031009	67·5	H B	5. 0	45. 47	022329		030956		
14. 0. 0	22. 50. 19						7. 0	45. 47	022307		030961		
2. 30		0·023270	67·6				8. 0	46. 4	022401		030946		
4. 0	51. 35	023337		031009			14. 0	46. 57	022268		030922		
6. 0	52. 8	023382		031009			22. 0	47. 3	021670		030885		
8. 0	52. 16	023382		031009			24. 0	46. 42	021582		030885		
10. 0	52. 26	023276		030958			26. 0	46. 18	021604		030875		
12. 0	52. 35	023165		030948			30. 0	45. 40	021515		030875		
16. 0	52. 18	023037		030910			32. 0	46. 2	021653		030861		
19. 0	51. 58	022949		030874			34. 0	45. 56	021786		030871		
24. 0	51. 58	022927		030859			36. 0	45. 56	021852		030885		
27. 0	51. 18	022732		030845			40. 0	45. 44	021830		030874		
33. 0	50. 21	022533		030793			43. 0	45. 44	021830		030883		
36. 0	49. 35	022339		030783			45. 0	45. 8	021830		030883		
43. 0	48. 49	021874		030723			47. 0	45. 4	021830		030893		
45. 0	48. 30	021769		030708			53. 0	45. 4	021946		030923		
47. 0	48. 1	021680		030718			17. 57. 30				030892	66·0	

Sep. 13d. 14h. The position of the Declination Magnet was found to be nearly 7′ different from its position at 12h. 10m, and extra observations were commenced.

Extraordinary Observations of September 13, 14, 16, 17, and 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 13. 18. 0. 0	22. 45. 18					H B
2. 30		0·021835	65·8			H B
Sep. 14. 7. 57. 30				0·032051	69·6	H B
8. 0. 0	22. 46. 42					
8. 2. 30		0·021299	70·2			
9. 57. 30				031768	69·3	
10. 0. 0	45. 29					
2. 30		022189	69·7			
10. 0	43. 47	022105		031658		
12. 0	43. 3	022060		031667		
15. 0	42. 56	022110		031672		
17. 0	42. 56	022110		031672		
19. 0	43. 11	022110		031677		
21. 0	43. 47	022043		031651		
10. 23. 0	43. 47	021977		031651		
11. 57. 30				031069	68·0	
12. 0. 0	45. 17					
2. 30		020944	68·5			H B
Sep. 16. 11. 57. 30				0·031763	71·0	H B
12. 0. 0	22. 47. 10					
12. 2. 30		0·021717	70·7			
13. 57. 30				031396	69·5	
14. 0. 0	53. 40					
2. 30		021778	69·5			
8. 0	52. 30	021938		031330		
11. 0	51. 36	021921		031304		
17. 0	50. 46	021965		031262		
23. 0	48. 51	021938		031213		
25. 0	48. 5	021865		031178		
27. 0	47. 39	021909		031187		
29. 0	47. 13	021953		031161		
14. 31. 0	47. 13	022092		031161		
15. 10. 0	43. 56	021591		031074		
51. 0	44. 35	021268		031150		
15. 57. 30				031132	67·5	
16. 0. 0	45. 10					
16. 2. 30		021295	67·7			
17. 57. 30				031034	66·3	
18. 0. 0	48. 44					
18. 2. 30		021677	66·3			
19. 57. 30				030911	64·5	
20. 0. 0	44. 34					
20. 2. 30		021344	64·6			H B
21. 57. 30				030852	64·0	C T
22. 0. 0	49. 13					
22. 2. 30		019344	64·3			
16. 23. 57. 30				031243	65·3	
17. 0. 0. 0	57. 23					
2. 30		020054	66·0			

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 17. 0. 15. 0	22. 57. 30	0·019906		0·031338		C T
22. 0	57. 55	020001		031367		
35. 0	58. 16	020185		031449		
40. 0	58. 18	020108		031502		
0. 54. 0	58. 18	019915		031607		
1. 20. 0	57. 47	020101		031767		
47. 30				032036		
50. 0	57. 17					
52. 30		020620				
1. 57. 30				031987	68·8	
2. 0. 0	57. 3					
2. 30		020510	69·2			
7. 30				031992		
10. 0	56. 35					
12. 30		020576				C T
Sep. 21. 3. 57. 30				0·031787	66·2	H B
4. 0. 0	22. 52. 25					
4. 2. 30		0·022486	66·5			
5. 57. 30				031718	67·3	
6. 0. 0	51. 39					
6. 2. 30		023032	67·5			
7. 50. 0	39. 10	020961		032106		
51. 0	38. 49	020961		032106		
52. 30	37. 40	021139		032121		
54. 0	36. 25	021271		032145		
55. 0	36. 10	021161		032121		
56. 0	35. 20	021005		032106		
57. 30				032121	67·0	
7. 58. 30	33. 6	021072		032136		
8. 0. 0	31. 49					
1. 0	31. 15	020961		032155		
2. 30		021094	67·3			
3. 0	29. 1	021227		032194		
4. 0	28. 10	021404		032219		
5. 0	27. 26	021382		032229		
6. 0	26. 32	021669		032239		
7. 0	25. 21	021891		032258		
8. 0	25. 2	022268		032287		
9. 0	24. 44	022229		032282		
10. 0	24. 43	022295		032292		
12. 0	25. 27	022494		032314		
13. 0	25. 19	022826		032367		
14. 0	25. 23	023202		032377		
15. 0	25. 40	023202		032387		
16. 0	25. 54	023291		032402		
19. 30	25. 38	023048		032318		
21. 0	25. 38	023158		032299		
22. 0	26. 1	023025		032299		
23. 0	26. 13	023048		032314		
24. 0	26. 23	023097		032304		

Sep. 14d. 4h to 8h. Between these times the positions of the Magnets were frequently examined, and frequent small changes took place, which at 8h appeared to be more frequent, and the above observations were consequently taken.

Sep. 16d. A change of 6′. 30″ having taken place in the position of the Declination Magnet between 12h and 14h, extra observations were commenced.

Sep. 21d. At 6h. 7m. 50s, considerable changes having taken place in the positions of the Declination and Horizontal Force Magnets, extra observations were commenced.

Extraordinary Observations of September 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 21. 8. 25. 0	22. 26. 1	0·023185		0·032318		H B
26. 0	25. 34	023319		032304		
27. 0	25. 29	023185		032299		
29. 0	25. 26	023319		032289		
32. 0	26. 43	023983		032328		
33. 0	27. 14	024248		032304		
34. 0	27. 14	024315		032279		
35. 0	26. 44	024248		032190		
36. 0	26. 10	023761		032068		
37. 0	25. 47	023407		032019		
38. 0	25. 41	023185		032009		
39. 0	25. 41	022969		032019		
40. 0	25. 41	022969		032019		
45. 0	26. 31	022283		032058		
48. 0	26. 31	022173		032083		
50. 0	26. 33	022217		032117		
8. 55. 0	27. 56	022864		032117		
9. 0. 0	33. 34	022067		031958		
1. 0	34. 44	022044		031978		
2. 0	35. 58	022022		031963		
3. 0	36. 54	021889		031919		
4. 0	38. 16	021713		031861		
5. 0	39. 5	021513		031870		
6. 0	40. 0	021292		031861		
7. 0	40. 50	020606		031787		
8. 0	42. 13	020141		031753		
9. 0	42. 52	019969		031753		
10. 0	43. 20	019791		031763		
11. 0	43. 50	019681		031777		
12. 0	44. 10	019592		031777		
13. 0	44. 10	019326		031758		
14. 0	44. 0	019282		031758		
15. 0	43. 55	019105		031748		
16. 0	43. 31	018950		031758		
17. 0	43. 10	018928		031787		
18. 0	42. 55	018928		031797		
19. 0	42. 49	018818		031797		
21. 0	42. 11	018684		031807		
22. 0	41. 34	018884		031846		
23. 0	40. 50	019149		031869		
24. 0	40. 28	019465		031928		
25. 0	39. 56	019686		031932		
26. 0	39. 49	019974		031932		
27. 0	39. 42	020151		031932		
28. 0	39. 35	020173		031932		
30. 0	38. 56	019863		031918		
31. 0	39. 7	019974		031893		
32. 0	39. 20	019996		031893		
33. 0	39. 17	020085		031893		
36. 0	40. 29	020377		031884		
49. 0	44. 28	020886		031774		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 21. 9. 52. 0	22. 45. 10	0·021064		0·031760		H B
54. 0	45. 34	020980		031755		
9. 57. 30				031745	66·5	
10. 0. 0	46. 6					
2. 30		021003	66·5			
6. 0	46. 10	020604		031708		
9. 0	46. 19	020631		031718		
14. 0	46. 31	021163		031733		
16. 0	47. 2	021317		031742		
18. 0	47. 14	021672		031726		
20. 0	47. 23	021959		031716		
22. 0	47. 46	021804		031677		
25. 0	47. 46	021655		031643		
27. 0	47. 46	021057		031619		
29. 0	47. 34	021079		031633		
33. 0	47. 25	021256		031606		
10. 40. 0	47. 54	021283		031606		H B
11. 57. 30				031394	65·5	C T
12. 0. 0	46. 22					
12. 2. 30		020906	65·8			
13. 57. 30				031081	65·0	
14. 0. 0	38. 23					
2. 30		020127	65·0			
14. 0	40. 33	019668		031054		
19. 0	39. 33	019540		031028		
23. 0	38. 51	019540		031028		
28. 0	38. 31	019429		031028		
33. 0	37. 18	019302		031016		
39. 0	37. 0	019191		031050		
47. 0	37. 23	019395		031072		
14. 54. 0	38. 16	019600		031085		
15. 1. 0	38. 9	019422		031120		
5. 0	38. 22	019361		031107		
39. 0	36. 8	020213		030991		
45. 0	35. 1	020750		030965		
49. 0	35. 29	021502		030965		
51. 0	35. 54	021546		030950		
53. 0	35. 28	021485		030900		
15. 57. 3				030788	64·0	
16. 0. 0	35. 29					
2. 30		021330	64·0			
14. 0	36. 57	021468		030620		
19. 0	35. 59	021269		030546		
24. 0	35. 24	021269		030423		
39. 0	33. 49	021362		030298		
42. 0	33. 49	021429		030313		
44. 0	33. 54	021429		030313		
52. 0	33. 54	021651		030346		
16. 59. 0	35. 3	021473		030370		
17. 9. 0	36. 4	020903		030359		
11. 0	36. 29	020792		030359		

Extraordinary Observations of September 21 and 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 21. 17. 13. 0	22. 36. 48.	0·020615		0·030369		C T
39. 0	42. 58	019906		030462		
42. 0	43. 27	020000		030462		
44. 0	44. 1	019668		030462		
49. 0	45. 11	019491		030462		
51. 0	44. 32	019558		030435		
53. 0	44. 1	019651		030420		
54. 0	43. 26	019828		030396		
17. 57. 30				030386	63·2	
18. 0. 0	42. 27					
2. 30		020426	63·5			
41. 0	48. 6	021354		029964		
44. 0	48. 54	021116		029815		
46. 0	48. 54	020673		029766		
51. 0	48. 11	020230		029766		
18. 57. 0	49. 8	020102		029815		
19. 9. 0	52. 24	019532		029861		
11. 0	52. 53	019532		029899		
12. 0	53. 36	019532		029909		
13. 0	53. 51	019294		029919		
14. 0	53. 51	019294		029919		
15. 0	53. 57	018834		029933		
19. 0	53. 57	018502		029933		
29. 0	52. 36	018374		029906		
19. 57. 30				029899	62·0	
20. 0. 0	51. 15					
20. 2. 30		017890	62·0			C T
21. 57. 30				029909	62·5	L
22. 0. 0	22. 56. 45					
22. 2. 30		013060	62·5			L
23. 34. 0	23. 2. 42	012675		031819		H B
39. 0	2. 25	013068		031869		
43. 0	2. 53	013511		031974		
48. 0	3. 53	014262		032033		
52. 0	5. 21	014500		032077		
23. 57. 30				032154	64·5	
22. 0. 0. 0	4. 24					
2. 30		015011	64·6			
4. 0	4. 33	015493		032224		
6. 0	4. 50	015870		032302		
7. 0	4. 18	015958		032307		
9. 0	4. 33	016395		032372		
10. 0	4. 52	016595		032382		
11. 0	4. 40	016727		032382		
16. 0	6. 22	016546		032419		
19. 0	5. 25	015461		032459		
26. 0	5. 53	016031		032554		
29. 30	5. 18	015472		032561		
34. 0	4. 44	015224		032646		
38. 30	3. 43	016176		032744		
48. 0	3. 18	016276		032928		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 0. 55. 0	23. 3. 50	0·017224		0·033151		H B
1. 0. 30	3. 50	018082		033240		
9. 0	4. 44	019666		033367		
17. 0	2. 40	021476		033505		H B
18. 0	3. 15	022074		033688		G
22. 0	0. 56	022494		033747		
25. 45	4. 3	023065		033865		
28. 0	9. 46	025655		034254		
29. 0	6. 22	026027		034304		
30. 0	7. 8	025628		034304		
30. 30		024964				
31. 0	5. 30	023879		034314		
32. 0	2. 39	023657		034401		
32. 30	2. 2	023635		034391		
33. 0	1. 17	023768		034476		
34. 0	23. 0. 19	023674		034574		
35. 0	22. 59. 28	024295		034671		
36. 0	58. 58	024582		034681		
37. 0	22. 58. 42	025246		034525		
39. 0	23. 1. 42	025662		034551		
41. 0	5. 17	025861		034541		G
43. 0	3. 58	024666		034527		H B
44. 0	4. 0	024616		034600		
46. 0	23. 1. 40	024395		034567		
47. 30				034744		
48. 0	22. 58. 47	024351		034602		
49. 0	57. 25	024373		034604		
50. 0	57. 9	024837		034629		
51. 0	56. 39	024793		034570		
52. 0	56. 58	024904		034517		
52. 30		024810				
53. 0	56. 37	024683		034483		
54. 0	55. 18	024434		034484		
56. 40				034470		
57. 30				034497	67·0	
58. 0	56. 46	023217		034304		
1. 59. 0	55. 55	023039		034390		
2. 0. 0	55. 52					
1. 0	55. 13	022265		034292		
2. 30		022198	66·5			
4. 0	55. 13	022458		034257		
5. 0	54. 50	022657		034332		
6. 0	54. 50	022724		034367		
7. 30				034316		
8. 0	58. 42	023278		034450		
9. 0	22. 59. 37	022968		034381		
10. 0	23. 0. 14	022613		034357		
11. 0	23. 0. 27	022370		034357		
12. 30		022375				
13. 0	22. 59. 56	023012		034513		
14. 0	59. 15	023117		034523		

Extraordinary Observations of September 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 2. 15. 0	22. 58. 10	0·023140		0·034527		H B
16. 0	58. 15	023781		034562		
17. 0	58. 3	023516		034563		
18. 0	58. 26	023649		034563		
19. 0	22. 59. 13	023643		034515		
20. 0	23. 0. 34	023599		034476		
21. 0	1. 31	023134		034442		
22. 0	2. 24	023090		034466		
23. 0	3. 12	022869		034500		
24. 0	1. 54	022249		034407		
25. 0	1. 11	022271		034344		
26. 0	0. 19	022027		034329		
27. 0	0. 6	021850		034309		
28. 0	0. 13	021983		034353		
29. 0	0. 24	021956		034395		
32. 0	4. 42	021048		034336		
33. 0	4. 37	020339		034356		
34. 0	3. 20	019786		034444		
35. 0	23. 1. 5	019499		034580		
36. 0	22. 57. 54	019942		034615		
37. 0	55. 2	020650		034761		
38. 0	54. 21	021779		034823		
39. 0	54. 39	022460		034882		
40. 0	56. 23	022969		034897		
41. 0	58. 31	023014		034918		
42. 0	59. 37	022814		034898		
43. 0	59. 11	022526		034859		
44. 0	58. 14	022588		034947		
45. 0	57. 44	022477		034967		
46. 0	56. 38	022654		035031		
47. 0	56. 18	023252		035031		
48. 0	56. 53	023805		035040		
49. 0	57. 34	024398		035040		
50. 0	58. 8	024686		035055		
51. 0	58. 32	024929		035069		
52. 0	59. 22	025107		035069		
53. 0	59. 3	025129		035096		
54. 0	58. 6	024973		035062		
55. 0	57. 1	025151		035082		
56. 0	56. 26	025239		035096		
2. 57. 0	56. 17	025151		035082		
3. 0. 0	55. 51	024946		034779		
2. 0	56. 46	024791		034668		
3. 0	58. 4	024836		034643		
4. 0	58. 15	024632		034624		
5. 0	58. 42	024454		034611		
6. 0	58. 49	024144		034597		
7. 0	59. 7	024012		034635		
8. 0	58. 49	023856		034645		
9. 0	58. 39	023657		034606		
10. 0	58. 14	023303		034523		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 3. 11. 0	22. 57. 39	0·023082		0·034597		H B
12. 0	57. 31	023082		034655		
13. 0	57. 24	023281		034659		
14. 0	57. 47	023542		034669		
15. 0	57. 12	023630		034679		
20. 0	55. 24	023492		034685		
22. 0	55. 31	023182		034647		
23. 0	55. 1	023160		034685		
24. 0	54. 36	023071		034720		
25. 0	54. 9	023049		034710		
26. 0	53. 21	023049		034623		
27. 0	53. 21	023005		034515		
28. 0	53. 26	023088		034598		
29. 0	52. 52	023088		034708		
30. 0	52. 49	023177		034708		
31. 0	53. 4	023177		034664		
32. 0	52. 48	023155		034464		
33. 0	52. 33	023066		034430		
34. 0	52. 39	023177		034464		H B
35. 0	52. 45	023221		034473		C T
37. 0	52. 13	022911		034478		
41. 0	51. 18	022153		034499		
44. 0	49. 55	021932		034260		
46. 0	50. 2	022264		034212		
51. 0	51. 45	022436		034041		
53. 0	52. 15	022170		033992		
3. 57. 30				033995	68·0	
4. 0. 0	52. 39					
2. 30		021966	68·0			
6. 0	50. 46	023294		033971		
9. 0	51. 25	025304		034043		
11. 0	22. 55. 46	025525		034043		
13. 0	23. 1. 48	025193		034043		
15. 0	2. 33	023975		033946		
17. 0	3. 7	024197		034092		
19. 0	7. 13	022647		034143		
21. 0	7. 58	021097		034192		
23. 0	23. 0. 32	019437		034167		
24. 0	22. 56. 48					
25. 0	53. 5	019547		034241		
26. 0	50. 41					
27. 0	50. 40	021097		034387		
29. 0	50. 59	022000		034411		
31. 0	53. 8	023107		034485		
33. 0	54. 52	022775		034411		
35. 0	56. 3	022221		034411		
37. 0	55. 47	021889		034411		
40. 0	50. 22	021447		034241		
41. 0	49. 16					
43. 0	49. 16	022221		034216		
48. 0	55. 44	022110		034289		

Extraordinary Observations of September 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 4. 50. 0	22. 55. 43	0·021685		0·034265		C T
51. 0	22. 55. 15	021685		034289		
56. 0	23. 3. 15	024231		034557		
57. 0	6. 57	024009		034509		
58. 0	6. 33					
4. 59. 0	5. 10	022460		034535		
5. 0. 0	23. 4. 52					
4. 0	22. 59. 47	020024		034535		
5. 0	58. 15	019803				
6. 0	56. 44	019759		034559		
8. 0	51. 10					
8. 30	51. 10					
9. 0	51. 39	019267		034535		
11. 0	55. 12					
13. 0	56. 46	020263		034339		
15. 0	56. 46	020705		034267		
19. 0	53. 44	020219		034242		
25. 0	49. 23	020705		034144		
26. 0	49. 44					
31. 0	52. 5	019837		033998		
38. 0	48. 59	020058		034047		
40. 0	48. 24	020058		034112		
45. 0	51. 41	021165		034220		
47. 0	52. 43	021498		034220		
48. 0	51. 32					
49. 0	51. 22	022289		034415		
5. 57. 30				034552	68·3	
6. 0. 0	38. 40					
2. 30		024503	68·6			
3. 0	47. 25	024946		034122		
4. 0	22. 55. 30					
5. 0	23. 0. 48	024725		033757		
6. 0	6. 24					
7. 0	9. 18	022953		033538		
8. 0	11. 8	021182		033367		
10. 0	11. 35					
11. 0	11. 35	018321		033391		
12. 0	10. 50	017878				
14. 0	23. 2. 17	016992		033732		
15. 0	22. 58. 55	017214		034122		
16. 0	56. 29	017435		034464		
6. 17. 0	22. 55. 55					C T
7. 11. 30	23. 8. 42					G
12. 0	22. 57. 0					
13. 0	47. 39	012881		032478		
16. 30	41. 47	014209		032517		
17. 0	39. 44	014830		032376		
18. 0	39. 19	015073		032278		
18. 30	39. 32	015272		032248		
19. 0	39. 58	015427		032200		
19. 30	41. 0	015471		032132		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 7. 20. 0	22. 40. 40	0·015272		0·032200		G
20. 30	40. 18	015516		032112		
21. 0	40. 45	015272		032102		
21. 30	41. 8	015294		032176		
22. 0	42. 53	014409		032297		
23. 0	41. 28	013944		032430		
23. 30	39. 26	013612		032430		
25. 0	36. 12	013612		032625		
25. 30	34. 57	013612		032766		
26. 0	33. 38	013656		032702		
26. 30	32. 25	013745		032810		
27. 0	31. 20	013833		032918		
28. 0	30. 38	013966		032825		
28. 30	30. 15	013944		032932		
29. 0	31. 3	014204		032913		
30. 30	27. 34	013850		033010		
32. 30	24. 9	013762		032981		
33. 0	23. 8	013740		032956		
34. 0	21. 44	013740		032908		
35. 0	21. 10	013740		032908		
35. 30	20. 24	013850		032859		
36. 0	19. 54	013961		032810		
36. 30	18. 48	013961		032835		
37. 0	18. 22	014293		032810		
37. 30	18. 21	014293		032786		
38. 0	16. 40	014404		032786		
38. 30	16. 34	014404		032786		
39. 30	16. 30	015289		032812		
40. 0	17. 6					
41. 30	16. 27	015289		032836		
42. 30	16. 59	015289		032812		
43. 0	16. 45	015289		032812		
43. 30	16. 22					
44. 0	16. 6	015289		032812		
45. 0	15. 17	015289		032812		
45. 30	15. 1	015289		032787		
46. 0	14. 45	015289		032714		
47. 0	14. 54	015289		032690		
48. 0	14. 12	015555		032690		
48. 30	13. 53	015555		032690		
49. 0	13. 22	015749		032700		
49. 30	12. 56	015749		032728		
50. 30	12. 6	015749		032690		
51. 30	11. 56	015926		032651		
52. 0	10. 49	016635		032641		
54. 0	10. 28	017099		032592		
57. 30	10. 11	017963		032592	68·6	
7. 58. 30	12. 4	018207		032397		
8. 0. 0	14. 54	018738		032372		
2. 30	16. 56	018849	69·2	032226		
4. 0	17. 6					

Extraordinary Observations of September 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. forTemp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. forTemp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°		d h m s	° ′ ″		°		°	
Sep. 22. 8. 5. 0	22. 20. 7	0·018610		0·032224		G	Sep. 22. 10. 27. 0	22. 26. 6	0·018431		0·030088		C T
6. 30	21. 29	018389		032054		L	28. 0	28. 25					
7. 0	21. 57	018345		032054			29. 0	29. 27	018032		030088		
7. 30	22. 12	018168		032030			30. 0	30. 56					
8. 0	22. 23	018168		032015			30. 30	31. 35	017479		030098		
8. 30	22. 25	017990		032040			31. 0	32. 49					
9. 0	22. 23	017929		031991			32. 0	33. 27	016482		030146		
9. 30	22. 13	017752		032078			34. 0	32. 25	016039		030366		
10. 0	22. 13	017708		032005			36. 0	30. 37	016371		030561		
11. 0	22. 18	017596		032005			37. 0	30. 37					
12. 0	22. 18	017375		031981			38. 0	32. 3	016703		030585		
13. 0	22. 10	017265		031786			40. 0	33. 21	016814		030648		
14. 0	22. 0	017248		031832			41. 0	33. 48					
17. 0	23. 10	017137		031662		L	43. 0	34. 44	017146		030731		
18. 0	24. 14	017026		031662		G	45. 0	35. 50	017323		030805		
20. 0	24. 37	016567		031662			48. 0	37. 10	017567		030805		
22. 0	24. 56	016456		031613			51. 0	38. 20	017589		030795		
25. 0	25. 40	015886		031587		G	54. 0	39. 47	017700		030795		
42. 0	29. 32	014017		031046		C T	10. 57. 0	40. 21	017811		030756		
45. 0	30. 19	014932		031020			11. 0. 0	41. 3	017811		030658		
48. 0	32. 50	015375		031117			4. 0	42. 55	018032		030633		
51. 0	35. 9	015928		031212			7. 0	44. 6	018076		030633		
54. 0	38. 40	016243		031188			11. 0	46. 8	018209		030633		
8. 57. 0	40. 59	016354		031261			15. 0	48. 18	018696		030633		
9. 1. 0	41. 52	016226		031162			19. 0	48. 36	018696		030585		
4. 0	39. 38	015877		031076			26. 0	48. 15	018253		030561		
7. 0	38. 49	015811		030989			32. 0	50. 39	017589		030512		
10. 0	37. 3	015528		030817			40. 0	50. 33	019803		030122		
13. 0	35. 53	015528		030793			41. 0	48. 15					
16. 0	35. 21	015511		030694			42. 0	46. 50	020467		029927		C T
21. 0	35. 28	015494		030597			51. 0	46. 26	020910		029021		L
26. 0	35. 51	015256		030498			53. 0	47. 6	020246		028708		
31. 0	35. 9	014796		030398			54. 0	47. 23	019582		028688		
36. 0	35. 44	014353		030225			55. 0	47. 23	019471		028708		
41. 0	34. 13	013672		030055			57. 30				028635	67·0	
46. 0	33. 50	013323		029930			11. 58. 0	47. 18	018918		028781		
51. 0	33. 27	013859		030051			12. 0. 0	47. 9	018696		028855		
9. 57. 30	33. 27			030074	67·0		2. 30		018696	67·0			
10. 0. 0	32. 9						4. 0	44. 30	019122		029147		
2. 30	29. 21	014268	67·0				7. 0	44. 20	020008		029363		
6. 0	20. 53	014490		029976			11. 0	47. 18	019813		029451		
11. 0	13. 39	014666		029902			13. 0	48. 15	019105		029476		
12. 0	9. 48						17. 0	46. 14	017605		029581		
13. 0	9. 6	014711		029868			19. 0	43. 41	017139		029728		
16. 0	9. 6	014711		029830			20. 0	41. 49	017222		029874		
18. 0	9. 17	014932		030122			21. 0	40. 11	017511		029947		
20. 0	12. 3	018032		030122			22. 0	38. 57	017599		030021		
22. 0	14. 51	019139		030366			23. 0	38. 9	018042		030108		
23. 0	16. 26	019360		030366			24. 0	37. 41	018662		030265		
24. 0	19. 15	019471		030342			26. 0	37. 12	019725		030508		
26. 0	23. 46	018918		030171			30. 0	38. 8	020460		030578		

Extraordinary Observations of September 22 and 28, and October 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 22. 12. 32. 0	22. 39. 8	0·020527		0·030686		L
33. 0	39. 41	020527		030676		
34. 0	40. 24	020527		030696		
35. 0	40. 56	020483		030725		
37. 0	41. 31	020527		030725		
38. 0	41. 52	020460		030749		
40. 0	42. 27	020372		030725		
41. 0	42. 27	020244		030699		
43. 0	42. 27	020178		030747		
45. 0	41. 58	020178		030747		
46. 0	41. 48	020355		030767		
47. 0	41. 55	020399		030796		
51. 0	42. 42	020399		030806		
53. 0	42. 42	020399		030868		
55. 0	42. 31	020382		030883		
56. 0	42. 31	020382		030907		
57. 0	42. 39	020426		030888		
12. 59. 0	43. 24	020426		030917		
13. 0. 0	43. 36	020382		030917		
1. 0	43. 26	020382		030941		
7. 0	43. 58	020382		030965		
18. 0	45. 4	020127		030912		
23. 0	49. 30	021175		030868		
13. 57. 30				031106	66·0	
14. 0. 0	47. 43					
2. 30		020076	66·0			
Sep. 28. 9. 57. 30				0·031256	62·8	
10. 0. 0	22. 46. 27					
10. 2. 30		0·021337	63·0			
11. 57. 30				030938	61·5	
12. 0. 0	54. 1					
2. 30		022506	61·8			
5. 0	54. 20					
11. 0	53. 40	022179		030715		
15. 0	52. 27	022051		030686		
20. 0	51. 26	021918		030631		
42. 0	45. 1	020888		030543		
46. 0	44. 11	020871		030543		
49. 0	43. 18	020871		030548		
12. 52. 0	43. 3	020893				
13. 4. 0	40. 29	021319		030732		
7. 0	40. 48	021474		030730		
10. 0	41. 6	021722		030730		
14. 0	41. 38	021856		030754		
18. 0	41. 55	021839		030718		
22. 0	42. 10	021705		030753		
25. 0	42. 23	021661		030753		
29. 0	42. 23	021423		030716		
13. 57. 30				030815	60·5	
14. 0. 0	44. 55					L

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Sep. 28. 14. 2. 30		0·021124	60·7			H B
Oct. 2. 3. 57. 30				0·030751	63·8	H B
4. 0. 0	22. 53. 48					
4. 2. 30		0·021737	64·7			
5. 57. 30				031059	65·0	
6. 0. 0	45. 42					
2. 30		020108	65·8			
7. 0	43. 15	019755		031133		
10. 0	41. 15	019555		031147		
12. 0	39. 58	019555		031180		
14. 0	38. 29	019666		031207		
15. 0	37. 46	019826		031212		
16. 0	37. 2	019848		031236		
19. 0	34. 12	020025		031231		
21. 0	32. 51	020202		031236		
22. 0	32. 16	020534		031180		
24. 0	31. 32	020689		031245		
26. 0	30. 32	021110		031254		
27. 0	30. 23	021331		031259		
29. 0	30. 28	021752		031277		
34. 0	28. 47	022394		031296		
37. 0	31. 8	022615		031296		
43. 0	31. 51	022970		031296		
50. 0	34. 11	022886		031259		
54. 0	34. 33	022731		031212		
6. 59. 0	35. 12	022598		031180		
7. 1. 0	35. 50	022598		031175		
5. 0	37. 16	022598		031161		
7. 0	38. 0	022443		031157		
9. 0	38. 52	022266		031138		
11. 0	39. 31	022089		031128		
13. 0	40. 6	021890		031110		
15. 0	40. 27	021762		031101		
17. 0	40. 41	021585		031087		
19. 0	40. 55	021475		031078		
21. 0	41. 25	021142		031059		
23. 0	41. 29	020943		031059		
25. 0	41. 1	020766		031044		
28. 0	40. 25	020766		031036		
29. 0	40. 41	020788		031045		
31. 0	40. 41	020810		031045		
35. 0	41. 6	020855		031032		
38. 0	41. 37	020988		031050		
40. 0	42. 10	021142		031073		
42. 0	42. 47	021209		031078		
45. 0	43. 6	021302		031078		
48. 0	43. 28	021302		031064		
50. 0	43. 38	021280		031045		
7. 57. 30				031027	65·0	
8. 0. 0	42. 19					

Sep. 28d. A change of 7′. 34″ having taken place in the position of the Declination Magnet between 10h and 12h, extra observations were commenced.

Oct. 2d. A change of 8′. 6″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of October 2 and 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 2. 8. 2. 30		0·020461	65·4			H B
3. 0	22. 40. 6	020373		0·030971		
5. 0	39. 31	020483		030939		
7. 0	38. 41	020533		030948		
9. 0	37. 46	020599		030953		
11. 0	37. 17	020643		030944		
13. 0	36. 33	020621		030930		
15. 0	36. 40	020643		030904		
17. 0	37. 1	020799		030913		
19. 0	36. 58	020776		030913		
22. 0	36. 58	020759		030904		
28. 0	37. 51	020759		030831		
32. 0	38. 40	020715		030821		
34. 0	38. 9	020560		030781		
38. 0	36. 23	019636		030697		
39. 0	35. 30	019436		030702		
40. 0	34. 21	019524		030665		
41. 0	32. 53	019524		030655		
42. 0	31. 24	019768		030688		
43. 0	30. 17	019923		030711		
44. 0	29. 27	020100		030685		
45. 0	28. 39	020255		030694		
46. 0	27. 42	020499		030685		
47. 0	26. 42	020920		030699		
48. 0	25. 54	021473		030741		
49. 0	25. 14	021738		030746		
50. 0	25. 21	022319		030755		
51. 0	25. 14	022341		030732		
52. 0	25. 19	022385		030694		
53. 0	25. 37	022629		030621		
54. 0	26. 14	022784		030574		
55. 0	27. 19	023006		030602		
56. 0	28. 21	022784		030528		
57. 0	28. 56	022762		030495		
58. 0	29. 42	022607		030449		
8. 59. 0	30. 16	022519		030417		
9. 0. 0	30. 33	022496		030403		
1. 0	31. 10	022452		030394		
2. 0	31. 56	022452		030370		
3. 0	32. 29	022385		030370		
4. 0	33. 1	022319		030307		
5. 0	33. 40	022341		030275		
6. 0	34. 24	022324		030275		
7. 0	35. 1	022391		030284		
8. 0	35. 45	022502		030293		
9. 0	36. 30	022546		030284		
10. 0	37. 30	022590		030284		
11. 0	38. 30	022546		030293		
12. 0	39. 47	022524		030293		
13. 0	41. 1	022103		030284		
14. 0	41. 48	022037		030257		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 2. 9. 15. 0	22. 42. 31	0·021660		0·030234		H B
16. 0	43. 16	021217		030210		
17. 0	43. 25	020758		030191		
18. 0	43. 17	020293		030172		
19. 0	42. 48	019806		030145		
20. 0	41. 49	019585		030117		
21. 0	40. 35	019164		030070		
22. 0	39. 28	018986		030052		
23. 0	38. 19	018986		030047		
24. 0	37. 16	019208		030021		
26. 0	35. 33	019607		030105		
27. 0	34. 51	019872		030128		
28. 0	34. 40	020293		030128		
29. 0	34. 36	020647		030137		
30. 0	34. 37	020785		030151		
31. 0	34. 55	021139		030170		
32. 0	35. 26	021405		030170		
33. 0	35. 54	021449		030170		
34. 0	36. 33	021604		030149		
35. 0	37. 2	021626		030149		
36. 0	37. 36	021759		030149		
37. 0	38. 7	021782		030149		
38. 0	38. 32	021804		030149		
39. 0	39. 1	021826		030158		
40. 0	39. 27	021759		030158		
41. 0	39. 53	021693		030149		
42. 0	40. 19	021587		030144		
43. 0	40. 45	021432		030144		
44. 0	41. 3	021277		030122		
45. 0	41. 22	021166		030131		
46. 0	41. 37	020945		030131		
47. 0	41. 41	020812		030122		
48. 0	41. 45	020724		030131		
49. 0	41. 51	020680		030131		
50. 0	41. 51	020569		030149		
51. 0	41. 45	020502		030140		
52. 0	41. 27	020485		030145		
53. 0	41. 17	020419		030145		
9. 57. 30				030138	63·8	
10. 0. 0	39. 50					
2. 30		020485	64·5			H B
Oct. 7. 5. 57. 30				0·031469	65·0	T D
6. 0. 0	22. 47. 45					
6. 2. 30		0·021234	65·0			
7. 57. 30				031274	64·0	
8. 0. 0	37. 41					
2. 30		019515	64·0			
8. 0	25. 39	021269		031161		
9. 0	25. 1	021932		031035		
11. 0	25. 37	022908		030965		

Oct. 7d. A change of 7′. 4″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Extraordinary Observations of October 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°		d h m s	° ′ ″		°		°	
Oct. 7. 8. 13. 0	22. 26. 19	0·023466		0·030895		T D	Oct. 7. 13. 57. 30				0·029273	61·0	C T
15. 0	26. 40	024130		030775			14. 0. 0	22. 41. 30					
17. 0	27. 7	024905		030766			2. 30		0·019447	61·0			
19. 0	28. 41	025458		030729			19. 0	46. 19	019226		028575		
21. 0	30. 42	025791		030660			22. 0	42. 53	019005		028435		
22. 0	32. 19	025680		030590			24. 0	41. 39	018783		028295		
23. 0	33. 24	025680		030604			25. 0	39. 38	018340		028202		
24. 0	34. 54	025680		030576			26. 0	39. 8	018340		028156		
25. 0	36. 27	025680		030543			27. 0	37. 54	018230		028147		
26. 0	37. 52	025348		030529			28. 0	37. 15	018119		028156		
27. 0	39. 50	025016		030496			29. 0	36. 15	018230		028156		
28. 0	41. 22	024794		030482			30. 0	35. 1	018340		028156		
29. 0	42. 48	024462		030447			32. 0	32. 57	018783		028156		
30. 0	44. 21	023936		030424			34. 0	31. 35	019226		028156		
31. 0	47. 12	023449		030401			36. 0	30. 13	019890		028156		
32. 0	46. 50	022785		030363			38. 0	29. 53	020444		028156		
33. 0	47. 55	022231		030284			40. 0	29. 53	020953		028156		
34. 0	48. 41	021456		030284			42. 0	30. 8	021263		028156		
35. 0	49. 15	020903		030284			44. 0	30. 52	021219		028156		
36. 0	49. 15	020349		030284			46. 0	31. 41	020997		028156		
38. 0	47. 41	018910		030192			50. 0	32. 45	020665		028156		
39. 0	46. 9	018578		030166			14. 55. 0	34. 35	020975		028156		
40. 0	44. 23	018025		030166			15. 2. 0	38. 2	019669		028156		
41. 0	41. 58	017914		030166			7. 0	37. 46	019093		028156		
42. 0	39. 20	017719		030221			14. 0	37. 46	018783		028156		
43. 0	37. 19	017897		030258			24. 0	29. 35	018562		028156		
44. 0	35. 44	017985		030258			26. 0	28. 37	018562		028156		
45. 0	34. 44	018118		030305			27. 0	28. 7	018628		028156		
46. 0	34. 1	018384		030333			28. 0	27. 58	018783		028156		
47. 0	33. 24	018782		030385			29. 0	27. 45	019005		028147		
48. 0	33. 16	019225		030403			31. 0	27. 45	019890		028147		
50. 0	33. 16	019712		030426			32. 0	28. 7	019934		028147		
52. 0	33. 55	019889		030464			34. 0	28. 11	020333		028147		
54. 0	34. 33	020094		030488			39. 0	30. 7	021263		028156		
56. 0	33. 46	020094		030464			45. 0	33. 28	022326		028170		
8. 58. 0	34. 21	020094		030471			49. 0	35. 51	022768		028156		
9. 1. 0	35. 25	020094		030499			15. 57. 30	37. 37	023654		028156	61·0	
4. 0	35. 58	020094		030481			16. 0. 0	39. 31	024318				
7. 0	36. 22	020298		030458			2. 30	41. 44	024318	61·0			
14. 0	37. 18	020453		030504			5. 0	44. 31	024872		028170		
19. 0	38. 4	020835		030492			7. 0	45. 15	024916		028143		
27. 0	39. 55	020835		030429			16. 0	42. 30	025408		028129		
37. 0	40. 40	020281		030379			22. 0	37. 17	025391		028103		
47. 0	39. 16	020026		030330			30. 0	32. 5	024284		028053		
54. 0	38. 2	019721		030317			34. 0	33. 39	023952		028076		
9. 57. 30				030323	62·6		39. 0	38. 2	023824		028050		
10. 0. 0	38. 38	019123		030323			40. 0	38. 29	023824		028050		
10. 2. 30		019123	63·0				41. 0	38. 58	024046		028050		
11. 57. 30				030033	61·8	T D	42. 0	39. 0	024267		028050		
12. 0. 0	40. 50					C T	44. 0	39. 37	024311		028050		
12. 2. 30		020724	62·0				54. 0	47. 52	022479		028047		

Extraordinary Observations of October 7 and 8.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 7. 16. 55. 0	22. 48. 57	0·022036		0·028038		C T
56. 0	49. 47	021593		028033		
58. 0	51. 49	020929		028024		
59. 0	53. 34	020708		028024		
16. 59. 30	54. 26					
17. 0. 0	54. 54	020442		028047		
1. 0	56. 49	020442		028047		
2. 0	59. 7	020155		028001		
3. 0	22. 59. 50	019933		028001		
4. 0	23. 0. 52	019866		028015		
5. 0	1. 14	019711		027974		
6. 0	3. 7	019601		027997		
9. 0	3. 1	019379		027988		
10. 0	23. 1. 33	018920		027997		
13. 0	22. 58. 37	018255		027997		
14. 0	58. 5	018145		027974		
15. 0	57. 14	017813		027988		
17. 0	56. 43	017547		027953		
18. 0	56. 43	017481		027953		
23. 0	58. 23	017436		027948		
24. 0	58. 55	017481		027948		
25. 0	59. 10	017591		027957		
39. 0	56. 34	016246		027921		
51. 0	41·22	015360		027895		
17. 57. 30	38. 46	015343		027860	60·0	
18. 0. 0	39. 22	015564		027883		
2. 30	41. 9	015786	60·3	027869		
7. 0	46. 44	017114		027846		
12. 0	50. 49	017557		027962		
14. 0	53. 1	018177		028078		
16. 0	54. 57	018221		028171		
18. 0	54. 51	017779		028148		
20. 0	54. 18	017540		028148		
22. 0	54. 42	017718		028162		
26. 0	53. 48	017762		028110		
31. 0	50. 41	017983		028060		
38. 0	53. 59	017540		028097		
52. 0	58. 44	018537		028424		
18. 59. 0	57. 39	018647		028461		
19. 15. 0	49. 54	018077		028633		
17. 0	50. 22					
19. 0	52. 34	018520		028772		
21. 0	53. 31	018630		028866		
23. 0	54. 6	018808		028917		
25. 0	55. 24	019073		028991		
27. 0	56. 30	018896		029023		
31. 0	55. 45	018586		028997		
34. 0	55. 25	018365		029021		
42. 0	48. 17	018060		029166		
44. 0	47. 41	017839		029166		
47. 0	47. 41	018060		029249		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 7. 19. 52. 0	22. 48. 21	0·018060		0·029276		C T
19. 57. 30				029356	59·8	
20. 0. 0	49. 53					
2. 30	50. 8	017617	60·0			
20. 4. 0	50. 19					C T
21. 55. 0	50. 46	018596		030320		G
21. 57. 30				030343	61·0	H B
22. 0. 0	50. 14					
2. 30		018751	61·2			
6. 0	50. 54	018839		030471		
8. 0	51. 19	018967		030439		
16. 0	52. 14	019122		030536		
25. 0	51. 36	019117		030441		
30. 0	52. 25	019073		030552		
22. 38. 0	52. 18	018691		030584		
23. 6. 0	55. 9	019705		030705		H B
15. 0	56. 13	019677		030686		T D
38. 0	56. 17	019185		030693		T D
44. 0	57. 32	019136				G
7. 23. 57. 30				030746	62·0	T D
8. 0. 0. 0	22. 58. 48					
2. 30		019286	62·0			
13. 0	23. 0. 24	019430		030752		
23. 0	1. 9	017914		030874		
33. 0	4. 57	017328		031020		
38. 0	3. 36	016620		031069		
44. 0	3. 33	015214		031003		
0. 52. 0	3. 33	014323		031029		
1. 12. 0	2. 31	014236		031210		
47. 30				031679		
50. 0	2. 36					
52. 30		017069				
1. 57. 30				031693	64·0	
2. 0. 0	4. 8					
2. 30		018663	64·2			
7. 30				031785		
10. 0	3. 45					
12. 30		018376				
26. 0	9. 31	020247		032070		
28. 0	7. 36	020092		032070		
30. 0	6. 39	021132		032065		
32. 0	6. 51	022239		032359		
36. 0	7. 40	023302		032420		
38. 0	8. 12	019931		032330		
40. 0	7. 53	021858		032330		
42. 0	7. 55	021371		032470		
44. 0	5. 31	020419		032516		
46. 0	5. 31	020485		032502		
48. 0	3. 34	020042		032656		
52. 0	1. 11	021100		032821		
55. 0	2. 16	021100		033007		

Extraordinary Observations of October 8.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 8. 2.58. 0	22.59.52	0·021875		0·033217		T D
3. 1. 0	23. 1.41	022273		033240		
4. 0	1. 6	022273		033404		T D
6. 0	23. 1. 0	022716		033519		H B
7. 0	22.58.53	022445		033537		
8. 0	56.58	022334		033546		
9. 0	55.34	022911		033570		
10. 0	55. 4	023353		033663		
11. 0	57.14	024217		033765		
12. 0	58.12	024327		033732		
13. 0	58. 5	023619		033686		
14. 0	55.20	023286		033602		
15. 0	54.40	023796		033653		
16. 0	54.30	023397		033677		
17. 0	54.37	023220		033709		
18. 0	53.14	023066		033732		
19. 0	52.19	022490		033746		
20. 0	50.27	022268		033672		
21. 0	48.42	022290		033639		
22. 0	45.38	021643		033628		
23. 0	42.13	022263		033651		
24. 0	40.53	022817		033610		
25. 0	41.19	023215		033600		
26. 0	43. 6	023968		033558		
27. 0	44.41	024278		033558		
28. 0	46.12	024521		033558		
29. 0	47.13	024499		033554		
30. 0	48.40	024256		033540		
31. 0	49.31	023857		033457		
32. 0	50.55	023924		033378		
33. 0	51.19	023392		033317		
34. 0	52.23	023016		033354		
35. 0	52.27	022706		033424		
36. 0	52.23	022462		033452		
37. 0	53. 2	022368		033483		
39. 0	54.19	022302		033450		
40. 0	55. 4	021549		033497		
41. 0	54. 8	020841		033543		
43. 0	53.27	020731		033543		H B
48. 0	53.26	020066		033552		C T
54. 0	49.19	020238		033556		
3.57.30	49.39	021234		033528	64·8	
4. 0. 0	54. 8	022120		033533		
2.30	56.41	021899	65·0	033486		
7. 0	56.11	020570		033264		
11. 0	53.41	020570		033133		
15. 0	53.18	020731		033086		
17. 0	54. 3					
21. 0	54. 3	020775		032944		
26. 0	54.16	020664		032874		
27. 0	54.16	020442		032782		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 8. 4.34. 0	22.56. 5	0·020553		0·032586		C T
40. 0	58.18	020802		032649		G
44. 0	54.41	019872		032453		
50. 0	53.35	020758		032430		
4.55. 0	55.29	020315		032356		
5. 0. 0	53.55	019523		032356		
5. 0	51.15	019368		032496		
8. 0	48.46	019169		032493		
9. 0	46.44	019191		032511		
10. 0	45.55	019612		032516		
11. 0	44.54	019656		032475		
13. 0	44.53	019855		032470		
15. 0	44.53	020143		032354		
17. 0	44.53	019855		032325		
21. 0	44.53	019412		032214		
25. 0	44. 9	019351		032187		G
38. 0	39.45	018952		032170		C T
42. 0	36.58	018842		032184		
44. 0	36.58	019063		032198		
46. 0	37. 7	019285		032151		
48. 0	37.26	019489		032137		
55. 0	35.55	020264		032009		
5.57.30	36.19	020485		031971	64·0	
6. 0. 0	37.34	020596		031939		
2.30	38.14	020441	64·5	031878		
14. 0	35.13	020468		031776		
14.31	34.31					
17. 0	35.35	021243		031785		
19. 0	37.13	021575		031785		
21. 0	39. 4	021575		031753		
23. 0	40.25	021354		031716		
25. 0	40.52	021132		031693		
27. 0	40.52	020468		031641		
29. 0	40.19	020136		031577		
33. 0	40.31	019981		031553		
57. 0	43.47	019897		031390		
6.59. 0	44.37	019677		031367		
7. 1. 0	45.22	019455		031344		
2. 0	45.26	019371		031344		
4. 0	45.23	019283		031320		
6. 0	45.18	019283		031320		
10. 0	45.47	019371		031320		
13. 0	46.21	019549		031315		
15. 0	46.49	019327		031297		
18. 0	46.46	019106		031274		
35. 0	46.59	018425		031242		
44. 0	47.28	018646		031251		
7.57.30	49.51			031219	64·0	
8. 0. 0	49.34	018408		031219		
2.30	48.47	019293	64·0	031121		
8. 0	46.52	020162		031070		

Extraordinary Observations of October 8, 9, and 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 8. 8. 18. 0	22. 49. 47	0·020433		0·031073		C T
37. 0	48. 28	020094		030886		
40. 0	48. 25					
8. 59. 0	47. 37	020818		030774		C T
9. 57. 30				030379	62·2	L
10. 0. 0	48. 33					
10. 2. 30		020819	62·3			L
11. 57. 30				029950	60·5	H B
12. 0. 0	51. 29					
2. 30		020902	60·7			H B
Oct. 9. 3. 57. 30				0·031157	62·5	H B
4. 0. 0	22. 51. 22					
4. 2. 30		0·021279	62·4			
5. 57. 30				031294	63·2	
6. 0. 0	48. 27					
2. 30		021344	63·3			
48. 0	39. 15	021305		031228		
51. 0	40. 10	021371		031205		
52. 0	40. 23	021327		031210		
54. 0	40. 54	021504		031210		
55. 0	41. 14	021549		031210		
57. 0	41. 25	021549		031195		
6. 59. 0	42. 9	021598		031191		
7. 2. 0	43. 15	021709		031173		
5. 0	43. 27	021532		031149		
12. 0	44. 13	021664		031080		
19. 0	45. 11	021775		031048		
24. 0	45. 47	021797		031029		
27. 0	46. 21	021709		031029		
34. 0	46. 14	021067		030974		
41. 0	45. 57	021094		030983		
50. 0	45. 30	020894		030939		
7. 57. 30				030952	62·8	
8. 0. 0	46. 50					
2. 30		021050	63·0			
8. 1	47. 28	020961		030929		
19. 1	47. 52	020911		030934		
45. 1	44. 37	022035		030876		
47. 1	43. 43	022168		030858		
49. 1	42. 44	022368		030858		
51. 1	42. 1	022634		030853		
53. 1	41. 16	023231		030830		
55. 1	41. 24	023807		030821		
56. 1	41. 51	024072		030821		
57. 1	42. 45	024427		030816		
58. 1	43. 40	024515		030816		
8. 59. 1	44. 47	024488		030821		
9. 0. 1	45. 42	024310		030825		
1. 1	46. 25	024244		030844		
2. 1	47. 2	024045		030825		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 9. 9. 3. 1	22. 47. 24	0·023890		0·030797		H B
4. 1	47. 39	023646		030792		
5. 0	47. 51	023602		030788		
6. 0	47. 58	023381		030778		
7. 0	48. 4	023203		030783		
8. 0	48. 4	022982		030774		
11. 0	48. 4	022539		030681		
12. 0	47. 57	022495		030681		
13. 0	47. 55	022318		030634		
14. 0	47. 52	022252		030634		
15. 0	47. 38	022207		030643		
16. 0	47. 38	022207		030643		
18. 0	47. 14	021986		030620		
20. 0	46. 53	022030		030634		
22. 0	47. 12	022096		030639		
24. 0	47. 14	021848		030620		
27. 0	47. 1	021449		030602		
31. 0	46. 37	021361		030619		
34. 0	46. 0	021472		030615		
39. 0	45. 47	021449		030633		
43. 0	45. 14	021693		030647		
45. 0	44. 45	021693		030647		
46. 0	44. 40	021782		030624		
48. 0	44. 56	021843		030624		
50. 0	45. 13	021865		030624		
51. 0	45. 21	021976		030647		
9. 57. 30				030624	63·0	
10. 0. 0	45. 44					
2. 30		022064	63·5			H B
Oct. 9. 21. 57. 30				0·030522	64·5	L
22. 0. 0	22. 54. 2					
2. 30		0·018240	64·6			
22. 27. 0	51. 49	017923				
23. 22. 0	55. 49	017709		030572		
9. 23. 57. 30				030604	64·6	
10. 0. 0. 0	57. 40					
0. 2. 30		017522	65·3			
1. 47. 30				031333		
50. 0	59. 47					
52. 30		018032				
1. 57. 30				031426	66·6	
2. 0. 0	59. 7					
2. 30		018032	67·0			
7. 30				031449		
10. 0	58. 26					
2. 12. 30		018475				L
3. 57. 30				032258	67·5	T D
4. 0. 0	57. 35					
4. 2. 30		019752	68·0			
5. 57. 30				031656	68·0	

Oct. 9d. 6h. 48m. A change of 9′. 12″ having taken place in the position of the Declination Magnet since 6h, extra observations were commenced.

Extraordinary Observations of October 10 and 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 10. 6. 0. 0	22. 49. 39					T D
2. 30		0·021080	68·0			
5. 0	49. 38	021063		0·031652		
11. 0	49. 25	021063		031626		
17. 0	49. 12	021268		031626		
23. 0	48. 35	021533		031599		
29. 0	48. 10	021693		031517		
35. 0	48. 10	021849		031491		
6. 41. 0	48. 29	021884		031509		
7. 57. 30				031283	66·5	
8. 0. 0	46. 20					
2. 30		021685	67·0			T D
Oct. 19. 9. 57. 30				0·030379	62·2	L
10. 0. 0	22. 46. 6					
10. 2. 30		0·023858	62·2			
11. 54. 0	34. 9	024625		029754		H B
11. 57. 30				029754	61·5	
12. 0. 0	33. 51					
2. 30		023474	61·5			
3. 0	32. 33	023141		029647		
5. 0	32. 33	023279		029703		
7. 0	32. 33	023257		029717		
8. 0	32. 48	023301		029773		
10. 0	33. 13	023434		029764		
12. 0	34. 17	023722		029773		
15. 0	35. 18	023970		029820		
18. 0	35. 23	023705		029677		
22. 0	35. 20	022642		029529		
24. 0	35. 9	022360		029478		
25. 0	35. 0	022138		029469		
26. 0	35. 0	022072		029469		
27. 0	35. 7	021850		029483		
28. 0	34. 57	021695		029469		
29. 0	34. 53	021695		029442		
31. 0	34. 45	021430		029442		
32. 0	34. 37	021187		029442		
34. 0	34. 22	020970		029451		
40. 0	33. 24	020461		029474		
42. 0	33. 20	020394		029462		
44. 0	33. 20	020333		029523		
45. 0	33. 37	020598		029560		
47. 0	34. 18	020776		029610		
49. 0	34. 18	020953		029610		
51. 0	34. 42	020931		029624		
55. 0	35. 21	021024		029624		
57. 0	35. 32	021091		029607		
12. 59. 0	36. 3	021136		029607		
13. 3. 0	36. 10	021136		029598		
6. 0	36. 35	021096		029590		
10. 0	37. 13	021119		029627		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 19. 13. 15. 0	22. 38. 47	0·021124		0·029748		H B
21. 0	40. 8	021124		029722		
28. 0	42. 57	022700		029802		
29. 0	44. 14	022479		029760		
30. 0	44. 1	022922		029760		
31. 0	44. 32	023143		029737		
32. 0	45. 19	023298		029728		
33. 0	45. 28	023143		029667		
34. 0	45. 41	023414		029625		
36. 0	45. 35	023968		029588		
37. 0	45. 15	024056		029541		
38. 0	44. 59	024233		029527		
39. 0	44. 45	024610		029527		
40. 0	44. 28	024610		029518		
41. 0	44. 48	024875		029492		
42. 0	44. 51	024897		029492		
43. 0	44. 12	025035		029464		
44. 0	43. 34	024924		029423		
45. 0	43. 12	024858		029409		
46. 0	42. 49	024814		029391		
47. 0	42. 23	024770		029321		
48. 0	41. 55	024659		029293		
49. 0	41. 14	024482		029293		
50. 0	41. 4	024305		029284		
51. 0	41. 24	024394		029274		
56. 0	39. 18	023646		029225		
13. 57. 30				029225	60·5	
14. 0. 0	39. 36					
2. 30		023690	60·3			
6. 0	41. 13	023823		029318		
8. 0	42. 6	023917		029300		
9. 0	42. 44	023850		029356		
10. 0	43. 6	023895		029365		
11. 0	43. 52	024027		029379		
12. 0	44. 5	024182		029376		
13. 0	44. 5	024182		029395		
14. 0	44. 22	024293		029413		
15. 30	45. 16	024360		029413		
17. 0	45. 47	024360		029422		
18. 0	46. 8	024315		029422		
19. 0	46. 12	024226		029413		
20. 0	46. 9	024138		029413		
22. 0	46. 42	023900		029422		
23. 0	46. 42	023922		029422		
24. 0	46. 49	023766		029413		
25. 0	46. 37	023811		029413		
14. 26. 0	46. 37	023766		029413		
15. 57. 30				029415	59·0	
16. 0. 0	44. 22					
2. 30		021849	59·5			H B

Oct. 19d. 11h. 54m. A change of 11′. 57″ having taken place in the position of the Declination Magnet since 10h, extra observations were commenced.

Extraordinary Observations of October 22 and 24, and November 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 22. 6. 15. 0	22. 27. 22					G
17. 30		0·025511				
20. 0	34. 15					
22. 30		025472				
25. 0	38. 5					
27. 30		024387				
30. 0	39. 14					
32. 30		024038				
35. 0	40. 46					
37. 30		023684				G
40. 0	41. 8					H B
42. 30		021448		0·030107		
43. 0	39. 15	021165		030102		
44. 0	39. 0	021010		030098		
45. 0	38. 30	021010		030102		
46. 0	38. 5					
47. 30	37. 34	021143		030104		
49. 0	36. 39	021408		030118		
50. 0	36. 42	021431		030095		
51. 0	36. 52	021453		030113		
52. 30	36. 52	021519		030127		
55. 0	37. 30					
57. 30		021458		030207		
6. 58. 0	38. 2	021502		030171		
7. 0. 0	38. 1					
2. 30		021835		030179		
5. 0	38. 49					
7. 30		022166		030181		
10. 0	40. 27	022260		030190		
11. 0	41. 2	022548		030190		
12. 30		022614		030199		
13. 0	31. 48	022924		030204		
14. 0	41. 41	022902		030204		
15. 0	43. 9	023190		030204		
16. 0	43. 22	023190		030204		
17. 30		023124		030204		
18. 0	44. 33	023035		030187		
19. 0	44. 40	023035		030160		
20. 0	44. 33	022969		030141		
22. 30	45. 24	023035		030146		
25. 0	45. 20	022725		030104		
27. 30		022614		030077		
30. 0	43. 58	022309		030049		
32. 30		022287		030012		
33. 0	44. 41	022221		030012		
35. 0	44. 20	022176		030012		
37. 30	44. 20	022110		030003		
40. 0	44. 22					
42. 30		022132		029986		
45. 0	44. 39					
47. 30		022198		030009		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor.for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor.for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Oct. 22. 7. 50. 0	22. 45. 9					H B
52. 30		0·022157		0·030010		
55. 0	45. 27					
7. 57. 0		022071		030006	57·7	
8. 0. 0	45. 47					
2. 30		022115	58·2			H B
Oct. 24. 5. 57. 30				0·030265	60·3	H B
6. 0. 0	22. 48. 26					
6. 2. 30		0·023377	60·8			
7. 57. 30				030181	60·0	
8. 0. 0	39. 38					
2. 30		023518	60·2			
10. 0	40. 18	025206		030225		
11. 0	40. 31	025272		030211		
12. 0	40. 31	025316		030225		
17. 0	40. 31	025189		030175		
21. 0	40. 13	025061		030126		
25. 0	40. 2	024839		030094		
36. 0	38. 47	024031		029990		
38. 0	39. 2	023920		029964		
48. 0	41. 18	023748		029946		
50. 0	42. 0	023576		029934		
51. 0	42. 19	023576		029934		
53. 0	42. 42	023443		029957		
54. 0	43. 4	023399		029957		
8. 55. 0	43. 21	023333		029857		
9. 0. 0	43. 34	022917		029899		
9. 0	43. 58	022878		029855		
15. 0	44. 47	022772		029842		
26. 0	45. 9	022556		029808		
34. 0	46. 13	022500		029795		
39. 0	46. 53	022256		029778		
9. 57. 30				029713	58·0	
10. 0. 0	46. 38					
2. 30		022538	58·6			H B
Nov. 2. 5. 57. 30				0·030235	57·7	H B
6. 0. 0	22. 48. 7					
6. 2. 30		0·022257	57·6			
7. 57. 30				029893	57·6	
8. 0. 0	47. 53					
8. 2. 30		022347	58·0			
9. 38. 0	50. 36	024200		029348		
40. 0	49. 0	023757		029299		
41. 0	47. 47	023691		029294		
43. 0	46. 36	023580		029294		
45. 0	45. 40	023580		029299		
46. 0	45. 24	023629		029294		
48. 0	45. 17	023497		029299		
50. 0	44. 50	023297		029299		

Oct. 22^{d}. 6^{h}. 20^{m}. 0^{s}. A change of 6′. 53″ having taken place in the position of the Declination Magnet since 6^{h}. 15^{m}, extra observations were commenced.

Oct. 24^{d}. A change of 8′. 48″ having taken place in the position of the Declination Magnet between 6^{h} and 8^{h}, extra observations were commenced.

Nov. 2^{d}. 8^{h}. A considerable change having taken place in the scale-reading of the Vertical Force Magnet at 8^{h}, extra observations were commenced.

Extraordinary Observations of November 2, 6, 7, and 9.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 2. 9. 52. 0	22. 44. 7	0·023275		0·029304		H B
54. 0	43. 34	023142		029281		
9. 57. 30				029318	57·3	
10. 0. 0	41. 37					
2. 30		022855	57·6			
4. 0	40. 29	023187		029373		
5. 0	40. 29	023341		029410		
7. 0	40. 38	023453		029410		
8. 0	40. 51	023585		029428		
10. 0	41. 17	023585		029442		
12. 0	42. 13	023585		029451		
14. 0	43. 17	023475		029445		
18. 0	44. 36	023120		029445		
20. 0	44. 36	023076		029481		
24. 0	45. 20	022855		029472		
26. 0	45. 20	022523		029472		
10. 28. 0	45. 20	022412		029477		H B
11. 57. 30				029602	57·6	L
12. 0. 0	44. 38					
2. 30		022889	57·8			L
Nov. 6. 13. 57. 30				0·028845	52·0	G H
14. 0. 0	22. 48. 20					
14. 2. 30		0·023895	52·0			
15. 57. 30				028758	52·0	
16. 0. 0	41. 30					
2. 30		023342	52·0			
5. 30	41. 53	023342		028845		
6. 30	42. 4	023248		028884		
7. 30	42. 11	023425		028825		
8. 30	42. 17	023469		028848		
9. 30	42. 29	023469		028848		
10. 30	42. 29	023469		028825		
12. 30	42. 45	023469		028848		
13. 30	43. 3	023469		028848		
14. 30	43. 8	023469		028871		
16. 30	43. 23	023469		028884		
18. 30	43. 31	023486		028874		
19. 30	43. 40	023486		028910		
21. 30	43. 59	023486		028925		
23. 30	43. 59	023486		028925		
24. 30	44. 19	023486		028864		
25. 30	44. 30	023486		028874		
27. 30	44. 30	023486		028910		
28. 30	44. 30	023486		028897		
35. 30	45. 33	023614		028952		
37. 30	45. 40	023725		028947		
39. 30	45. 50	023725		028947		
41. 30	46. 10	023725		028924		
43. 30	46. 27	023742		028973		
47. 30	46. 35	023742		028973		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 6. 16. 49. 30	22. 46. 52	0·023742		0·028950		G H
51. 30	47. 0	023742		028963		
53. 30	47. 0	023742		028973		
55. 30	47. 12	023759		028977		
57. 30	47. 12	023759		029000		
16. 59. 30	47. 12	023759		029000		
17. 57. 30				029109	53·0	
18. 0. 0	45. 18					
2. 30		024287	53·0			G H
Nov. 7. 7. 57. 30				0·029274	53·0	G H
8. 0. 0	22. 44. 57					
8. 2. 30		0·021826	53·5			
9. 57. 30	34. 4	020667		029396	54·0	
10. 0. 0	34. 4	020667		029350		
2. 30	34. 34	020667	54·5	029327		
6. 0	35. 21	020667		029304		
7. 0	35. 21	020556		029259		
8. 0	35. 21	020446		029190		
11. 0	35. 29	020446		029259		
13. 0	35. 29	020114		029239		
14. 0	35. 23	020003		029239		
17. 0	34. 58	019892		029239		
19. 0	35. 11	019892		029262		
21. 0	35. 32	020003		029262		
29. 0	38. 29	020114		029262		
31. 0	38. 36	020070		029285		
34. 0	38. 30	020114		029275		
35. 0	37. 46	020114		029262		
36. 0	37. 46	020114		029288		
10. 37. 0	37. 54	020247		029265		G H
11. 57. 30				028794	54·5	L
12. 0. 0	42. 47					
2. 30		021636	54·6			L
Nov. 9. 15. 57. 30				0·029063	51·0	T D
16. 0. 0	22. 47. 43					
16. 2. 30		0·023589	51·5			
17. 57. 30				029028	50·0	
18. 0. 0	47. 8					
2. 30		026059	50·4			
4. 0	47. 9	026059		029028		
7. 0	47. 9	026059		029028		
10. 0	47. 8	026103		029042		
13. 0	47. 6	026324		029060		
16. 0	47. 4	026484		029074		
19. 0	47. 4	026640		029047		
22. 0	47. 4	026640		029093		
25. 0	47. 20	026905		029079		
28. 0	47. 51	026971		029070		
31. 0	47. 51	026971		029070		

Nov. 6d. A change of 6′. 50″ having taken place in the position of the Declination Magnet between 14h and 16h, extra observations were commenced.

Nov. 7d. 9h. 57m. 30s. A change of 10′. 53″ having taken place in the position of the Declination Magnet since 8h, extra observations were commenced.

Nov. 9d. 18h. A considerable change having taken place in the position of the Horizontal Force Magnet since 16h. 2m. 30s, extra observations were commenced.

Extraordinary Observations of November 9 and 17.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 9. 18. 36. 0	22. 47. 51	0·026971		0·029093		T D
41. 0	48. 2	026706		029056		
46. 0	48. 2	025803		029033		
51. 0	47. 50	025692		029033		
18. 56. 0	47. 42	025692		029001		
19. 1. 0	47. 42	025139		028952		
6. 0	47. 34	024807		028929		
11. 0	47. 10	024696		028929		
16. 0	47. 4	024612		028961		
21. 0	46. 51	024458		028975		
26. 0	46. 46	024391		028984		
31. 0	46. 46	024236		028984		
36. 0	46. 46	024325		028984		
41. 0	46. 46	024015		028957		
46. 0	46. 45	023998		028991		
19. 57. 30				029021		
20. 0. 0	46. 26				49·7	
2. 30		023555	50·0			T D
Nov. 17. 3. 57. 30				0·029326	53·2	H B
4. 0. 0	22. 51. 10					
4. 2. 30		0·022556	53·5			
5. 57. 30				029410	54·0	
6. 0. 0	53. 5					
6. 2. 30		022719	54·2			
7. 51. 0	42. 20	017678		032961		
52. 0	42. 15	018165		032994		
53. 0	42. 10	018520		032975		
54. 0	41. 3	018763		032961		
55. 0	40. 52	018785		032970		
56. 0	40. 9	018785		032970		
7. 57. 30	39. 29	018829		032961	54·3	
8. 0. 0	42. 44					
1. 0	41. 41	018940		032778		
2. 0	44. 19	018785		032778		
2. 30		018963	54·5			
3. 0	44. 33	018320		032778		
3. 30	48. 7	018011				
4. 0	46. 51	018011		032917		
5. 0	45. 40	017944		032894		
6. 0	43. 52	017745		032755		
7. 0	43. 24	017302		032618		
8. 0	43. 24	017279		032590		
9. 0	43. 3	017125		032575		
10. 0	43. 30	016970		032621		
11. 0	43. 30	017080		032667		
12. 0	43. 9	017075		032576		
13. 0	43. 5	017075		032576		
14. 0	43. 1	016987		032644		
15. 0	42. 22	016987		032621		
16. 0	42. 11	016921		032584		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 17. 8. 17. 0	22. 41. 57	0·016965		0·032621		H B
18. 0	41. 38	016943		032657		
19. 0	41. 39	017031		032703		
20. 0	41. 30	017009		032703		
21. 0	41. 40	017031		032667		
22. 0	41. 53	017097		032621		
23. 0	42. 19	017296		032598		
24. 0	42. 59	017363		032598		
25. 0	45. 18	017474		032740		
26. 0	44. 22	017540		032740		
27. 0	44. 14	017562		032747		
28. 0	44. 31	017585		032694		
29. 0	44. 50	017452		032602		
30. 0	44. 55	017208		032546		
31. 0	44. 55	017009		032510		
32. 0	44. 55	016921		032487		
33. 0	44. 39	016588		032454		
34. 0	44. 12	016588		032441		
35. 0	43. 39	016478		032427		
36. 0	43. 7	016472		032373		
37. 0	42. 42	016583		032368		
38. 0	42. 36	016605		032327		
39. 0	42. 38	016583		032313		
40. 0	42. 48	016495		032281		
41. 0	42. 52	016450		032271		
42. 0	42. 47	016384		032244		
43. 0	42. 47	016450		032261		
44. 0	42. 34	016583		032251		
45. 0	42. 4	016716		032224		
46. 0	42. 0	016605		032183		
48. 0	41. 23	016982		032215		
51. 0	38. 58	017868		032077		
52. 0	38. 52	017978		032040		
53. 0	38. 53	018199		032008		
54. 0	38. 49	018576		031985		
55. 0	39. 28	018753		031976		
56. 0	39. 56	018797		031949		
57. 0	40. 35	018664		031921		
58. 0	41. 8	018532		031894		
8. 59. 0	41. 15	018376		031843		
9. 0. 0	41. 2	018172		031823		
1. 0	40. 35	018238		031782		
2. 0	40. 35	018371		031750		
3. 0	40. 23	018593		031737		
4. 0	40. 5	018725		031732		
5. 0	40. 0	018836		031700		
6. 0	40. 0	019058		031686		
7. 0	40. 7	019345		031677		
8. 0	39. 48	019146		031645		
9. 0	40. 3	018925		031599		
10. 0	40. 17	018593		031553		

Nov. 17d. Considerable changes having taken place in the positions of the three magnets between 6h and 7h. 51m, extra observations were commenced.

Extraordinary Observations of November 17 and 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 17. 9. 11. 0	22. 40. 48	0·018393		0·031544		H B
12. 0	41. 6	018393		031544		
13. 0	41. 18	018437		031553		
14. 0	41. 26	018593		031508		
15. 0	42. 4	018836		031508		
16. 0	42. 36	018903		031494		
17. 0	43. 4	019102		031498		
18. 0	43. 31	019169		031503		
19. 0	43. 44	019279		031494		
20. 0	44. 2	019478		031475		
21. 0	44. 18	019544		031443		
25. 0	44. 37	019717		031305		
26. 0	44. 54	019783		031286		
27. 0	45. 11	019894		031259		
28. 0	45. 21	019982		031222		
29. 0	45. 21	019916		031176		
30. 0	45. 42	019960		031157		
31. 0	46. 14	020027		031121		
32. 0	46. 24	020116		031112		
33. 0	46. 34	019960		031076		
34. 0	46. 34	019960		031039		
35. 0	46. 41	019916		031033		
36. 0	46. 41	019916		031000		
37. 0	46. 41	019872		030978		
38. 0	46. 30	019938		030964		
39. 0	46. 30	019916		030941		
40. 0	46. 21	019916		030918		
41. 0	46. 12	019960		030881		
42. 0	46. 9	019960		030872		
43. 0	46. 2	019960		030835		
44. 0	45. 54	020004		030816		
45. 0	45. 38	020027		030794		
46. 0	45. 31	019982		030780		
47. 0	45. 25	019960		030739		
48. 0	45. 8	019977		030706		
50. 0	44. 47	019800		030643		
51. 0	44. 36	019756		030620		
52. 0	44. 29	019756		030633		
53. 0	44. 10	019822		030619		
9. 57. 30				030587	55·0	
10. 0. 0	44. 30					
2. 30		020088	55·0			
3. 0	44. 57	019977		030486		
5. 0	44. 51	020088		030476		
6. 0	44. 51	020038		030466		
8. 0	44. 42	019972		030456		
10. 0	44. 45	019972		030429		
12. 0	44. 45	019994		030420		
19. 0	44. 56	020011		030400		
23. 0	44. 38	020011		030344		
28. 0	44. 35	020211		030322		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 17. 10. 31. 0	22. 44. 43	0·020228		0·030326		H B
33. 0	45. 0	020250		030299		
36. 0	45. 27	020072		030258		
40. 0	46. 23	020028		030253		
43. 0	46. 23	019802		030238		
46. 0	45. 53	019824		030224		
55. 0	46. 9	019841		030195		
10. 59. 0	45. 54	019730		030159		
11. 3. 0	45. 54	019775		030159		
8. 0	46. 2	019680		030180		
12. 0	47. 17	019858		030185		
14. 0	47. 27	019747		030180		
17. 0	47. 1	019858		030180		H B
11. 57. 30				030107	56·0	L
12. 0. 0	48. 50					
2. 30		020634	56·0			L
Nov. 20. 7. 57. 30				0·029702	55·7	H B
8. 0. 0	22. 48. 40					
8. 2. 30		0·021641	55·8			
9. 57. 30				029487	55·3	
10. 0. 0	44. 8					
10. 2. 30		023289	55·6			H B
11. 56. 40	35. 43	020752		028912		G H
57. 30				028912	54·6	
11. 59. 15	36. 49	020863		028912		
12. 0. 0	36. 50					
1. 55	37. 21	020774		028994		
2. 30		020774	55·0			
3. 56	37. 37	020641		028981		
6. 56	37. 22	020641		029004		
9. 56	37. 3	020685		028917		
11. 56	37. 1	020641		029007		
13. 56	37. 1	020641		029030		
16. 56	37. 16	020658		028928		
20. 56	37. 42	020680		029030		
21. 56	38. 12	020769		029067		
23. 56	38. 40	020791		029067		
25. 56	39. 11	020880		028977		
27. 26	39. 43	020880		029011		
28. 56	40. 2	020813		029076		
30. 56	40. 34	020880		029081		
31. 56	40. 57	020880		029062		
33. 56	41. 34	020880		029076		
34. 56	42. 3	020880		029081		
35. 56	42. 25	020991		029108		
36. 56	42. 51	021101		029126		
37. 56	43. 22	021190		029103		
41. 56	44. 1	021544		029103		
43. 56	44. 20	021605		029112		
46. 56	44. 30	021938		029011		

Nov. 20^{d}. 11^{h}. 56^{m}. 40^{s}. A change of 8′. 25″ having taken place in the position of the Declination Magnet since 10^{h}, extra observations were commenced.

Extraordinary Observations of November 20 and 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. forTemp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 20. 12. 48. 56	22. 44. 3	0·022004		0·028988		G H
51. 56	43. 32	022225		029057		
53. 56	43. 32	022225		029057		
12. 58. 56	45. 4	022889		028991		
13. 0. 56	45. 52	023000		029083		
5. 56	47. 9	023332		028991		
7. 56	47. 47	023221		028996		
10. 56	48. 14	023332		028945		
13. 56	49. 29	023216		028917		
18. 56	48. 22	022906		028830		
23. 56	47. 4	022685		028857		
28. 56	46. 6	023017		028798		
38. 56	46. 17	022464		028812		
13. 57. 30				028861	55·1	
14. 0. 0	44. 59					
2. 30		021705	55·4			G H
Nov. 26. 1. 47. 30				0·028780		G H
50. 0	22. 51. 23					
52. 30		0·023982				
1. 57. 30				028711	54·1	
2. 0. 0	51. 29					
2. 30		023452	54·6			
7. 30				028688		
10. 0	49. 25					
2. 12. 0		023009				G H
3. 57. 30				029994	55·8	H B
4. 0. 0	54. 5					
2. 30		019556	56·3			
5. 0	54. 24	020685		030095		
7. 0	56. 15	020862		030109		
9. 30	57. 20	020597		030081		
11. 0	57. 36	020420		030059		
13. 0	56. 16	020198		030011		
15. 0	55. 32	020154		030052		
19. 0	53. 6	020198		030034		
20. 0	52. 42	020464		030034		
21. 0	51. 54	020641		030034		
25. 0	52. 13	021416		030030		
28. 0	53. 49	021571		030025		
30. 0	54. 38	021699		030007		
32. 0	55. 39	021765		030012		
35. 0	56. 7	021699		029966		
37. 0	56. 35	021322		029970		
38. 0	56. 44	021199		029905		
40. 0	56. 49	020946		029901		
42. 0	56. 20	020990		029892		
45. 30	55. 11	020946		029892		
48. 0	53. 52	021322		029878		
51. 0	53. 9	021699		029878		
52. 0	53. 4	021964		029905		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. forTemp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. forTemp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 26. 4. 55. 0	22. 54. 1	0·022473		0·029924		H B
57. 0	54. 44	022319		029924		
4. 59. 0	55. 1	022296		029924		
5. 1. 0	55. 11	022274		029950		
2. 0	55. 48	022296		029955		
4. 0	56. 49	022252		029959		
5. 0	56. 55	022030		029964		
7. 0	56. 28	021588		029940		
9. 0	55. 27	021300		029936		
12. 0	54. 12	020857		029931		
13. 30	52. 35	020769		029931		
15. 0	51. 25	020835		029927		
16. 0	50. 42	020923		029927		
18. 0	50. 19	021034		029927		
19. 0	49. 46	021057		029945		
23. 0	49. 25	021544		029973		
25. 0	49. 37	021655		030008		
31. 0	50. 33	021826		030022		
34. 0	50. 51	021672		030022		
36. 0	51. 10	021450		030027		
38. 0	50. 57	020985		030022		
40. 0	50. 31	020852		030022		
42. 0	49. 24	020388		030027		
43. 0	49. 44	020432		030031		
44. 0	49. 25	020166		030054		
50. 0	49. 59	020786		030208		
51. 0	50. 30	021273		030264		
52. 0	50. 59	021472		030255		
53. 0	52. 10	021472		030278		
54. 0	52. 57	021495		030278		
55. 0	53. 46	021383		030246		
56. 0	54. 16	021229		030232		
5. 57. 30				030310	56·3	
6. 0. 0	22. 56. 7					
2. 30		021672	56·5			
11. 0	23. 0. 7	022075		030504		
12. 30	1. 44	021986		030527		
13. 30	2. 19	021699		030504		
18. 0	3. 14	019950		030495		
24. 0	1. 24	019246		030693		
25. 0	1. 9	019158		030693		
27. 0	0. 43	019091		030707		
30. 0	23. 0. 43	019135		030716		
34. 0	22. 59. 51	018715		030730		
36. 0	58. 39	018781		030771		
37. 0	57. 51	018897		030796		
38. 0	57. 23	019141		030832		
39. 0	57. 12	019207		030842		
41. 0	57. 20	019429		030842		
42. 0	57. 20	019451		030819		
43. 0	57. 31	019694		030828		

Nov. 26d. Considerable changes having taken place in the positions of the Vertical and Horizontal Force Magnets between $2^h.10^m$ and 4^h, extra observations were commenced.

Extraordinary Observations of November 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 26. 6. 44. 0	22. 57. 59	0·019805		0·030874		H B
45. 0	58. 30	019894		030874		
46. 0	22. 59. 23	020004		030902		
47. 0	23. 0. 2	020115		030902		
48. 0	0. 21	019960		030897		
49. 0	0. 17	019960		030888		
52. 0	23. 0. 24	019252		030861		
53. 0	22. 59. 28	018880		030870		
54. 0	58. 39	018614		030875		
55. 0	57. 35	018503		030907		
56. 0	56. 54	018238		030907		
57. 0	56. 5	018128		030952		
58. 0	55. 13	017994		030975		
6. 59. 0	54. 33	017950		030998		
7. 0. 0	53. 42	017773		031016		
1. 0	52. 6	017663		031030		
2. 0	50. 35	017663		031044		
3. 0	49. 3	017596		031066		
4. 0	47. 54	017884		031099		
5. 0	47. 2	017994		031104		
6. 0	46. 22	018017		031119		
8. 0	44. 55	018354		031156		
10. 0	43. 9	018398		031156		
11. 0	42. 0	018398		031087		
12. 0	40. 53	018553		031064		
13. 0	40. 11	018753		031032		
14. 0	39. 29	018863		030999		
15. 0	39. 8	018996		030967		
16. 0	38. 52	019151		030926		
17. 0	38. 26	019262		030881		
18. 0	38. 57	019240		030825		
19. 0	37. 37	019151		030743		
20. 0	37. 9	019173		030729		
21. 0	36. 52	019218		030670		
22. 0	36. 52	019356		030670		
23. 0	36. 59	019532		030670		
24. 0	37. 42	019776		030679		
25. 0	37. 56	019798		030670		
26. 0	38. 10	019843		030665		
29. 0	37. 1	019444		030564		
30. 0	36. 1	019356		030532		
31. 0	34. 41	019294		030522		
32. 0	33. 57	019427		030518		
33. 0	33. 14	019449		030486		
34. 0	32. 24	019515		030472		
36. 0	31. 51	019714		030395		
37. 0	32. 5	019892		030395		
38. 0	32. 1	019914		030337		
39. 0	32. 7	019980		030337		
44. 0	33. 38	020578		030277		
46. 0	34. 50	020689		030272		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 26. 7. 47. 30	22. 36. 1	0·020821		0·030278		H B
49. 0	37. 3	020888		030259		
50. 0	37. 42	020932		030241		
51. 0	38. 21	021026		030231		
52. 0	38. 42	021048		030195		
53. 0	39. 2	020982		030182		
54. 0	39. 31	021026		030159		
55. 0	39. 44	020915		030127		
7. 57. 30				030113	55·5	
8. 0. 0	41. 3					
2. 30		020760	55·7			
4. 0	41. 45	020871		030021		
6. 0	41. 58	020938		030021		
8. 0	41. 58	020960		029984		
10. 0	41. 28	020960		029952		
14. 0	41. 28	020871		029906		
16. 0	41. 28	020716		029879		
18. 0	40. 53	020694		029847		
21. 0	40. 53	020716		029817		
8. 55. 0	42. 3	020096		029536		
9. 0. 0	41. 4	019653		029490		
4. 0	40. 8	019697		029485		
9. 0	39. 46	019277		029480		
13. 0	40. 35	019255		029480		
14. 30	40. 18	019100		029467		
15. 30	39. 19	018967		029444		
16. 0	38. 10	018989		029399		
18. 0	38. 4	018878		029389		
19. 0	37. 24	018967		029399		
21. 0	36. 34	019255		029430		
24. 0	35. 51	019875		029490		
25. 0	35. 20	020052		029490		
28. 0	35. 45	020716		029408		
30. 0	36. 34	021026		029327		
32. 0	37. 29	021048		029258		
34. 0	38. 10	021026		029189		
37. 0	38. 35	020738		029143		
40. 0	38. 45	020760		029120		
42. 0	37. 8	020804		029097		
43. 0	36. 31	020915		029097		
44. 0	35. 51	021004		029097		
45. 0	35. 33	021048		029097		
46. 0	35. 0	020915		029106		
47. 0	34. 49	021026		029106		
48. 30	34. 0	021026		029097		
50. 0	33. 22	021093		029106		
51. 0	32. 50	021314		029087		
52. 0	31. 58	021558		029097		
54. 0	31. 40	022532		029212		
55. 0	31. 58	022753		029226		
56. 0	32. 15	023041		029226		

Extraordinary Observations of November 26 and 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 26. 9. 56. 30	22. 32. 59	0·023461		0·029235		H B
9. 57. 30				029235	55·3	
10. 0. 0	35. 50					
2. 30		024524	55·7			
6. 0	39. 10	024906		029097		
7. 0	40. 7	024928		029070		
8. 0	41. 2	024994		029070		
9. 0	41. 57	024994		029014		
10. 0	42. 57	025016		029014		
11. 0	43. 59	025016		029014		
12. 0	44. 42	024795		029001		
14. 0	45. 58	024441		028923		
16. 0	46. 4	023870		028855		
17. 0	46. 4	023383		028785		
18. 0	46. 4	023206		028785		
19. 0	45. 34	022984		028758		
21. 0	44. 10	022609		028703		
23. 0	43. 5	022232		028677		
26. 0	41. 58	023123		028713		
28. 0	42. 22	023366		028686		
31. 0	44. 1	023388		028618		
32. 0	44. 39	023300		028586		
33. 0	45. 9	023211		028567		
34. 0	45. 23	023101		028563		
36. 0	45. 33	022973		028540		
37. 0	45. 12	022773		028504		
38. 0	44. 59	022906		028514		
43. 0	44. 59	023106		028477		
45. 0	46. 0	022867		028463		
46. 0	46. 46	022779		028463		
48. 0	48. 8	022380		028436		
49. 0	48. 31	022115		028422		
50. 0	48. 25	021826		028357		
51. 0	48. 10	021406		028339		
52. 0	48. 6	021008		028344		
53. 0	48. 19	020875		028326		
55. 0	48. 19	020437		028317		
10. 56. 0	48. 19	020371		028326		H B
11. 57. 30				028428	54·5	T D
12. 0. 0	36. 43					
2. 30		018386	54·5			
5. 0	35. 29	017900		028474		
7. 0	34. 25	017900		028510		
8. 0	33. 53	017900		028519		
9. 0	33. 34	017900		028515		
10. 0	33. 5	017900		028538		
11. 0	32. 52	017944		028538		
12. 0	32. 43	018055		028584		
13. 0	32. 43	018104		028584		
15. 0	33. 4	018281		028744		
17. 0	33. 30	018281		028666		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 26. 12. 19. 0	22. 33. 59	0·018325		0·028676		T D
21. 0	34. 34	018325		028676		
23. 0	35. 17	018436		028707		
25. 0	35. 57	018547		028707		
27. 0	36. 27	018702		028695		
29. 0	37. 3	019211		028741		
31. 0	37. 44	019875		028741		
33. 0	38. 17	020097		028741		
35. 0	39. 24	020318		028741		
37. 0	40. 26	020301		028741		
39. 0	41. 28	020522		028741		
41. 0	41. 59	020522		028741		
43. 0	42. 30	020522		028741		
45. 0	43. 0	020700		028741		
48. 0	43. 6	020788		028682		
51. 0	43. 24	020965		028577		
54. 0	43. 36	021121		028588		
12. 58. 0	43. 52	020855		028623		
13. 3. 0	43. 52	020992		028583		
8. 0	44. 24	020948		028583		
13. 0	44. 32	020948		028560		
13. 57. 30				028599	53·8	
14. 0. 0	47. 15					
14. 2. 30		020693	54·0			
15. 57. 30				028489	52·3	
16. 0. 0	54. 5					
2. 0	54. 5	020327		028489		
2. 30		020283	52·5			
4. 0	54. 5	020327		028489		
6. 0	53. 52	020327		028475		
11. 0	53. 22	020438		028277		
16. 0	52. 17	020753		028213		
21. 0	51. 50	021019		028167		
26. 0	51. 8	021749		028140		
31. 0	50. 39	021749		028126		
36. 0	50. 28	021732		028095		
41. 0	50. 18	021732		028140		
16. 46. 0	50. 7	021732		028140		
17. 57. 30				028502	52·0	
18. 0. 0	47. 49					
2. 30		021681	52·0			T D
Nov. 28. 5. 37. 30				0·029095		H B
40. 0	22. 45. 43					
42. 30		0·020785		029086		
45. 0	45. 18					
47. 30		020829		029100		
50. 0	42. 25					
52. 0	40. 29	021316		029086		
52. 30		021228		029100		
53. 0	40. 14	021493		029109		

Extraordinary Observations of November 28 and December 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 28. 5. 54. 0	22. 40. 14	0·022202		0·029132		H B
55. 0	40. 10	022335		029155		
5. 57. 30		022423		029122	53·0	
6. 0. 0	43. 32	023376		029210		
1. 0	44. 22	023021		029185		
2. 30	44. 54	022822	53·5	029192		
4. 0		022600		029155		
5. 0	45. 38	022556		029141		
6. 0		022556		029141		
7. 30		022357		029146		
9. 0	46. 29	021980		029150		
10. 0	46. 34					
12. 30		021604		029144		
15. 0	46. 34					
17. 30		021228		029107		
20. 0	46. 3					
22. 30	42. 10	020564		029066		
23. 30	40. 25	020829		029011		
24. 0	39. 4	020940		029030		
25. 0	37. 3	021560		029075		
26. 0	34. 52	022269		029112		
27. 30		023221		029148		
28. 0	34. 27	023751		029158		
29. 0	34. 27	024704		029204		
30. 0	35. 55	025190		029218		
31. 0	37. 2	025479		029245		
32. 30		025589		029218		
33. 0	39. 28	025589		029204		
34. 0	40. 26	025435		029190		
35. 0	41. 11					
36. 0	41. 54	025257		029172		
37. 30		024992		029158		
38. 0	42. 35	024881		029148		
39. 0	43. 4	024770		029144		
40. 0	43. 49	024615		029121		
41. 0	44. 17	024637		029112		
42. 30	44. 18	024416		029124		
44. 0	45. 34	024150		029092		
45. 0	46. 2	023973		029092		
47. 30		023663		029069		
48. 0	47. 24	023376		029037		
49. 0	47. 39	023221		029024		
50. 0	48. 3					
51. 0	48. 20	022556		029001		
52. 30	48. 25	022313		029001		
53. 0	48. 7	021803		028969		
54. 0	46. 52	021316		028955		
55. 0	45. 57	021117		028923		
56. 0	45. 12	021095		028923		
6. 57. 30		020873		028918		
7. 0. 0	42. 12					

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Nov. 28. 7. 1. 0	22. 42. 3	0·021272		0·028945		H B
2. 30		021316		028945		
3. 0	42. 15	021537		028960		
5. 0	42. 47					
7. 30		021759		029001		
10. 0	43. 27					
12. 30		021671		028984		
15. 0	43. 35					
17. 30		021471				H B
Dec. 1. 9. 57. 30				0·027120	44·0	G H
10. 0. 0	22. 46. 30					
10. 2. 30		0·022087	44·1			G H
11. 57. 30				027117	43·7	L
12. 0. 0	38. 11					
2. 30		020951	43·8			
4. 0	38. 53	021198		027151		
7. 30	39. 55	021085		027173		
9. 30	40. 32	021107		027160		
10. 30	40. 54	021107		027168		
11. 30	41. 12	021062		027185		
12. 30	41. 30	021085		027194		
13. 30	41. 39	021062		027194		
14. 30	41. 46	020973		027194		
15. 30	41. 42	020929		027194		
16. 30	41. 42	020885		027173		
17. 30	41. 50	020907		027151		
18. 30	42. 3	020841		027151		
19. 30	42. 21	020907		027151		
20. 30	42. 36	020951		027194		
21. 30	43. 3	020951		027203		
22. 30	43. 27	020995		027228		
23. 30	43. 44	021173		027228		
24. 30	44. 5	021394		027211		
25. 30	44. 16	021438		027228		
26. 30	44. 45	021616		027228		
27. 30	45. 3	021793		027228		
28. 30	45. 18	021837		027237		
29. 30	45. 29	022058		027237		
30. 30	45. 52	022169		027237		
31. 30	46. 21	022280		027250		
32. 30	46. 43	022501		027237		
33. 30	46. 52	022723		027237		
34. 30	46. 52	022723		027237		
35. 30	46. 59	022878		027203		
36. 30	47. 9	022944		027194		
37. 30	47. 20	022988		027194		
41. 30	48. 0	023121		027151		
50. 30	46. 8	022280		027023		
12. 55. 30	45. 9	022280		027002		
13. 2. 30	44. 22	022280		027002		

Dec. 1d. A change of 8′.19″ having taken place in the position of the Declination Magnet between 10h and 12h, extra observations were commenced.

Extraordinary Observations of December 1, 9, and 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 1. 13. 57. 30				0·026997	43·6	L
14. 0. 0	22. 46. 15					
2. 30		0·020934	43·7			L
Dec. 9. 7. 57. 30				0·026963	50·0	H B
8. 0. 0	22. 49. 48					
8. 2. 30		0·022672	50·4			
9. 47. 0	38. 1	021218		026983		
51. 0	35. 58	021282		026991		
53. 0	34. 50	021436		026991		
54. 0	35. 7	021392		027004		
56. 0	34. 24	021525		027013		
9. 57. 30				026987	49·8	
10. 0. 0	33. 23					
2. 30		022056	50·3			
4. 0	33. 39	022212		027077		
5. 0	34. 0	022322		027073		
8. 0	34. 55	022433		027073		
10. 0	35. 32	022482		027073		
13. 0	36. 54	022526		027077		
16. 0	38. 29	022526		027077		
18. 0	39. 9	022593		027060		
20. 0	40. 15	022593		027060		
23. 0	41. 16	022327		027060		
26. 0	42. 3	022239		027055		
28. 0	42. 26	022083		027038		
32. 0	42. 39	021867		026999		
34. 0	42. 43	021757		026978		
40. 0	43. 1	021580		026965		
45. 0	43. 34	021757		026965		
50. 0	43. 17	022022		026944		
10. 57. 0	42. 44	022178		026914		
11. 4. 0	42. 13	022133		026902		
13. 0	40. 25	021801		026837		
17. 0	40. 22	021425		026816		
20. 0	40. 22	021358		026816		H B
27. 0	39. 34	021186		026837		T D
30. 0	39. 55	020677		026803		
33. 0	39. 50	020677		026816		
36. 0	39. 47	020677		026837		
40. 0	40. 26	020898		026889		
44. 0	41. 14	020898		026889		
49. 0	41. 18	020898		026902		
53. 0	41. 5	020898		026889		
11. 57. 30				026880	49·8	
12. 0. 0	40. 11					
2. 30		021009	50·0			
6. 0	40. 11	021009		026889		
11. 0	40. 16	021009		026889		
16. 0	39. 39	020898		026837		
12. 21. 0	40. 10	020787		026837		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 9. 13. 57. 30				0·026673	50·8	T D
14. 0. 0	22. 36. 32					
14. 2. 30		0·021954	51·0			
15. 57. 30				026788	50·8	
16. 0. 0	47. 26					
2. 30		021511	51·0			
3. 0	47. 46	021511		026854		
5. 0	48. 6	021511		026840		
7. 0	48. 37	021511		026844		
9. 0	49. 5	021511		026844		
11. 0	49. 38	021511		026844		
13. 0	49. 49	021511		026835		
15. 0	49. 58	021511		026835		
17. 0	50. 24	021733		026844		
22. 0	50. 26	021733		026844		
16. 27. 0	49. 56	021733		026844		
17. 57. 30				026940	51·0	
18. 0. 0	49. 37					
2. 30		022574	51·0			T D
Dec. 10. 3. 57. 30				0·027241	50·7	T D
4. 0. 0	22. 51. 57					
4. 2. 30		0·021777	51·0			
5. 57. 30				027147	50·0	
6. 0. 0	45. 18					
2. 30		021341	50·0			
4. 0	46. 35	021341		027147		
6. 0	46. 48	021341		027147		
8. 0	47. 11	021563		027147		
10. 0	47. 39	021607		027198		
12. 0	47. 51	021674		027232		
14. 0	48. 22	021607		027198		
16. 0	48. 39	021674		027168		
21. 0	48. 39	021784		027147		
6. 28. 0	49. 8	021961		027113		
7. 57. 30				027061	50·0	
8. 0. 0	48. 14					
8. 2. 30		022227	50·0			
9. 29. 0	36. 30	021120		027018		
30. 0	34. 19	021120		027018		
31. 0	33. 42	021341		027018		
32. 0	33. 6	021674		027061		
33. 0	32. 44	021784		027061		
34. 0	32. 21	021895		027061		
35. 0	32. 7	022005		027061		
36. 0	31. 52	022227		027091		
37. 0	32. 3	022448		027104		
38. 0	31. 57	022670		027104		
39. 0	31. 42	022670		027104		
40. 0	31. 42	022847		027104		
41. 0	31. 50	022847		027104		

Dec. 9d. 9h. 47m. A change of 11′. 47″ having taken place in the position of the Declination Magnet since 8h, extra observations were commenced.

Dec. 10d. A change of 6′. 39″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of December 10 and 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 10. 9. 42. 0	22. 32. 14	0·023046		0·027138		T D
43. 0	32. 47	023334		027147		
44. 0	33. 22	023334		027147		
45. 0	33. 51	023334		027117		
46. 0	34. 21	023178		027104		
47. 0	34. 46	023112		027061		
49. 0	35. 39	023112		027134		
51. 0	36. 41	022891		027083		
54. 0	38. 15	022604		027104		
56. 0	38. 56	022448		027074		
9. 57. 30				027074	50·0	
10. 0. 0	39. 31					
2. 30		022116	50·0			
3. 0	41. 10	021939		027040		
5. 0	41. 38	021784		027018		
7. 0	42. 6	021607		027018		
9. 0	42. 35	021563		027018		
11. 0	43. 2	021762		027018		
13. 0	43. 12	021563		027018		
15. 0	43. 25	021546		027018		
17. 0	43. 55	021546		026991		
19. 0	44. 30	021546		026991		
21. 0	44. 27	021529		026991		
23. 0	44. 30	021529		026952		
25. 0	44. 39	021529		026965		
28. 0	44. 55	021512		026931		
31. 0	45. 0	021468		026917		
34. 0	44. 41	021495		026862		
37. 0	44. 46	021495		026896		
42. 0	45. 4	021478		026870		
10. 51. 0	45. 43	021478		026899		
11. 5. 0	45. 51	021589		026823		
9. 0	46. 8	021589		026810		T D
11. 57. 30				026669	49·0	L
12. 0. 0	47. 46		49·0			
2. 30		021570				L
Dec. 23. 3. 57. 30				0·026475	47·7	G H
4. 0. 0	22. 53. 31					
4. 2. 30		0·023946	48·0			
5. 57. 30				026892	48·0	
6. 0. 0	44. 30					
2. 30		022994	48·0			
5. 0	44. 39	023105		027046		
6. 0	45. 0	022994		027046		
7. 0	44. 44	022772		026896		
8. 0	44. 48	022794		026960		
9. 0	44. 5	022551		026917		
10. 0	43. 30	022551		026960		
11. 0	42. 13	022551		026960		
12. 0	40. 54	022441		027003		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 23. 6. 13. 0	22. 39. 58	0·022330		0·027012		G H
14. 0	39. 40	022219		027046		
15. 0	38. 27	022130		027089		
16. 0	37. 17	022108		027046		
17. 0	36. 27	022130		027089		
18. 0	35. 19	022108		026913		
19. 0	34. 16	022551		026960		
20. 0	33. 39	022772		027003		
21. 0	33. 4	023215		026982		
22. 0	33. 17	023437		027003		
23. 0	33. 27	023769		027046		
24. 0	33. 48	023990		027131		
25. 0	34. 24	024211		027131		
26. 0	34. 53	024433		027131		
27. 0	35. 20	024561		027153		
28. 0	35. 58	024561		027131		
29. 0	36. 42	024671		027131		
30. 0	37. 17	024737		027123		
31. 0	37. 53	024715		027089		
32. 0	38. 23	024715		027080		
33. 0	39. 0	024605		027046		
34. 0	39. 37	024561		027055		
35. 0	39. 55	024450		027097		
36. 0	40. 12	024339		027114		
37. 0	40. 24	024118		027110		
38. 0	40. 18	023985		027080		
39. 0	40. 9	023896		027046		
40. 0	39. 57	023675		027037		
41. 0	39. 38	023675		026960		
42. 0	39. 26	023675		026960		
43. 0	39. 26	023675		026960		
44. 0	39. 11	023786		026960		
45. 0	39. 14	023852		026982		
46. 0	39. 35	023896		026990		
47. 0	39. 46	023918		027046		
48. 0	40. 12	024118		027046		
49. 0	40. 17	024118		027046		
50. 0	40. 23	024534		027046		
51. 0	40. 23	024356		027029		
6. 52. 0	40. 23	024356		027003		
7. 1. 0	42. 59	024578		027003		
2. 0	42. 53	024799		026994		
3. 0	43. 10	024556		026917		
4. 0	43. 33	024467		026917		
5. 0	43. 43	024356		026917		
6. 0	43. 54	024135		026896		
7. 0	44. 1	024024		026883		
8. 0	44. 5	023913		026900		
9. 0	44. 17	023692		026960		
10. 0	44. 12	023581		026917		
11. 0	44. 12	023471		026939		

Dec. 23d. A change of 9′. 1″ having taken place in the position of the Declination Magnet between 4h and 6h, extra observations were commenced.

Extraordinary Observations of December 23 and 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 23. 7. 12. 0	22. 44. 3	0·023471		0·026900		G H
13. 0	44. 11	023471		026900		
14. 0	44. 28	023271		026896		
15. 0	44. 20	023249		026875		
16. 0	44. 12	023116		026866		
17. 0	44. 19	023116		026875		
18. 0	44. 24	023028		026883		
7. 57. 30				027037	48·0	
8. 0. 0	45. 46					
8. 2. 30		021495	48·3			G H
9. 17. 0	32. 55	023864		027098		G
19. 30	29. 23	023820		026995		
23. 30	26. 54	024152		026991		
25. 30	26. 12	024855		026948		
27. 0	27. 27	025054		026893		
29. 0	27. 57	025210		026893		
31. 0	29. 17	025514		026898		
32. 0	29. 46	025647		026911		
33. 0	30. 14	025714		026907		
34. 0	30. 16	025996		026855		
40. 0	32. 26	027192		026821		
43. 0	33. 49	028475		026804		
44. 0	34. 29	028426		026788		
45. 0	35. 16	028692		026724		
46. 0	36. 0	028692		026677		
47. 0	37. 15	028886		026677		
48. 0	38. 25	028886		026642		
49. 0	39. 44	028886		026604		
50. 0	40. 20	028903		026574		
54. 0	43. 46	028482		026446		
55. 0	45. 0	028018		026381		
57. 30	45. 33	027769		026408	48·5	
9. 58. 0	46. 17	027370		026296		
10. 0. 0	47. 34	027149		026284		
2. 30	48. 19	026928	49·0	026259		
5. 0	48. 39	025833		026113		
7. 30	48. 20	025539		026113		
10. 0	46. 31	025114		026057		
10. 12. 30	46. 26	025020		026057		
11. 57. 30				026378	49·2	
12. 0. 0	43. 19					
2. 30		024544	49·7			
11. 0	46. 3	024013		026306		
46. 0	48. 25	025607		026036		
48. 0	48. 5	025762		026015		
49. 0	47. 30	026249		026046		
52. 30	45. 59	026604		025982		
54. 0	45. 59	026825		025982		
55. 0	45. 36	026825		025918		
12. 56. 0	44. 53	026715		025897		
13. 0. 0	43. 7	025829		025774		

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°	
Dec. 23. 13. 1. 0	22. 42. 35	0·025718		0·025753		H B
2. 30	42. 4	025541		025658		
4. 0	41. 25	025275		025645		
5. 0	40. 59	024943		025624		
7. 0	40. 34	024611		025624		
9. 0	39. 43	024168		025602		
10. 0	39. 12	023925		025602		
12. 30	38. 23	023770		025602		
14. 0	37. 24	023792		025581		
15. 0	37. 1	023947		025581		
17. 30	36. 0	024168		025624		
19. 0	45. 45	024168		025658		
26. 0	38. 41	024899		025753		
27. 30	39. 49	024899		025795		
31. 0	41. 24	024279		025795		
33. 0	42. 20					
34. 0	42. 51	023925		025795		
35. 0	43. 1	023770		025816		
36. 0	43. 8	023571		025816		
38. 0	43. 0	023283		025816		
39. 0	42. 55	023127		025816		
43. 0	40. 42	023017		025795		
44. 0	40. 8	023039		025795		
13. 57. 30				025924	49·5	
14. 0. 0	39. 34					
2. 30		023733	50·0			H B
Dec. 28. 1. 57. 30				0·026573	40·7	T D
2. 0. 0	22. 49. 2					
2. 2. 30		0·025191	41·0			T D
3. 57. 30				026375	41·0	C
4. 6. 0	47. 31					
4. 2. 30		025966	41·0			C
5. 44. 0	37. 39	025498		026182		
46. 0	38. 13	025498		026182		
48. 0	38. 17	025498		026161		
50. 0	38. 20	025498		026161		
52. 0	38. 20	025498		026161		
54. 0	37. 47	025409		026161		
56. 0	37. 56	025343		026161		
5. 57. 30				026161	41·0	
6. 0. 0	37. 31					
2. 30		025493	41·5			
8. 0	37. 52	025702		026118		
10. 0	38. 43	025813		026118		
11. 0	39. 4	025879		026118		
12. 0	39. 29	025813		026097		
13. 0	39. 44	025813		026097		
14. 0	40. 2	025702				
16. 0	40. 36	025685		026102		
18. 0	40. 55	025685		026123		

Dec. 28^{d}. 5^{h}. 44^{m}. A change of 9′. 52″ having taken place in the position of the Declination Magnet since 4^{h}, extra observations were commenced.

Extraordinary Observations of December 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force cor. for Temp.	Thermometer of Horizontal Force Magnetometer.	Vertical Force Reading in parts of the whole Vert. Force cor. for Temp.	Thermometer of Vertical Force Magnetometer.	Observers.
d h m s	° ′ ″		°		°		d h m s	° ′ ″		°		°	
Dec. 28. 6. 20. 0	22. 41. 22	0·025508		0·026102		C	Dec. 28. 6. 47. 0	22. 43. 14	0·025242		0·026042		C
22. 0	41. 37	025353		026102			51. 0	42. 55	025021		026020		
24. 0	41. 47	025353		026080			6. 56. 0	42. 40	025021		026020		
26. 0	42. 2	025242		026080			7. 0. 0	42. 8	025242		026026		
28. 0	42. 15	025242		026080			3. 0	41. 55	025242		026026		
30. 0	42. 23	025242		026076			6. 0	42. 5	025242		026004		
34. 0	42. 41	025198		026063			12. 0	42. 18	025198		026004		
37. 0	42. 59	025242		026063			7. 57. 30				025952	41·5	
40. 0	42. 59	025242		026063			8. 0. 0	41. 16					
43. 0	43. 3	025132		026042			8. 2. 30		024859	41·0			C

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

THE MAGNETIC DIP.

1846.

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		(4) East.		(2) West.		(4) East.		(2) West.		(1) East.		(3) West.			
			Circle Reading																	
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Jan. 1. 3	A 1		69. 20	18	10	10	68. 45	42	55	65	69. 5	0	0	0	68. 70	70	35	40	69. 0·25	L
Jan. 4. 21	A 1		68. 72	70	51	53	68. 58	56	35	30	68. 73	70	66	68	68. 55	52	30	28	68. 54·00	H B
Jan. 8. 3	A 1		68. 65	60	52	56	68. 40	43	55	63	68. 63	56	50	52	68. 75	72	53	60	68. 57·25	L
Jan. 11. 21	A 1		69. 35	30	33	40	68. 57	57	40	47	68. 87	92	44	46	68. 70	75	27	39	69. 1·25	T D
Jan. 15. 3	A 1		68. 68	70	45	52	68. 60	52	45	48	68. 60	58	42	50	68. 70	67	55	58	68. 56·25	L
Jan. 18. 21	A 1		68. 73	77	54	59	68. 70	58	50	55	68. 67	50	40	57	68. 73	68	58	60	69. 0·50	T D
Jan. 25. 21	A 1		68. 78	75	40	43	68. 60	55	50	53	68. 60	60	28	32	68. 73	70	50	52	68. 55·00	L
Jan. 29. 3	A 1		69. 25	20	0	5	68. 65	67	33	38	69. 8	5	4	7	68. 63	60	42	45	69. 0·50	H B
Feb. 1. 21	A 1		68. 60	58	57	54	68. 60	60	54	56	69. 10	8	0	0	68. 55	50	50	53	68. 58·00	L
Feb. 5. 3	A 1		68. 72	70	55	60	68. 48	48	40	50	69. 15	10	5	7	68. 35	33	50	57	68. 56·00	L
Feb. 8. 21	A 1		68. 66	60	54	62	68. 55	52	32	36	68. 72	65	48	45	68. 72	68	45	50	68. 55·00	H B
Feb. 12. 3	A 1		68. 40	45	60	65	68. 70	70	30	40	68. 60	58	55	57	68. 72	70	50	57	68. 56·25	T D
Feb. 15. 21	A 1		68. 75	77	50	55	68. 58	55	50	50	68. 60	58	40	45	68. 68	63	55	58	68. 57·25	L
Feb. 19. 3	A 1		68. 75	72	35	47	69. 10	10	22	30	68. 68	60	52	55	68. 55	57	48	50	69. 1·50	
Feb. 22. 21	A 1		68. 56	58	50	55	68. 56	54	58	60	68. 65	60	45	48	68. 58	60	54	56	68. 55·75	L
Feb. 26. 3	A 1		68. 20	12	40	45	68. 30	30	35	40	68. 57	52	10	20	69. 0	0	10	15	68. 41·00	T D

Feb. 26^{d}. 3^{h}. The observations taken before reversing the poles of the needle differ very much from those previously taken in the same position, and the observations taken after reversing the poles are not accordant with other observations: the result is small.

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (1) East.		(3) West.			
			Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading			
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Feb. 27. 3	A 1		69. 15	8	0	10	68. 50	45	40	50	68. 52	50	50	40	68. 75	10	50	55	68. 56·25	T D
Mar. 1. 21	A 1		69. 20	20	5	10	68. 75	78	45	50	68. 50	40	50	55	68. 65	60	35	40	68. 58·75	
Mar. 2. 3	A 1	Not moved									68. 60	55	50	45	68. 68	70	35	42		T D
Mar. 5. 3	A 1		68. 57	55	35	33	69. 18	12	4	7	68. 64	62	48	52	68. 60	58	57	61	68. 57·75	H B
Mar. 5. 21	A 1	Not moved	68. 45	40	50	55	68. 60	58	40	42										H B
Mar. 8. 21	A 1		68. 52	50	32	35	68. 80	75	43	52	68. 60	55	50	55	68. 70	67	58	60	68. 56·00	T D
Mar. 9. 3	A 1	Not moved									68. 55	50	55	50	68. 90	70	55	58		
Mar. 15. 21	A 1		68. 67	70	37	42	68. 72	78	48	53	68. 55	65	60	70	68. 78	72	37	43	68. 59·00	
Mar. 16. 3	A 1	Not moved	69. 12	10	0	12	68. 80	70	43	40										T D
Mar. 22. 21	A 1		68. 75	70	47	45	68. 55	53	38	42	68. 68	63	58	60	68. 65	68	53	60	68. 57·50	H B
Mar. 23. 3	A 1	Not moved									68. 65	60	56	55	68. 67	65	48	55		H B
Mar. 26. 3	A 1		68. 60	55	60	65	68. 30	35	50	55	68. 60	57	50	55	68. 70	65	50	55	68. 54·50	T D
Mar. 29. 21	A 1		68. 74	68	50	53	68. 63	64	47	53	68. 72	68	57	61	68. 60	56	45	50	68. 58·75	H B
Mar. 30. 3	A 1	Not moved									69. 8	5	5	7	68. 59	57	42	45		H B
Apr. 2. 3	A 1		68. 58	55	52	48	68. 62	60	48	53	68. 52	50	60	52	68. 70	64	55	58	68. 56·00	L
Apr. 5. 21	A 1		68. 77	70	55	60	68. 50	45	37	45	68. 63	55	55	58	68. 70	75	40	45	68. 56·25	H B
Apr. 6. 3	A 1	Not moved									68. 52	45	58	63	68. 70	65	47	52		
Apr. 9. 3	A 1		68. 72	66	58	60	68. 45	43	45	52	68. 65	60	53	56	68. 57	55	45	50	68. 55·00	H B

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (1) East.		(3) West.			
			Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading			
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Apr. 12. 21	A 1		69. 14	8	5	0	68. 45	50	40	45	68. 50	45	60	67	68. 47	50	53	65	68. 55·25	T D
Apr. 13. 3	A 1	Not moved									68. 50	55	60	65	68. 50	55	53	58		T D
Apr. 16. 3	A 1		68. 50	48	50	57	69. 18	15	5	8	68. 45	47	35	37	69. 4	0	0	0	68. 56·25	L
Apr. 19. 21	A 1		68. 60	55	50	55	68. 47	52	65	70	69. 7	12	0	5	68. 70	72	50	52	69. 0·00	T D
Apr. 20. 3	A 1	Not moved									69. 0	5	0	0	68. 70	60	45	50		T D
Apr. 26. 21	A 1		68. 50	45	65	68	68. 60	58	43	39	68. 73	66	53	58	68. 55	50	48	53	68. 55·25	H B
Apr. 27. 3	A 1	Not moved	68. 70	65	53	58	68. 40	34	75	70										
Apr. 30. 3	A 1		69. 20	15	18	22	68. 38	35	33	38	68. 25	20	83	85	68. 70	67	50	55	68. 57·00	H B
May 3. 21	A 1		68. 55	52	50	55	69. 8	0	5	10	68. 60	60	48	52	68. 58	50	55	58	68. 57·25	L
May 4. 3	A 1	Not moved	68. 65	60	54	58	68. 53	56	56	60										L
May 7. 3	A 1		69. 8	0	0	5	68. 67	65	39	45	69. 15	8	10	15	68. 47	42	35	38	68. 57·50	H B
May 10. 21	A 1		68. 55	52	55	60	69. 3	8	10	15	68. 50	57	60	67	68. 45	50	53	57	68. 58·50	T D
May 11. 3	A 1	Not moved	68. 60	57	55	60	68. 50	55	50	58										
May 14. 3	A 1		68. 70	65	53	55	68. 77	83	20	30	69. 10	0	0	5	68. 60	67	40	45	68. 57·50	T D
May 17. 21	A 1		68. 61	58	56	59	68. 64	60	55	60	68. 75	70	47	50	68. 56	55	45	47	68. 57·50	H B
May 18. 3	A 1	Not moved	69. 15	10	6	5	68. 48	45	38	40										H B
May 21. 3	A 1		68. 72	67	50	53	68. 62	68	50	57	68. 75	72	50	53	68. 60	55	43	49	68. 58·50	T D
May 24. 21	A 1		68. 69	65	53	55	68. 55	52	31	35	68. 55	50	63	67	68. 75	72	45	49	68. 55·75	H B
May 25. 3	A 1	Not moved	68. 73	70	52	50	68. 65	68	35	40										H B

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		Graduated Face of Circle (4) East.		2) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (1) East.		(3) West.			
			Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading			
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
May 28. 3	A 1	{	69. 23	18	15	10	68. 28	25	43	50	69. 16	10	2	7	68. 52	47	50	55	} 68. 58·25	H B
May 31. 21	A 1	{	68. 55	52	48	52	68. 60	57	60	64	68. 55	53	60	72	69. 12	8	0	4	} 68. 59·50	L
June 1. 3	A 1	Not moved	68. 75	80	50	53	69. 5	5	0	5										L
June 4. 3	A 1	{	68. 79	75	45	48	69. 3	0	5	10	68. 58	55	52	56	68. 74	68	35	40	} 68. 59·00	H B
June 7. 21	A 1	{	69. 2	2	4	10	68. 55	52	58	60	68. 60	58	50	54	68. 70	68	50	55	} 68. 59·25	L
June 8. 3	A 1	Not moved	68. 72	70	50	53	68. 55	52	45	50										L
June 11. 3	A 1	{	68. 71	65	50	54	69. 3	5	5	10	69. 4	0	5	8	68. 38	35	50	45	} 68. 58·00	H B
June 14. 21	A 1	{	68. 68	70	52	56	68. 57	60	60	65	68. 52	55	40	45	68. 57	54	72	75	} 68. 58·75	L
June 15. 3	A 1	Not moved	69. 10	8	15	20	68. 45	50	47	52										L
June 18. 3	A 1	{	68. 90	85	55	58	68. 78	80	45	47	68. 58	55	46	48	68. 47	45	42	46	} 68. 57·75	H B
June 21. 21	A 1	{	68. 64	66	46	50	68. 63	65	58	60	68. 62	64	40	45	68. 58	60	50	53	} 68. 56·50	L
June 22. 3	A 1	Not moved	69. 5	7	0	2	68. 58	55	50	52										
June 28. 21	A 1	{	68. 45	50	78	80	68. 48	50	60	62	68. 60	57	42	45	68. 45	47	56	60	} 68. 55·25	
June 29. 3	A 1	Not moved									68. 46	52	65	72	68. 60	53	37	40		L
July 2. 3	A 1	{	68. 55	60	47	52	68. 72	75	50	53	68. 60	55	67	70	68. 48	44	50	54	} 68. 57·00	T D
July 5. 21	A 1	{	69. 7	0	5	10	68. 72	74	42	45	68. 74	70	58	61	68. 67	64	50	53	} 69. 2·00	L
July 6. 3	A 1	Not moved									68. 65	68	47	50	68. 60	56	55	52		L
July 9. 3	A 1	{	68. 90	95	50	55	68. 82	85	40	45	68. 53	57	47	50	68. 45	50	40	42	} 68. 57·75	T D

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards. Marked Side of Needle East. Graduated Face of Circle (1) East. Circle Reading Upper.	Lower.	Graduated Face of Circle (3) West. Circle Reading Upper.	Lower.	Marked Side of Needle West. Graduated Face of Circle (4) East. Circle Reading Upper.	Lower.	Graduated Face of Circle (2) West. Circle Reading Upper.	Lower.	Observations with the unmarked End of the Needle pointing downwards. Marked Side of Needle West. Graduated Face of Circle (4) East. Circle Reading Upper.	Lower.	Graduated Face of Circle (2) West. Circle Reading Upper.	Lower.	Marked Side of Needle East. Graduated Face of Circle (1) East. Circle Reading Upper.	Lower.	Graduated Face of Circle (3) West. Circle Reading Upper.	Lower.	Resulting Dip.	Observer.
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
July 12. 21	A 1		69. 20	18	0	4	68. 68	70	40	47	69. 17	14	14	16	68. 50	44	56	60	69. 3·00	L
July 13. 3	A 1	Not moved									68. 45	45	52	57	69. 20	15	8	10		
July 16. 3	A 1		68. 57	55	45	48	68. 73	67	58	58	68. 62	60	56	63	69. 15	8	4	8	69. 1·00	L
July 19. 21	A 1		69. 20	30	5	10	68. 60	64	35	38	69. 13	17	14	20	68. 48	40	60	65	69. 3·75	T D
July 26. 21	A 1		68. 48	46	42	45	69. 15	10	12	16	68. 68	65	35	35	69. 20	15	0	3	68. 59·75	L
July 27. 21	A 1	Not moved	69. 14	10	20	22	68. 60	60	53	60										
July 30. 3	A 1		68. 52	48	63	67	68. 35	30	64	72	68. 90	85	45	50	68. 60	56	54	58	68. 58·00	L
Aug. 2. 21	A 1		68. 50	44	35	40	68. 72	70	47	42	69. 10	12	0	7	69. 20	28	20	25	69. 2·50	T D
Aug. 3. 3	A 1	Not moved	69. 10	12	15	25	69. 22	27	12	17										T D
Aug. 9. 21	A 1		69. 25	23	0	5	68. 40	37	25	30	69. 30	25	10	12	68. 28	25	78	83	68. 59·75	H B
Aug. 10. 3	A 1	Not moved									69. 23	20	15	18	68. 55	50	72	75		H B
Aug. 13. 3	A 1		68. 60	55	30	37	68. 75	80	50	45	68. 55	60	47	52	69. 20	27	23	27	69. 1·50	T D
Aug. 16. 21	A 1		68. 55	50	45	47	68. 60	56	43	47	69. 10	5	2	7	68. 63	57	60	65	68. 57·00	H B
Aug. 17. 3	A 1	Not moved									68. 70	63	52	57	68. 25	33	35	40		H B
Aug. 20. 3	A 1		68. 70	67	47	50	68. 60	55	50	55	68. 57	55	60	65	68. 54	58	60	67	68. 58·25	T D
Aug. 23. 21	A 1		68. 72	75	58	63	68. 58	56	63	68	69. 25	20	12	16	68. 30	27	25	30	68. 58·50	H B
Aug. 24. 3	A 1	Not moved									69. 17	10	15	18	68. 43	38	35	40		
Aug. 27. 3	A 1		68. 68	60	45	50	68. 55	52	50	57	69. 18	15	12	15	68. 65	60	45	52	69. 0·00	H B

Aug. 9d. 21h. The observations not satisfactory; the readings discordant; those used are the means of several.

Aug. 16d. 21h. The readings are discordant; the observations were carefully taken.

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (1) East.		(3) West.			
			Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading			
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Aug. 30. 21	A 1		68. 70	65	52	58	68. 50	45	55	60	69. 12	10	20	25	68. 60	65	40	45	69. 0·75	T D
Aug. 31. 3	A 1										69. 5	0	25	20	68. 55	57	50	55		T D
Sep. 3. 3	A 1		68. 30	25	55	60	68. 55	50	72	77	68. 60	55	45	50	68. 73	68	45	52	68. 54·50	H B
Sep. 6. 21	A 1		68. 40	37	60	60	68. 60	55	70	77	68. 70	65	55	53	68. 60	60	54	57	68. 58·25	T D
Sep. 7. 3	A 1	Not moved									68. 60	65	60	55	68. 65	70	55	58		
Sep. 10. 3	A 1		68. 70	72	40	43	68. 50	48	50	55	68. 70	72	60	57	68. 80	83	40	44	68. 58·50	T D
Sep. 13. 21	A 1		68. 63	58	53	56	68. 48	50	48	52	69. 10	7	5	10	68. 65	63	52	58	68. 58·50	L
Sep. 14. 3	A 1	Not moved									68. 55	48	70	70	68. 60	56	45	48		L
Sep. 17. 3	A 1		68. 70	65	58	60	68. 65	62	45	50	68. 68	62	50	54	68. 75	75	35	42	68. 58·75	H B
Sep. 20. 21	A 1		69. 10	6	3	6	68. 60	63	52	55	68. 65	68	56	60	68. 57	54	48	52	68. 59·75	L
Sep. 21. 3	A 1	Not moved									69. 0	5	5	8	68. 77	70	45	47		L
Sep. 27. 21	A 1		69. 20	15	6	10	68. 65	62	40	45	69. 5	0	0	4	68. 53	50	70	75	69. 2·50	H B
Sep. 28. 3	A 1	Not moved	69. 10	6	22	25	69. 12	8	0	2										H B
Oct. 1. 3	A 1		68. 72	70	55	60	68. 65	67	55	60	68. 72	75	55	60	68. 60	65	45	50	69. 1·50	T D
Oct. 4. 21	A 1		68. 50	45	75	78	68. 45	42	56	62	68. 43	38	45	50	68. 63	58	75	80	68. 56·50	H B
Oct. 5. 3	A 1	Not moved	68. 60	55	70	75	68. 48	45	50	55										H B
Oct. 8. 3	A 1		68. 75	70	55	57	68. 70	72	50	55	68. 70	77	50	53	68. 50	55	58	60	69. 0·50	T D

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Resulting Dip.	Observer.
			Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.					
			Graduated Face of Circle (1) East.		(3) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (4) East.		(2) West.		Graduated Face of Circle (1) East.		(3) West.			
			Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading		Circle Reading			
			Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Oct. 11.21	A 1		69. 15	12	0	3	68. 55	58	60	65	69. 10	5	16	20	68. 45	42	48	53	69. 1·75	H B
Oct. 12. 3	A 1	Not moved	69. 20	18	22	25	68. 60	58	35	40										H B
Oct. 15. 3	A 1		69. 20	25	10	10	68. 50	53	45	50	68. 60	65	47	53	68. 60	60	55	57	69. 0·00	T D
Oct. 18.21	A 1		68. 58	63	93	97	68. 45	42	68	73	68. 75	70	50	54	68. 20	22	45	48	68. 57·75	H B
Oct. 19. 3	A 1	Not moved	69. 25	20	15	20	68. 38	35	32	35										
Oct. 25.21	A 1		69. 15	10	0	3	68. 48	45	30	35	68. 75	70	45	48	68. 45	40	75	83	68. 57·00	
Nov. 1.21	A 1		68. 55	55	40	45	69. 14	20	8	11	68. 53	55	45	50	69. 8	2	0	2	68. 59·00	
Nov. 5. 3	A 1		69. 10	2	10	12	68. 45	42	40	48	68. 50	45	50	56	69. 8	5	0	6	68. 56·75	
Nov. 8.21	A 1		69. 10	6	10	15	68. 75	73	45	52	68. 70	65	55	58	68. 75	73	40	43	69. 3·00	
Nov. 9. 3	A 1	Not moved	68. 60	58	72	82	69. 10	3	18	20										H B
Nov. 12. 3	A 1		69. 12	10	20	25	68. 40	40	50	55	68. 50	55	45	50	69. 10	10	0	0	68. 59·50	T D
Nov. 15.21	A 1		68. 47	44	50	55	69. 12	10	2	5	68. 60	58	80	83	68. 69	67	43	47	69. 0·75	H B
Nov. 16. 3	A 1	Not moved	69. 4	0	10	8	68. 68	65	50	55										
Nov. 19. 3	A 1		68. 50	45	70	73	68. 35	38	80	83	68. 85	80	50	53	68. 35	32	55	57	68. 57·75	
Nov. 25.21	A 1		69. 9	5	20	23	68. 50	47	40	42	69. 4	0	18	20	68. 50	48	38	42	68. 58·50	H B
Nov. 26. 3	A 1	Not moved	68. 70	65	50	53	68. 48	45	50	53										

DAY and APPROXIMATE HOUR, 1846.	Letter referring to Needle.	Angle made by the Plane of the Vertical Circle with the North Magnetic Meridian, reckoning towards the East.	Whether moved from its bearing subsequently to the last Observation.	Observations with the marked End of the Needle pointing downwards.								Observations with the unmarked End of the Needle pointing downwards.								Mean for each Azimuthal Angle.	Resulting Dip.	Observer.
				Marked Side of Needle East.				Marked Side of Needle West.				Marked Side of Needle West.				Marked Side of Needle East.						
				Graduated Face of Circle (1) East.		(3) West.		(4) East.		(2) West.		(4) East.		(2) West.		(1) East.		(3) West.				
				Circle Reading Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.	Upper.	Lower.			
d h		°		° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	° ′	
Dec. 3. 3	A 1	30		69. 48	46	80	70	69. 17	25	68	70	70. 50	55	48	40	70. 10	8	42	55	70. 15½	68. 15·6	L
		120		79. 45	53	40	45	80. 20	20	40	32	79. 50	55	50	58	80. 25	15	40	40	80. 9¼		
Dec. 5. 21	A 1	30		70. 50	43	15	20	70. 45	48	25	33	70. 60	68	45	40	70. 35	30	0	3	70. 35	68. 12·2	H B
		120		79. 25	33	20	27	79. 40	35	50	55	79. 0	8	5	13	78. 55	50	65	60	79. 18½		
Dec. 13. 21	A 1			68. 48	43	60	65	68. 50	45	70	75	69. 5	3	5	8	68. 75	70	45	50		68. 59·75	
Dec. 14. 3	A 1		Not moved	68. 45	38	50	55	69. 20	15	10	12											H B
Dec. 21. 21	A 1			69. 42	34	8	14	68. 65	62	30	48	68. 40	35	30	34	68. 58	54	35	32		68. 50·0	G H
Dec. 27. 21	A 1			68. 48	43	34	38	68. 70	65	55	60	68. 78	73	58	68	69. 28	15	0	8		69. 1·0	G H

Dec. 3 and 5. The resulting dip from each of these sets of observations is small: the observations themselves seem to be good, and the reductions have been made correctly.

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1845 AND 1846.

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet Reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Poles of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
1845.			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s		s	°
Sep. 11													4·766	50		
													4·632	49	4·707	56
													4·740	20		
		Away				21. 39. 12·45	2. 45. 27·20		22. 24. 39·65							
	E	W	1. 0	56·3		7. 20. 26·61	2. 45. 25·50	48·52	8. 5. 52·11	8. 9. 33·20						
	E	E		56·2		7. 28. 41·79	2. 44. 32·50	48·70	8. 13. 14·29		14. 14. 58·15	0·24614				
	W	W		57·0		35. 51. 16·30	2. 43. 1·10	48·78	36. 34. 17·40	36. 39. 29·50						
	W	E		57·0		36. 1. 46·29	2. 42. 55·30	48·75	36. 44. 41·59							
	W	N		57·0		14. 23. 30·61	2. 43. 46·60	48·80	15. 7. 17·21	15. 4. 9·78						
	W	S		57·0		14. 17. 45·65	2. 43. 16·70	48·86	15. 1. 2·35		7. 20. 23·92	0·12776				
	E	N		57·2		29. 0. 11·23	2. 42. 40·80	48·70	29. 42. 52·03	29. 44. 57·62						
	E	S		57·5	57·4	29. 4. 38·91	2. 42. 24·30	48·76	29. 47. 3·21							
	W	W	1. 6	58·0		25. 53. 36·86	2. 40. 53·70	48·80	26. 34. 30·56	26. 34. 30·56						
	W	E		58·0		25. 53. 36·86	2. 40. 53·70	48·82	26. 34. 30·56		4. 9. 15·52	0·07244				
	E	W		57·5		17. 32. 26·88	2. 42. 4·20	48·80	18. 14. 31·08	18. 15. 59·53						
	E	E		58·0		17. 36. 17·68	2. 41. 10·30	48·87	18. 17. 27·98							
	E	N		58·0		23. 51. 7·50	2. 40. 41·10	48·78	24. 31. 48·60	24. 33. 28·05						
	E	S		58·0		23. 54. 45·50	2. 40. 22·00	48·88	24. 35. 7·50		2. 8. 26·26	0·03735				
	W	N		58·0		19. 37. 20·62	2. 40. 57·60	48·87	20. 18. 18·22	20. 16. 35·54						
	W	S		58·0		19. 34. 3·85	2. 40. 49·00	48·90	20. 14. 52·85							
													4·746	50		
													4·746	50	4·746	58
Sep. 23													4·820	50		
													4·816	50	4·818	52
		Away				23. 23. 41·79	2. 48. 33·00		24. 12. 4·79							
	E	W	1. 0	54·5		9. 33. 32·92	2. 48. 17·20	49·55	10. 21. 50·12	10. 22. 28·06						
	E	E		55·0		9. 35. 2·20	2. 48. 3·80	49·55	10. 23. 6·00		13. 49. 53·06	0·23907				
	W	W		56·0		37. 8. 59·04	2. 47. 14·10	49·59	37. 56. 13·14	38. 2. 14·18						
	W	E		55·0		37. 21. 56·41	2. 46. 18·80	49·67	38. 8. 15·21							
	W	N		55·0		16. 17. 20·48	2. 47. 38·80	49·57	17. 4. 59·28	17. 3. 19·21						
	W	S		56·0		16. 14. 10·84	2. 47. 28·30	49·58	17. 1. 39·14		7. 8. 2·28	0·12419				
	E	N		54·5		30. 33. 44·95	2. 45. 31·20	49·73	31. 19. 16·15	31. 19. 23·76						
	E	S		54·5		30. 34. 12·07	2. 45. 19·30	49·68	31. 19. 31·37							
	W	W	1. 6	55·5	55·3	27. 30. 50·61	2. 43. 45·60	49·75	28. 14. 36·21	28. 15. 57·12						
	W	E		56·5		27. 33. 39·52	2. 43. 38·50	49·75	28. 17. 18·02		4. 3. 28·18	0·07076				
	E	W		54·5		19. 23. 35·42	2. 45. 23·40	49·69	20. 8. 58·82	20. 9. 0·77						
	E	E		54·5		19. 23. 38·11	2. 45. 24·60	49·70	20. 9. 2·71							
	E	N		56·5		25. 28. 48·58	2. 43. 33·90	49·78	26. 12. 22·48	26. 15. 12·85						
	E	S		56·5		25. 34. 36·82	2. 43. 26·40	49·75	26. 18. 3·22		2. 2. 40·61	0·03568				
	W	N		55·0		21. 28. 46·21	2. 44. 14·40	49·66	22. 13. 0·61	22. 9. 51·64						
	W	S		55·0		21. 22. 34·87	2. 44. 7·80	49·69	22. 6. 42·67							
		Away				23. 28. 55·57	2. 43. 16·60		24. 12. 12·17							
													4·824	50		
													4·816	50	4·820	55
Oct. 13													4·870	50		
													4·926	50	4·898	61
		Away				23. 19. 25·60	2. 45. 30·10		24. 4. 55·70							

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Poles of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
1845.			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s	s	s	°
Oct. 13	E	W	1. 0	61·0		9. 54. 8·32	2. 45. 11·10	50·17	10. 39. 19·42	10. 36. 27·36						
	E	E		61·0		9. 48. 20·10	2. 45. 15·20	50·00	10. 33. 35·30		13. 28. 37·87	0·23306				
	W	W		63·5		36. 45. 5·39	2. 44. 37·90	50·00	37. 29. 43·29	37. 33. 43·10						
	W	E		64·0		36. 53. 26·20	2. 44. 16·70	50·23	37. 37. 42·90							
	W	N		61·5		16. 22. 14·81	2. 45. 15·20	49·97	17. 7. 30·01	17. 7. 25·68						
	W	S		63·5		16. 22. 26·44	2. 44. 54·90	49·96	17. 7. 21·34		6. 57. 4·94	0·12103				
	E	N		64·0		30. 17. 3·50	2. 44. 12·90	50·30	31. 1. 16·40	31. 1. 35·55						
	E	S		64·0		30. 17. 54·00	2. 44. 0·70	50·30	31. 1. 54·70							
					63·3											
	W	W	1. 6	64·0		27. 14. 58·09	2. 44. 41·10	50·25	27. 59. 39·19	28. 0. 34·34						
	W	E		64·0		27. 16. 27·68	2. 45. 1·80	50·22	28. 1. 29·48		3. 57. 1·24	0·06889				
	E	W		63·8		19. 22. 11·24	2. 44. 18·50	50·24	20. 6. 29·74	20. 6. 31·87						
	E	E		63·5		19. 22. 10·80	2. 44. 23·20	50·25	20. 6. 34·00							
	E	N		64·0		25. 17. 6·92	2. 45. 10·30	50·22	26. 2. 17·22	26. 4. 28·33						
	E	S		64·0		25. 21. 29·14	2. 45. 10·30	50·23	26. 6. 39·44		2. 0. 36·90	0·03508				
	W	N		63·5		21. 21. 21·67	2. 44. 23·20	50·25	22. 5. 44·87	22. 3. 14·53						
	W	S		63·8		21. 16. 12·49	2. 44. 31·70	50·27	22. 0. 44·19							
		Away				23. 18. 18·61	2. 45. 16·90		24. 3. 35·51				4·860	50	4·865	64
													4·870	50		
													4·882	50	4·878	50
													4·874	50		
Nov. 3		Away				23. 25. 42·67	2. 40. 28·30		24. 6. 10·97							
	E	W	1. 0	49·8		9. 59. 42·27	2. 40. 4·20	50·67	10. 39. 46·47	10. 37. 40·07						
	E	E		49·5		9. 55. 44·27	2. 39. 49·40	50·50	10. 35. 33·67		13. 27. 10·05	0·23264				
	W	W		51·5		36. 47. 37·84	2. 38. 55. 10	50·50	37. 26. 32·94	37. 32. 0·17						
	W	E		51·5		36. 59. 17·20	2. 38. 10·20	50·52	37. 37. 27·40							
	W	N		50·0		16. 31. 22·20	2. 38. 54·20	50·66	17. 10. 16·40	17. 6. 2·04						
	W	S		51·0		16. 23. 10·59	2. 38. 37·10	50·60	17. 1. 47·69		6. 58. 43·60	0·12150				
	E	N		52·0		30. 21. 7·31	2. 38. 14·80	50·47	30. 59. 22·11	31. 3. 29·24						
	E	S		52·0		30. 30. 2·36	2. 37. 34·00	50·47	31. 7. 36·36							
					51·4											
	W	W	1. 6	51·8		27. 23. 51·35	2. 36. 54·20	50·42	28. 0. 45·55	28. 2. 8·72						
	W	E		51·8		27. 26. 20·69	2. 37. 11·20	50·50	28. 3. 31·89		3. 57. 9·99	0·06893				
	E	W		51·8		19. 31. 16·92	2. 37. 11·20	50·50	20. 8. 28·12	20. 7. 48·74						
	E	E		51·8		19. 29. 39·47	2. 37. 29·90	50·41	20. 7. 9·37							
	E	N		52·0		25. 25. 27·82	2. 37. 18·50	50·51	26. 2. 46·32	26. 6. 2·73						
	E	S		52·0		25. 31. 29·84	2. 37. 49·30	50·50	26. 9. 19·14		2. 0. 35·39	0·03507				
	W	N		52·0		21. 30. 56·66	2. 37. 22·30	50·45	22. 8. 18·96	22. 4. 51·96						
	W	S		52·0		21. 23. 56·36	2. 37. 28·60	50·47	22. 1. 24·96							
													4·858	50	4·865	52
													4·872	50		
Dec. 2													4·730	50	4·740	49
													4·750	50		
		Away				23. 20. 43·53	2. 39. 42·50		24. 0. 26·03							
	E	W	1. 0			10. 1. 40·28	2. 39. 7·20	50·60	10. 40. 47·48	10. 39. 6·61						
	E	E				9. 58. 30·04	2. 38. 55·70	50·62	10. 37. 25·74		13. 20. 52·00	0·23086				
	W	W				36. 36. 43·06	2. 38. 29·50	50·62	37. 15. 12·56	37. 20. 50·58						
	W	E				36. 48. 13·30	2. 38. 15·30	50·58	37. 26. 28·60							

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centres of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Poles of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s		s	°
1845.																
Dec. 2	W	N	1 ·0	50 ·0		16. 33. 36 ·09	2. 38. 42 ·30	50 ·65	17. 12. 18 ·39	17. 4. 18 ·12						
	W	S		50 ·3		16. 17. 18 ·64	2. 38. 59 ·20	50 ·63	16. 56. 17 ·84		6. 55. 37 ·18	0 ·12061				
	E	N		51 ·0		30. 9. 20 ·80	2. 38. 16 ·40	50 ·55	30. 47. 37 ·20	30. 55. 32 ·47						
	E	S		51 ·0		30. 25. 0 ·04	2. 38. 27 ·70	50 ·47	31. 3. 27 ·74							
					51 ·1											
	W	W	1 ·6	51 ·7		27. 17. 9 ·94	2. 37. 34 ·50	50 ·53	27. 54. 44 ·44	27. 56. 3 ·42						
	W	E		51 ·5		27. 19. 36 ·10	2. 37. 46 ·30	50 ·50	27. 57. 22 ·40		3. 54. 24 ·94	0 ·06814				
	E	W		50 ·7		19. 28. 55 ·77	2. 38. 8 ·40	50 ·50	20. 7. 4 ·17	20. 7. 13 ·54						
	E	E				19. 29. 14 ·51	2. 38. 8 ·40	50 ·50	20. 7. 22 ·91							
	E	N		51 ·7		25. 19. 47 ·91	2. 37. 53 ·80	50 ·42	25. 57. 41 ·71	26. 1. 45 ·02						
	E	S		51 ·0		25. 27. 54 ·03	2. 37. 54 ·30	50 ·48	26. 5. 48 ·33		1. 59. 44 ·14	0 ·03482				
	W	N		51 ·5		21. 27. 14 ·24	2. 38. 6 ·20	50 ·48	22. 5. 20 ·44	22. 2. 16 ·74						
	W	S		51 ·3		21. 21. 37 ·84	2. 37. 35 ·20	50 ·50	21. 59. 13 ·04							
		Away				23. 23. 9 ·04	2. 37. 26 ·50		24. 0. 35 ·54				4 ·802	100	4 ·815	51
													4 ·857	30		
1846.																
Feb. 4													4 ·974	50	4 ·982	41
													4 ·990	50		
		Away				23. 27. 40 ·79	2. 43. 22 ·90		24. 11. 3 ·69							
	E	W	1 ·0	44 ·5		10. 30. 23 ·75	2. 43. 12 ·50	52 ·20	11. 13. 36 ·25	11. 18. 5 ·57						
	E	E		45 ·8		10. 40. 15 ·29	2. 42. 19 ·60	52 ·20	11. 22. 34 ·89		12. 51. 30 ·54	0 ·22254				
	W	W				36. 17. 1 ·65	2. 43. 4 ·10	52 ·10	37. 0. 5 ·75	37. 1. 6 ·65						
	W	E				36. 19. 3 ·45	2. 43. 4 ·10	52 ·12	37. 2. 7 ·55							
	W	N		46 ·0		16. 36. 31 ·11	2. 43. 1 ·30	52 ·18	17. 19. 32 ·41	17. 25. 44 ·86						
	W	S		46 ·0		16. 48. 56 ·01	2. 43. 1 ·30	52 ·17	17. 31. 57 ·31		6. 42. 32 ·16	0 ·11683				
	E	N		46 ·7		30. 15. 23 ·72	2. 42. 56 ·20	52 ·13	30. 58. 19 ·92	30. 50. 49 ·18						
	E	S		47 ·0		30. 0. 37 ·94	2. 42. 40 ·50	52 ·10	30. 43. 18 ·44							
					46 ·9											
	W	W	1 ·6	47 ·5		27. 12. 5 ·06	2. 41. 20 ·60	52 ·15	27. 53. 25 ·66	27. 53. 25 ·81						
	W	E		47 ·5		27. 12. 5 ·36	2. 41. 20 ·60	52 ·15	27. 53. 25 ·96		3. 43. 45 ·18	0 ·06504				
	E	W		47 ·2		19. 43. 55 ·62	2. 41. 56 ·10	52 ·10	20. 25. 51 ·72	20. 25. 55 ·46						
	E	E		47 ·3		19. 44. 3 ·09	2. 41. 56 ·10	52 ·14	20. 25. 59 ·19							
	E	N		47 ·8		25. 25. 48 ·09	2. 41. 9 ·10	52 ·18	26. 6. 57 ·19	26. 6. 48 ·57						
	E	S		48 ·0		25. 26. 12 ·94	2. 40. 27 ·00	52 ·20	26. 6. 39 ·94		1. 56. 24. 69	0 ·03386				
	W	N		47 ·3		21. 32. 20 ·45	2. 41. 46. 10	52 ·14	22. 14. 6 ·55	22. 13. 59 ·20						
	W	S		47 ·5		21. 32. 23 ·95	2. 41. 27 ·90	52 ·10	22. 13. 51 ·85							
		Away				23. 28. 58 ·21	2. 40. 27 ·00		24. 9. 25 ·21				4 ·923	52	4 ·932	48
													4 ·944	50		
Mar. 17													5 ·016	50	5 ·018	44
													5 ·020	50		
		Away				23. 41. 52 ·35										
	E	W	1 ·0	46 ·0		10. 45. 29 ·76				10. 49. 25 ·82						
	E	E		46 ·0		10. 53. 21 ·87					12. 47. 47 ·10	0 ·22149				
	W	W		44 ·7		36. 18. 20 ·00				36. 25. 0 ·02						
	W	E				36. 31. 40 ·03										

March 17. During these observations workmen were engaged in boring the ground for the reception of the long thermometers, and the observations of the Declination Magnet were consequently not trustworthy; no great magnetic changes took place during the continuance of the observations.

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet Reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Poles of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet,	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
1846.			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s		s	°
Mar. 17	W	N	1. 0	45·8		17. 1. 0·23										
	W	S		46·0		16. 59. 40·70				17. 0. 20·47						
	E	N		46·0		30. 24. 23·55					6. 41. 19·56	0·11648				
	E	S		46·0		30. 21. 35·62				30. 22. 59·59						
					46·2											
	W	W	1. 6	46·5		27. 34. 35·95										
	W	E		46·5		27. 37. 36·63				27. 36. 6·29						
	E	W		46·7		19. 57. 59·76					3. 48. 8·64	0·06632				
	E	E		46·6		20. 1. 38·26				19. 59. 49·01						
	E	N		46·3		25. 36. 23·42										
	E	S		46·0		25. 38. 23·08				25. 37. 23·25						
	W	N		46·6		21. 54. 16·83					1. 52. 51·04	0·03282				
	W	S		46·6		21. 49. 5·53				21. 51. 41·18						
		Away				23. 45. 37·30							5·020	50	4·998	46
													4·976	50		
Apr. 21													4·972	100	4·972	47
		Away				23. 44. 24·12	2. 44. 42·60		24. 29. 6·72							
	E	W	1. 0	48·5		10. 50. 44·81	2. 43. 58·20	56·95	11. 34. 43·01	11. 39. 14·13						
	E	E		48·8		10. 59. 47·05	2. 43. 58·20	56·92	11. 43. 45·25		12. 50. 26·20	0·22224				
	W	W		48·8		36. 41. 51·90	2. 42. 37·40	56·95	37. 24. 29·30	37. 20. 6·53						
	W	E		50·8		36. 33. 36·46	2. 42. 7. 30	56·90	37. 15. 43·76							
	W	N		49·0		17. 2. 46·36	2. 43. 30·00	56·90	17. 46. 16·36	17. 46. 42·76						
	W	S		50·5		17. 3. 39·15	2. 43. 30·00	56·90	17. 47. 9·15		6. 43. 32·57	0·11712				
	E	N		51·3		30. 32. 58·91	2. 42. 7·30	56·90	31. 15. 6·21	31. 13. 47·91						
	E	S		51·5		30. 31. 0·71	2. 41. 28·90	56·90	31. 12. 29·61							
					51·5											
	W	W	1. 6	53·5		27. 35. 11·30	2. 39. 52·20	57·04	28. 15. 3·50	28. 17. 4·17						
	W	E		53·6		27. 39. 27·54	2. 39. 37·30	57·00	28. 19. 4·84		3. 47. 43·50	0·06619				
	E	W		52·0		20. 0. 33·48	2. 41. 6·50	56·90	20. 41. 39·98	20. 41. 37·18						
	E	E		52·5		20. 0. 58·78	2. 40. 35·60	56·98	20. 41. 34·38							
	E	N		52·8		25. 43. 19·28	2. 38. 55·40	57·25	26. 22. 14. 68	26. 25. 2·12						
	E	S		53·5		25. 49. 6·86	2. 38. 42·70	57·15	26. 27. 49·56		1. 55. 38·04	0·03363				
	W	N		53·5		21. 55. 3·37	2. 40. 35·60	56·90	22. 35. 38·97	22. 33. 46·04						
	W	S		53·2		21. 51. 48·50	2. 40. 4·60	57·40	22. 31. 53·10							
		Away				23. 50. 52·16	2. 38. 29·50		24. 29. 21. 66				4·954	50	4·967	53
													4·980	50		
May 13													5·010	50	5·010	62
													5·010	50		
		Away				24. 1. 1·35	2. 37. 39·70		24. 38. 41. 05							
	E	W	1. 0	61·0		11. 11. 18·79	2. 37. 5·40	53·60	11. 48. 24·19	11. 51. 30·94						
	E	E		60·5		11. 18. 5·19	2. 36. 32·50	53·65	11. 54. 37·69		12. 48. 6·10	0·22158				
	W	W		60·5		36. 48. 34·00	2. 36. 4·70	53·60	37. 24. 38·70	37. 27. 43·13						
	W	E		60·4		36. 55. 41·26	2. 35. 6·30	53·85	37. 30. 47·56							
	E	N		60·5		30. 40. 34·06	2. 36. 40·40	53·60	31. 17. 14·46	31. 28. 45·73						
	E	S		60·5		31. 3. 44·79	2. 36. 32·20	53·50	31. 40. 16·99		6. 53. 24·43	0·11997				

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Poles of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
1846.			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s		s	°
Mar. 13	W	N	1. 0	54 ·5	58 ·5	17. 20. 42 ·02	2. 37. 51 ·60	55 ·30	17. 58. 33 ·62	17. 41. 56 ·87						
	W	S		54 ·5		16. 45. 0 ·01	2. 40. 20 ·10	55 ·30	17. 25. 20 ·11							
	W	W	1. 6	57 ·8		27. 46. 51 ·11	2. 34. 55 ·50	54 ·07	28. 21. 46 ·61	28. 26. 27 ·69						
	W	E		57 ·5		27. 54. 58 ·16	2. 36. 10 ·60	53 ·92	28. 31. 8 ·76		3. 46. 35 ·47	0 ·06587				
	E	W		59 ·0		20. 19. 9 ·75	2. 33. 50 ·70	54 ·12	20. 53. 0 ·45	20. 53. 16 ·76						
	E	E		58 ·8		20. 19. 15 ·66	2. 34. 17 ·40	53 ·98	20. 53. 33 ·06							
	E	N		57 ·5		25. 54. 17 ·60	2. 35. 49 ·10	54 ·15	26. 30. 6 ·70	26. 33. 58 ·00						
	E	S		57 ·4		26. 2. 29 ·29	2. 35. 20 ·00	54 ·23	26. 37. 49 ·29		1. 54. 44 ·90	0 ·03337				
	W	N		58 ·3		22. 14. 16 ·18	2. 33. 54 ·70	54 ·20	22. 48. 10 ·88	22. 44. 28 ·21						
	W	S		58 ·0		22. 6. 23 ·03	2. 34. 22 ·50	54 ·10	22. 40. 45 ·53							
		Away				24. 6. 38 ·60	2. 35. 1 ·60		24. 41. 40 ·20							
													4 ·974	50	4 ·970	57
													4 ·966	50		
Oct. 30													5 ·024	100	5 ·024	52
		Away				24. 4. 43 ·39	2. 23. 25 ·70		24. 28. 9 ·09							
	E	W	1. 0	51 ·3	52 ·1	11. 21. 38 ·75	2. 24. 31 ·60	54 ·25	11. 46. 10 ·35	11. 52. 8 ·83						
	E	E		51 ·5		11. 33. 35 ·00	2. 24. 32 ·30	54 ·30	11. 58. 7 ·30		12. 35. 0 ·30	0 ·21786				
	W	W		51 ·5		36. 35. 54 ·04	2. 23. 25 ·70	54 ·37	36. 59. 19 ·74	37. 2. 9 ·43						
	W	E				36. 40. 44 ·22	2. 24. 14 ·90	54 ·20	37. 4. 59 ·12							
	W	N		51 ·5		17. 22. 37 ·59	2. 23. 48 ·00	54 ·25	17. 46. 25 ·59	17. 52. 2 ·30						
	W	S		51 ·5		17. 33. 51 ·00	2. 23. 48 ·00	54 ·30	17. 57. 39 ·00		6. 35. 59 ·98	0 ·11494				
	E	N		51 ·5		30. 46. 13 ·10	2. 24. 31 ·40	54 ·15	31. 10. 44 ·50	31. 4. 2 ·26						
	E	S		51 ·5		30. 33. 17 ·02	2. 24. 3 ·00	54 ·18	30. 57. 20 ·02							
	W	W	1. 6	52 ·0		27. 46. 7 ·93	2. 24. 13 ·30	54 ·20	28. 10. 21 ·23	28. 10. 58 ·35						
	W	E		53 ·0		27. 47. 49 ·66	2. 23. 45 ·80	54 ·25	28. 11. 35 ·46		3. 42. 38 ·93	0 ·06472				
	E	W		51 ·5		20. 20. 32 ·54	2. 23. 43 ·40	54 ·25	20. 44. 15 ·94	20. 45. 40 ·49						
	E	E		51 ·7		20. 23. 10 ·84	2. 23. 54 ·20	54 ·25	20. 47. 5 ·04							
	W	N		53 ·2		22. 13. 57 ·35	2. 23. 3 ·20	54 ·75	22. 37. 0 ·55	22. 35. 40 ·39						
	W	S		53 ·5		22. 11. 2 ·43	2. 23. 17 ·80	54 ·65	22. 34. 20 ·23		1. 52. 44 ·96	0 ·03279				
	E	N		53 ·0		25. 54. 18 ·93	2. 23. 26 ·40	54 ·25	26. 17. 45 ·33	26. 21. 10 ·31						
	E	S		53 ·2		26. 1. 8 ·88	2. 23. 26 ·40	54 ·25	26. 24. 35 ·28							
		Away				24. 3. 4 ·64	2. 24. 13 ·80		24. 27. 18 ·44							
													5 ·028	100	5 ·028	52
Nov. 25													5 ·016	100	5 ·016	48
		Away				23. 13. 36 ·87	2. 43. 51 ·10		23. 57. 27 ·97							
	E	W	1. 0	48 ·8	49 ·1	10. 31. 16 ·70	2. 43. 9 ·90	55 ·70	11. 14. 26 ·60	11. 17. 58 ·30						
	E	E		48 ·8		10. 38. 39 ·41	2. 42. 50 ·60	55 ·67	11. 21. 30 ·01		12. 36. 8 ·84	0 ·21819				
	W	W		49 ·0		35. 42. 48 ·42	2. 41. 10 ·60	55 ·70	36. 23. 59 ·02	36. 30. 15 ·97						
	W	E		49 ·0		35. 55. 33 ·02	2. 40. 59 ·90	55 ·77	36. 36. 32 ·92							
	W	N		49 ·0		16. 33. 54 ·70	2. 42. 4 ·00	55 ·60	17. 15. 58 ·70	17. 18. 15 ·05						
	W	S		49 ·0		16. 39. 6 ·89	2. 41. 24 ·50	55 ·68	17. 20. 31 ·39		6. 36. 10 ·13	0 ·11499				
	E	N		49 ·5		29. 54. 20 ·09	2. 40. 49 ·00	55 ·90	30. 35. 9 ·09	30. 30. 35 ·31						
	E	S				29. 45. 33 ·63	2. 40. 27 ·90	55 ·80	30. 26. 1 ·53							
	W	W	1. 6	48 ·8		26. 57. 55 ·54	2. 37. 51 ·00	55 ·88	27. 35. 46 ·54	27. 35. 23 ·60						
	W	E		48 ·8		26. 58. 45 ·66	2. 36. 15 ·00	56 ·10	27. 35. 0 ·66		3. 40. 42 ·56	0 ·06416				

Year, Month, and Day.	Position of Marked End of Deflecting Magnet.	Position of Deflecting Magnet with respect to suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Mean Temperature.	Reduced Circle Reading.	Micrometer Reading of Declination Magnet reduced to Arc.	Scale Reading of Horizontal Force Magnet.	Circle Reading increased by Micrometer Reading of Declination Magnet, omitting 2°.	Mean of the Numbers in the preceding Column, when the Deflecting Magnet was on opposite sides of the suspended Magnet.	Half Difference of Reduced Readings for Reversed Positions of Deflecting Magnet, or Observed Deflexion.	Natural Sine of Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of the Times from all the Vibrations.	Temperature.
			ft. in.	°	°	° ′ ″	° ′ ″	div.	° ′ ″	° ′ ″	° ′ ″		s		s	°
1846.																
Nov. 25	E	W	1. 6	50 ·0		19. 38. 28 ·09	2. 38. 34 ·20	56 ·10	20. 17. 2 ·29	20. 13. 58 ·48						
	E	E		50 ·0		19. 31. 28 ·67	2. 39. 26 ·00	55 ·88	20. 10. 54 ·67							
	E	N		49 ·0		25. 11. 38 ·83	2. 38. 46 ·70	55 ·90	25. 50. 25 ·53	25. 50. 3 ·06						
	E	S		48 ·8		25. 11. 26 ·08	2. 38. 14 ·50	55 ·95	25. 49. 40 ·58		1. 53. 48 ·09	0 ·03310				
	W	N		49 ·6		21. 25. 44 ·13	2. 39. 29 ·40	55 ·60	22. 5. 13 ·53	22. 2. 26 ·88						
	W	S		49 ·0		21. 21. 28 ·73	2. 38. 11 ·50	55 ·64	21. 59. 40 ·23							
		Away				23. 15. 53 ·13	2. 40. 13 ·80		23. 56. 6 ·93				5 ·029	98	5 ·029	48
Dec. 9		Away				23. 44. 14 ·84	2. 41. 17 ·00		24. 25. 31 ·84				5 ·023	116	5 ·023	44
	E	W	1. 0	43 ·8		10. 57. 19 ·49	2. 40. 42 ·20	55 ·30	11. 38. 1 ·69	11. 41. 35 ·40						
	E	E		43 ·8		11. 4. 18 ·40	2. 40. 50 ·70	55 ·25	11. 45. 9 ·10		12. 42. 55 ·50	0 ·22011				
	W	W		44 ·0		36. 22. 7 ·54	2. 40. 7 ·60	55 ·30	37. 2. 15 ·14	37. 7. 26 ·39						
	W	E		44 ·0		36. 32. 30 ·03	2. 40. 7 ·60	55 ·30	37. 12. 37 ·63							
	W	N		43 ·8		17. 2. 51 ·47	2. 40. 26 ·00	55. 30	17. 43. 17 ·47	17. 45. 42 ·07						
	W	S		43 ·8		17. 7. 56 ·57	2. 40. 10 ·10	55 ·30	17. 48. 6 ·67		6 39. 17 ·72	0 ·11589				
	E	N		43 ·8		30. 28. 19 ·12	2. 41. 17 ·00	55 ·30	31. 9. 36 ·12	31. 4. 17 ·51						
	E	S		43 ·8		30. 18. 57 ·29	2. 40. 1. 60	55 ·28	30. 58. 58 ·89							
	W	W	1. 6	43 ·8	43 ·8	27. 25. 39 ·06	2. 39. 47. 50	55 ·48	28. 5. 26 ·56	28. 8. 46 ·31						
	W	E		43 ·8		27. 32. 9 ·15	2. 39. 56 ·90	55 ·50	28. 12. 6 ·05		3. 44. 34 ·86	0 ·06528				
	E	W		43 ·8		19. 58. 49 ·99	2. 39. 46. 50	55 ·40	20. 38. 36 ·49	20. 39. 36 ·60						
	E	E		43 ·8		20. 0. 30 ·41	2. 40. 6 ·30	55 ·30	20. 40. 36 ·71							
	E	N		43 ·8		25. 35. 47 ·16	2. 40. 3 ·60	55 ·50	26. 15. 50 ·76	26. 17. 42 ·76						
	E	S		43 ·8		25. 39. 17 ·95	2. 40. 16 ·80	55 ·50	26. 19. 34 ·75		1. 54. 19 ·26	0 ·03325				
	W	N		43 ·8		21. 51. 10 ·45	2. 39. 19 ·90	55 ·47	22. 30. 30 ·35	22. 29. 4 ·25						
	W	S		43 ·8		21. 48. 18 ·25	2. 39. 19 ·90	55 ·50	22. 27. 38 ·15							
		Away				23. 42. 50 ·70	2. 40. 16 ·80	24 ·23	24. 23. 7 ·50				5 ·019	98	5 ·019	44

Month and Day, 1846.	Mean of Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of Times from all the Vibrations.	Temperature.
	s		s	°
May 25	4·996	50	4·999	66
	4·988	50		
	5·002	50		
	5·010	50		
June 1	5·000	50	5·030	76
	5·020	50		
	5·071	48		
	5·032	50		
June 8	5·092	50	5·046	70
	5·068	50		
	5·006	50		
	5·020	50		
June 8	5·033	100	5·033	71
June 15	5·015	60	4·987	83
	5·023	40		
	4·958	50		
	4·950	50		
June 22	5·018	100	5·022	88
	5·025	100		
July 7	5·020	50	5·012	64
	5·012	50		
	5·014	50		
	5·004	50		
July 15	5·023	100	5·023	73

Month and Day, 1846.	Mean of Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Mean of Times from all the Vibrations.	Temperature.
	s		s	°
July 31	5·021	98	5·021	87
August 10	5·028	50	5·035	69
	5·042	50		
August 10	5·040	98	5·040	71
August 25	5·020	50	5·020	66
	5·030	50		
	5·010	50		
September 2	5·034	100	5·034	78
September 4	5·038	100	5·038	73
September 8	5·042	50	5·033	73
	5·026	50		
	5·032	50		
September 10	5·031	100	5·032	70
	5·033	100		
November 5	5·030	92	5·030	58
November 6	5·046	98	5·035	46
	5·025	100		
November 11	5·020	99	5·023	51
	5·026	100		
November 19	5·000	100	5·000	56

June 8. The magnet at the commencement of the observations was vibrating through an arc of 18′, but during the series this increased to one of 30′, in consequence of the air being in quick motion. At the time of the second set of observations the air was nearly in a calm state.

ROYAL OBSERVATORY, GREENWICH.

ORDINARY

METEOROLOGICAL OBSERVATIONS.

1846.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 0. 14	29·313	48·5	48·0	0·5	..	..	52·2 / 38·0	0·00	..	..	..	..	..	0	0	0	..	..
16	29·383	43·0	40·0	3·0	43·0	0·0	50·6 / 33·3	0·00	..	..	..	..	..	0	0	0	..	..
18	29·468	41·7	38·2	3·5	..	..			..	..	..	..	..	0	0	0	..	..
20	29·569	42·0	39·4	2·6	..	..	44·2 / 41·5	0·000	..	..	..	..	..	0	0	0	..	..
22	29·633	43·0	38·2	4·8	32·0	11·0			..	..	..	..	..	0	0	0	..	..
Jan. 1. 0	29·711	43·0	38·1	4·9	..	..	..	..	..	..	..	..	..	0	0	0	..	..
2	29·758	43·5	39·4	4·1	..	..	..	..	..	..	..	..	..	0	0	0	..	..
4	29·807	43·0	37·4	5·6	30·0	13·0	43·9	..	..	..	..	..	..	0	0	0	..	..
6	29·856	40·5	36·7	3·8	..	..	33·1	0·00	..	..	..	..	..	0	0	0	..	..
8	29·892	38·5	35·2	3·3	..	..			..	..	..	..	..	0	0	0	..	..
10	29·914	36·2	34·2	2·0	31·0	5·2	46·8	0·00	..	..	..	..	Pos.	1	1	0	..	..
12	29·940	36·5	34·4	2·1	..	..	25·8		..	..	..	..	Pos.	10	10	5	5	..
14	29·963	35·8	34·2	1·6	..	..		0·000	..	..	..	..	Pos.	10	12	7	7	13. 0
16	29·987	34·4	33·1	1·3	31·0	3·4	44·2		..	..	..	..	..	0	0	0	..	..
18	29·996	34·8	33·6	1·2	..	..	41·8	..	..	..	..	..	..	0	0	0	..	..
20	30·043	35·0	33·4	1·6	..	..	..	..	..	..	..	..	Pos.	15	25	10	10	8. 0
22	30·105	35·0	33·6	1·4	32·0	3·0	..	..	..	..	..	..	Pos.	10	10	5	5	12. 0
Jan. 2. 0	30·151	37·9	34·7	3·2	..	..	..	..	..	..	..	..	Pos.	40	40	20	30	12. 0
2	30·185	38·5	34·9	3·6	..	..	..	..	..	..	..	..	Pos.	15	20	10	12	6. 0
4	30·219	37·8	34·7	3·1	30·0	7·8	38·8	..	..	..	..	..	Pos.	30	40	20	20	4. 20
6	30·260	35·5	32·8	2·7	..	..	29·8	0·00	..	..	..	..	Pos.	30	40	20	20	4. 15
8	30·296	33·5	31·6	1·9	..	..			..	..	..	..	Pos.	35	40	20	20	2. 10
10	30·336	33·3	31·7	1·6	29·0	4·3	49·7	0·00	..	..	..	..	Pos.	40	50	25	25	2. 10
12	30·352	32·4	31·1	1·3	..	..	21·5		..	..	..	..	..	0	0	0	..	..
14	30·361	31·7	30·7	1·0	..	..		0·000	..	..	..	..	Pos.	42	40	20	25	2. 0
16	30·365	32·0	31·0	1·0	28·5	3·5	43·2		..	..	..	..	Pos.	45	50	25	30	2. 30
18	30·363	31·3	30·4	0·9	..	..	40·8	..	..	..	..	..	Pos.	40	40	20	25	1. 45
20	30·365	30·1	29·2	0·9	..	..	..	..	..	..	..	..	Pos.	45	50	25	30	0. 5
22	30·377	33·3	31·8	1·5	29·0	4·3	..	..	..	..	..	..	Pos.	40	50	25	30	0. 30
Jan. 3. 0	30·361	37·5	35·2	2·3	..	..	..	..	..	..	..	..	Pos.	30	..	20	25	9. 0
2	30·328	40·3	37·4	2·9	..	..	..	..	..	..	..	..	Pos.	30	..	20	20	..
4	30·294	39·5	37·3	2·2	34·0	5·5	40·8	..	..	..	..	..	Pos.	45	..	..	60	5. 0
6	30·258	37·7	36·1	1·6	..	..	33·9	0·00	..	..	..	..	Pos.	40	30	15	25	5. 0
8	30·244	38·3	35·9	2·4	..	..			..	..	..	..	Pos.	8	5	3	..	8. 0
10	30·216	39·1	36·2	2·9	32·5	6·6	45·0	0·02	..	..	..	..	Pos.	5	5	3	..	..
12	30·164	39·5	36·5	3·0	..	..	29·0		..	..	..	..	..	..	..	..	..	..
14	..	..	..	..	..	..		0·000	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	42·0		..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	39·5	..	..	..	..	..	..	..	..	..	..	..
20	29·891	39·3	37·7	1·6	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	29·866	38·8	37·9	0·9	..	..	..	..	..	..	..	..	Neg.	40	..	40	50	0. 10
Jan. 4. 0	..	..	..	..	..	..	41·3	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	29·4	0·00	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	42·8	0·00	..	..	..	..	..	..	..	..	..	..
8	29·872	39·0	37·2	1·8	..	..	26·5		..	..	..	..	Pos.	1	0	0	0	..
10	..	..	..	..	..	..		0·000	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	41·0 / 38·2	..	..	..	..	..	..	..	..	..	..	..

The day referred to in the foot-notes is always to be understood as that of Civil Reckoning, unless the time of the observation is mentioned, and then it is referred to Astronomical Reckoning.

Every part of each instrument was examined, and found to be in good order, except Osler's and Whewell's Anemometers, which were in the hands of Mr. Bennett and Mr. Simms, respectively, for alteration and repair.

BAROMETER.

Jan. 0^d. 20^h. The reading was $0^{in}.101$ higher than at 18^h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: rain falling in occasional squalls: wind blowing in gusts to 4.	L
4	..	Cirro-stratus towards the N.: loose scud in various parts of the sky: wind blowing in gusts to 3.	
0	..	Cloudless: wind in gusts to 3 and upwards.	
10	..	Overcast: slight rain is falling: wind in gusts to 3.	L
$7\frac{1}{2}$	..	Cumuli, cirri, and scud cover the greater part of the sky: wind in gusts to $2\frac{1}{2}$.	T D
10	..	Overcast: cirro-stratus.	
7	..	Cirro-stratus and scud: there is a portion of clear sky in the S.W.	T D
3	Transit	Cirro-stratus and loose scud in every direction: wind blowing in gusts to 3.	L
2	..	Cirro-stratus around the horizon; every other part clear.	
0	..	Cloudless: wind in gusts to 1.	
0	..	,, wind in gusts to $\frac{1}{2}$.	L
0	..	,,	T D
0	..	,,	
0	..	,,	
0	..	,,	
0	..	,,	T D
7	..	Cirro-stratus and fog.	H B
3	..	Light clouds S. of the zenith, and cirro-stratus near the horizon.	H B
0	..	Cloudless.	L
0	..	,, hazy in the horizon.	L
4	Transit	A bank of stratus cloud extending from the N.W. to the S.W. horizon: the zenith beautifully clear.	T D
0	In Equator	Cloudless: a thin haze prevalent in the lower part of the Park.	
9	..	The sky is covered with thin cirro-stratus and fleecy clouds, through which a few stars are visible.	T D
10	..	Overcast.	H B
10	..	,,	
10	..	Overcast, but a few stars are occasionally visible.	
2	..	Cirro-stratus and scud round the horizon.	
3	..	Fleecy clouds, cirro-stratus, and fragments of brownish-coloured scud distributed in every part of the sky.	H B
7	..	The sky is principally covered with beautifully formed cumuli and light fleecy clouds.	T D
9	..	Cirro-stratus and fleecy clouds: breaks about the zenith.	L
8	..	,, small clear breaks in several directions.	T D
7	..	The sky is principally covered with cumuli, cirro-strati, and fleecy clouds.	H B
10	Transit	Cirro-stratus and scud: the Moon and Venus are occasionally visible through the clouds.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	H B
10	..	,,	L
..	..		
..	..		
..	..		
10	..	,, rain is falling.	
10	..	,, ,, gusts of wind to $\frac{1}{2}$.	
..	..		
..	..		
..	1st Qr.		
..	Transit		
0	..	Cloudless: foggy: the rain ceased at 0^h.	L
..	..		
..	..		

STRENGTH OF WIND BY ESTIMATION.

Jan. $0^d.14^h$. In the general remarks, by the expression "wind in gusts to 4," is meant that the pressure of the wind by estimation sometimes amounted to 4, although its general value for that time was less. The strength of the wind is estimated by considering a calm to be represented by 0, and a hurricane by 6; and the pressure in lbs. per square foot will be nearly measured by the square of the numbers thus given. A similar expression occurs frequently in the general remarks, and is always to be interpreted in the same way.

ELECTRICITY.—Jan. $2^d.10^h$. There was a spark at the distance of 0·02 inch.

Jan. $3^d.2^h$. There was a spark at the distance of 0·01 inch.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 4. 14	29·966	34·5	33·2	1·3	..	..	..			..		..	..	..	..	..	Pos.	15	25	10	15	8. 0
16	30·074	33·0	31·5	1·5	28·0	5·0	..			..		..	..	..	..	..	Pos.	10	15	8	10	10. 0
18	30·076	31·0	29·7	1·3	..	..	..			..		..	..	..	..	..	Pos.	12	20	10	10	20. 0
20	29·981	30·6	29·5	1·1	..	..	..			..		..	..	..	..	..	Pos.	25	40	20	25	2. 0
22	30·005	31·8	30·6	1·2	27·0	4·8	..			..		..	..	..	..	..	Pos.	40	..	50	50	0. 40
Jan. 5. 0	30·005	34·8	33·4	1·4	..	..	..			..		..	WSW	..	..	..	Pos.	40	..	40	40	1. 30
2	30·003	36·0	34·9	1·1	..	..	..			..		..	Calm	..	..	..	Pos.	40	..	60	70	0. 10
4	30·002	34·0	33·4	0·6	33·0	1·0	39·3			..		..	Calm	..	..	..	Pos.	40	..	60	70	2. 0
6	30·016	31·3	30·7	0·6	..	..	30·1			..		..	Calm	..	..	..	Pos.	40	..	40	50	0. 40
8	30·038	30·2	29·7	0·5	..	..				0·00			Calm	..	..	..	Pos.	40	..	60	80	1. 0
10	30·049	30·2	29·6	0·6	27·0	3·2	40·0						Calm	..	..	..	Pos.	40	..	out of range	100	0. 50
12	30·031	32·0	31·6	0·4	..	..	22·3			0·01			Calm	..	..	..	Pos.	40	..	,,	90	0. 40
14	30·018	31·2	30·7	0·5	..	..							Calm	..	..	..	Pos.	30	..	,,	60	0. 30
16	29·995	32·8	31·8	1·0	29·5	3·3	40·0			0·000			S	..	..	..	Pos.	35	..	50	50	0. 55
18	29·996	34·5	33·2	1·3	..	..	37·0			..			S by W	..	..	..	Pos.	25	30	20	20	1. 15
20	29·972	38·3	37·1	1·2	..	..				..			S by W	..	..	..	Pos.	25	20	10	10	2. 45
22	29·969	39·8	39·4	0·4	38·0	1·8	..			..			SSW	0 to ¼	..	..	Pos.	1	0	0	..	..
Jan. 6. 0	29·950	42·5	42·5	0·0	..	..	..			..			SSW	..	..	..	Pos.	10	20	12	15	1. 30
2	29·916	45·2	45·0	0·2	..	..	..			..			SW	..	..	..	..	0	0	0	..	..
4	29·928	45·5	45·2	0·3	45·0	0·5	47·3			..			SW	..	..	..	Pos.	35	50	40	40	1. 10
6	29·936	46·3	46·2	0·1	..	..	40·4			0·00			SW	..	..	..	Pos.	35	40	25	25	0. 35
8	29·949	46·9	46·7	0·2	..	..							WSW	..	..	..	Pos.	35	40	25	25	0. 37
10	29·968	46·8	46·7	0·1	46·8	0·0	47·2			0·06			WSW	..	..	..	Pos.	35	30	20	20	1. 10
12	29·995	46·4	46·2	0·2	..	..	32·3						W	..	..	..	Pos.	30	30	10	10	2. 0
14	29·919	46·4	46·2	0·2	..	..				0·035			W	..	..	..	Pos.	30	20	10	10	2. 30
16	30·033	46·0	45·2	0·8	44·5	1·5	39·2						W	..	..	..	Pos.	30	20	10	10	3. 0
18	30·050	45·1	44·2	0·9	..	..	36·5			..			W by S	..	..	..	Pos.	25	20	10	10	2. 30
20	30·070	44·9	44·2	0·7	..	..	..			..			W by S	..	..	..	..	0	0	0	..	..
22	30·118	45·3	43·9	1·4	42·0	3·3	..			..			WSW	..	..	..	Pos.	7	15	10	10	1. 10
Jan. 7. 0	30·142	46·5	45·2	1·3	..	..	..			..			WSW	..	..	..	..	15	30	16	20	..
2	30·149	47·2	45·2	2·0	..	..	..			..			WSW	0 to ½	..	..	Pos.	10	20	12	15	..
4	30·176	47·8	45·6	2·2	43·0	4·8	48·3			..			WSW	..	..	..	Pos.	17	20	10	10	4. 10
6	30·199	46·5	44·4	2·1	..	..	43·7			..			WSW	..	..	..	..	0	0	0	..	..
8	30·227	45·5	43·6	1·9	..	..				0·00			SW	..	..	..	Pos.	0	2	0	..	..
10	30·249	43·7	42·0	1·7	40·0	3·7	48·5						S W	..	..	..	Pos.	15	30	10	10	1. 30
12	30·275	44·5	42·5	2·0	..	..	38·5			0·00			WSW	..	..	..	Pos,	12	20	10	10	8. 0
14	30·281	45·0	43·2	1·8	..	..				0·035			WSW	..	..	..	Pos.	14	20	10	12	3. 0
16	30·305	45·2	43·4	1·8	42·0	3·2	39·5			..			WSW	0 to ¼	..	..	Pos.	8	12	6	8	2. 0
18	30·325	45·0	43·5	1·5	..	..	37·5			..			WSW	..	..	..	Pos.	17	25	12	15	9. 0
20	30·357	45·6	44·0	1·6	..	..	..			..			WSW	..	..	..	Pos.	3	6	4	..	0. 40
22	30·395	46·5	45·0	1·5	43·0	3·5	..			..			WSW	..	..	..	Pos.	40	60	50	50	3. 0
Jan. 8. 0	30·424	47·3	45·7	1·6	..	..	47·8						WSW	..	..	..	Pos.	40	50	40	40	1. 40
2	30·413	47·3	46·0	1·3	..	..	40·9			0·00			WSW	..	..	..	Pos.	40	50	40	40	1. 37
4	30·435	46·8	44·9	1·9	43·0	3·8	48·8						WSW	..	..	..	Pos.	25	35	20	25	6. 0
6	30·448	46·0	44·2	1·8	..	..	37·7			0·00			WSW	..	..	..	..	0	0	0	..	..
8	30·474	45·2	43·4	1·8	..	..							Calm	..	..	..	Pos.	20	30	15	20	4. 0
10	30·496	45·1	43·2	1·9	41·5	3·6	40·8			0·035			Calm	..	..	..	Pos.	25	30	15	20	3. 30
							38·0															

BAROMETER.

Jan. 4d.16h. The reading was 0in.108 higher than at 14h.

Jan. 6d.16h. The reading was 0in.114 higher than at 14h.

MAXIMUM FREE THERMOMETER.

Jan. 5d. 22h. The reading was lower than that of the Dry Thermometer at 22h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless.	L
0	..	,,	
0	..	,,	
0	..	,,	L
0	..	,, a thick haze prevails.	T D
8½	..	Cumuli, cirri, and fleecy clouds: a thin haze still prevails.	
9	..	The sky is covered with thin cirro-stratus and fleecy clouds: a dense haze.	T D
0	..	Cloudless: thin fog.	L
0	..	,,	
9	Transit	Cirro-stratus and fleecy clouds: clear about the place of the Moon.	
0	..	Cloudless: foggy.	L
10	..	The sky is covered with thin cirro-stratus. At 11^h. 40^m a finely coloured corona was visible around the Moon.	T D
4	..	Cirro-stratus in the W.; the remainder of the sky is clear.	
5	..	Thin cirro-stratus in several directions.	
10	..	Overcast: cirro-stratus.	
10	..	Since the last observation a thin rain has fallen at intervals; at present the sky is covered with dense cirro-stratus, but no rain is falling.	T D
10	..	Overcast: thin drizzling rain is falling: gusts of wind to ½.	L
10	..	Overcast: a thin drizzling rain is falling.	
10	..	,, the rain has ceased.	L
10	..	,, cirro-stratus: a thin misty rain is falling.	T D
10	..	,, ,, rain is falling.	
10	Transit	,, ,, ,,	
10	..	,, the rain has ceased.	T D
10	..	,, one uniform cloud.	D
10	..	,, ,,	
10	..	,, ,,	
10	..	,,	
10	..	,,	D
10	..	,,	L
10	..	Overcast.	
10	..	,,	L
10	..	,,	T D
10	..	,,	L
10	..	Cirro-stratus and fleecy clouds: small breaks in various directions, but to no numerical extent.	L
7	Transit	The greater part of the sky is covered with large white fleecy clouds; the Moon and the large stars are shining through them.	D
8	..	Cirro-stratus and fleecy clouds: clear about the zenith.	L
10	..	Cirro-stratus and fleecy clouds.	
10	..	Overcast.	
10	..	,,	
10	..	,,	L
10	..	,,	T D
10	..	Overcast.	
10	..	,,	T D
10	..	,,	L
10	..	,,	
10	..	,,	L
10	Transit	,,	D

ELECTRICITY.

Jan. 4^d. 22^h. There was a spark at the distance of 0^{in}·02.

Jan. 5^d. At 0^h, 2^h, 8^h, 10^h, 12^h, 14^h, and 16^h, there were sparks at the distances of 0^{in}·01, 0^{in}·02, 0^{in}·03, 0^{in}·03, 0^{in}·03, 0^{in}·02, and 0^{in}·02 respectively.

OSLER'S ANEMOMETER.

Jan. 4^d. 22^h. The instrument was returned by Mr. Bennett and set going at this time.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 8. 12	30·501	44·2	42·7	1·5	..	..	..		..	..			Calm	..	..	..	Pos.	25	30	20	20	1. 15
14	30·505	43·8	42·6	1·2	..	..	..		..	..			SW	..	..	..	Pos.	25	30	20	20	1. 15
16	30·509	42·9	41·7	1·2	40·0	2·9	..		..	..			Calm	..	..	..	Pos.	15	20	10	10	1. 27
18	30·519	42·0	40·9	1·1	..	..	..		..	..			Calm	..	..	..	Pos.	20	25	15	15	1. 10
20	30·530	41·0	40·0	1·0	..	..	..		..	..			Calm	..	..	..	Pos.	25	30	20	20	2. 0
22	30·543	41·2	40·4	0·8	39·5	1·7	..		..	..			Calm	..	..	..	Pos.	30	45	20	25	5. 0
Jan. 9. 0	30·541	41·5	41·0	0·5	..	..	..		..	..			SW	..	..	..	Pos.	30	50	25	28	15. 0
2	30·515	42·3	41·4	0·9	..	..	..		..	..			SW	..	..	..	Pos.	30	45	30	35	5. 0
4	30·507	43·5	42·0	1·5	40·0	3·5	43·9		..	..			SW	..	..	..	Pos.	3	5	3	..	3. 0
6	30·500	42·7	41·2	1·5	..	..	37·0		..	0·00			SW	..	..	..	Pos.	15	20	10	10	2. 5
8	30·500	41·5	40·2	1·3	..	..	———		..				Calm	..	..	..	Pos.	10	12	7	7	3. 10
10	30·489	40·0	38·7	1·3	37·0	3·0	42·0		..	0·00			Calm	..	..	..	Pos.	8	10	6	6	5. 0
12	30·470	39·0	37·8	1·2	..	..	34·0		..				Calm	..	..	..	Pos.	6	10	10	5	1. 30
14	30·441	38·4	37·3	1·1	..	..	———		..	0·035			SSW	..	..	..	Pos.	10	20	12	10	3. 0
16	30·419	38·0	37·2	0·8	36·0	2·0	41·2		..				SSW	..	..	..	Pos.	12	20	10	10	2. 30
18	30·393	37·6	36·9	0·7	..	..	39·0		..	..			Calm	..	..	..	Pos.	6	10	5	..	1. 15
20	30·381	37·6	36·8	0·8	..	..	..		..	..			Calm	..	..	..	Pos.	15	20	10	10	3. 0
22	30·398	37·0	36·0	1·0	35·0	2·0	..		..	..			Calm	..	..	..	Pos.	2	5	2	0	9. 0
Jan. 10. 0	30·383	38·0	37·0	1·0	..	..	..		..	..			Calm	..	..	..	Pos.	2	5	2	..	8. 0
2	30·346	37·5	36·0	1·5	..	..	..		..	..			Calm	..	..	..	Pos.	20	40	20	30	13. 0
4	30·322	37·5	36·0	1·5	34·0	3·5	39·6		..	..			Calm	..	..	..	Pos.	20	30	15	20	4. 30
6	30·305	36·7	35·7	1·0	..	..	36·4		..	0·00			Calm	..	..	..	Pos.	30	30	20	20	4. 30
8	30·307	36·9	36·1	0·8	..	..	———		..				Calm	..	..	..	Pos.	8	10	6	..	5. 0
10	30·289	36·8	36·2	0·6	35·0	1·8	38·5		..	0·00			Calm	..	..	..	Pos.	6	10	5	3	4. 0
12	30·282	36·5	36·2	0·3	..	..	31·8		..				Calm	..	..	..	Pos.	8	15	7	10	5. 0
14	..	..	..	..	..	..	———		..	0·035			Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	41·8		..				Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	39·2		..	..			Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..		..	..			Calm	..	..	..	..	..	..	..	..	..
22	30·229	38·9	38·7	0·2	..	..	..		..	..			Calm	..	..	..	..	0	0	0	..	..
Jan. 11. 0	..	..	..	..	..	..	..		..	..			Calm	..	..	..	..	..	..	..	..	..
2	30·207	42·4	41·8	0·6	..	..	..		..	..			Calm	..	..	..	Pos.	10	15	8	8	5. 0
used 4	..	..	..	..	..	..	~~42·3~~		..	..			Calm	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	32·9		..	0·00			Calm	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	———		..				Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	44·0		..	0·00			Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	31·0		..				Calm	..	..	..	..	..	..	..	..	..
14	30·112	37·8	37·2	0·6	..	..	———		..	0·035			Calm	..	..	..	..	0	0	0	..	..
16	30·070	36·0	35·2	0·8	34·0	2·0	42·0		..				Calm	..	..	..	..	0	0	0	..	..
18	30·034	34·2	33·4	0·8	..	..	39·8		..	..			Calm	..	..	..	..	0	0	0	..	..
20	29·988	33·8	33·0	0·8	..	..	..		..	..			Calm	..	..	..	..	0	0	0	..	..
22	29·967	33·2	32·2	1·0	30·0	3·2	..		..	..			Calm	..	..	..	Pos.	12	20	7	5	5. 10
Jan. 12. 0	29·935	33·0	32·0	1·0	..	..	39·6		..	..			Calm	..	..	..	Pos.	10	12	5	5	7. 0
2	29·879	33·0	32·0	1·0	..	..	31·4		..	0·00			Calm	..	..	..	Pos.	15	20	10	10	3. 20
4	29 824	32·5	31·5	1·0	30·0	2·5	———		..				Calm	..	..	..	Pos.	10	20	10	15	15. 0
6	29·802	32·0	31·2	0·8	..	..	42·0		..	0·00			Calm	..	..	..	Pos.	8	15	8	10	3. 0
8	29·754	31·8	31·2	0·6	..	..	28·5		..				Calm	..	..	..	Pos.	10	20	10	12	3. 30
10	29·742	32·6	31·4	1·2	29·0	3·6	———		..	0·035			Calm	..	..	..	Pos.	4	8	3	5	0. 30
12	29·697	34·0	33·2	0·8	..	..	42·0		..				Calm	..	..	..	Pos.	10	15	8	8	3. 37
							39·8			..												

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast.	T D
10	..	,,	
10	..	,,	
10	..	,,	
10	..	,,	T D
10	..	,,	L
10	..	Overcast.	
10	..	,,	L
10	..	,,	T D
10	..	,,	
10	..	,,	
10	Greatest dec. N. Transit	,,	T D
10	..	,, flashes of lightning have been visible in the S.	D
10	..	,,	
10	..	,,	
10	..	,,	
10	..	,,	D
10	..	,,	L
10	..	Overcast.	L
10	..	,,	D
10	..	,,	
10	..	,,	
10	..	,,	D
10	..	,, a thin rain falling at intervals.	T D
10	Transit	,, a thin rain is falling.	L
..	..		
..	..		
..	..		
..	..		
10	..	,, ,,	T D
..	..		
10	..	Overcast: a thin rain is falling.	T D
..	..		
..	..		
..	..		
..	..		
..	Transit		
10	..	Overcast.	L
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	,,	T D
10	..	Overcast.	
10	Full	,,	T D
10	..	,,	L
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	,, the Moon is occasionally seen faintly through the clouds.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volts 1.	Straws of Volts 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div	m s
Jan. 12. 14	29·668	34·8	34·2	0·6	..	..	..	..	Calm	..	..	..	Pos.	40	60	40	40	1. 27
16	29·644	35·3	34·7	0·6	34·0	1·3	..	..	Calm	..	..	..	Pos.	30	40	20	20	2. 10
18	29·599	35·0	34·5	0·5	..	..	..	..	Calm	..	..	..	Pos.	12	20	10	10	3. 47
20	29·585	36·0	35·5	0·5	..	..	..	..	Calm	..	..	..	Pos.	10	15	8	8	3. 45
22	29·573	39·7	39·2	0·5	38·0	1·7	..	..	Calm	..	..	..	Pos.	8	15	8	10	2. 40
Jan. 13. 0	29·536	44·6	42·2	2·4	..	..	..	..	Calm	..	..	..	Pos.	15	30	15	20	3. 20
2	29·494	46·2	43·8	2·4	..	..	..	..	Calm	..	..	..	Pos.	10	20	10	15	1. 20
4	29·457	45·0	42·7	2·3	40·0	5·0	..	..	Calm	..	..	..	Pos.	20	30	15	15	2. 0
6	29·436	41·9	40·2	1·7	..	..	..	..	Calm	..	..	..	Pos.	25	40	20	20	1. 10
8	29·420	41·5	40·0	1·5	..	..	..	..	Calm	..	..	..	Pos.	30	45	25	25	0. 55
10	29·431	40·2	39·1	1·1	38·0	2·2	46·3 / 38·4	.. / 0·00	Calm	..	..	..	Pos.	12	20	10	7	3. 0
12	29·395	39·8	38·7	1·1	..	..	51·0 / 32·5	0·00	Calm	..	..	..	Pos.	8	15	10	10	4. 30
14	29·373	39·7	38·9	0·8	..	..	41·5 / 39·8	0·035 / ..	Calm	..	..	..	Pos.	12	10	8	..	8. 0
16	29·353	40·0	39·0	1·0	38·0	2·0	..	.. / ..	Calm	..	..	..	Pos.	23	25	15	10	11. 0
18	29·339	40·5	39·5	1·0	..	..	..	..	Calm	..	..	..	Pos.	25	30	15	10	11. 30
20	29·344	39·9	39·0	0·9	..	..	..	..	Calm	..	..	..	Pos.	20	30	10	10	2. 40
22	29·362	41·0	40·0	1·0	38·0	3·0	..	..	Calm	..	..	..	Pos.	15	35	15	20	2. 0
Jan. 14. 0	29·370	43·3	41·9	1·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·341	45·2	43·9	1·3	..	..	..	..	Calm	..	..	..	Pos.	8	15	8	10	..
4	29·348	45·7	44·0	1·7	42·3	3·4	46·3	..	Calm	..	..	..	Pos.	5	10	3	..	2. 30
6	29·371	42·6	41·2	1·4	..	..	40·4	..	Calm	..	..	..	Pos.	30	35	15	20	2. 35
8	29·399	41·7	40·7	1·0	..	..		0·00	Calm	..	..	..	Pos.	25	20	10	15	0. 5
10	29·433	41·2	40·2	1·0	39·5	1·7	..	0·00	Calm	..	..	..	Pos.	8	10	5	..	0. 50
12	29·464	41·0	40·2	0·8	..	..	33·5	..	Calm	..	..	..	Pos.	7	15	6	5	4. 0
14	29·492	42·2	41·7	0·5	..	..	41·8	0·035	Calm	..	..	..	Pos.	10	20	10	12	2. 0
16	29·522	43·0	42·4	0·6	41·0	2·0	40·0	..	Calm	..	..	..	Pos.	4	8	3	..	0. 30
18	29·546	44·0	43·2	0·8	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	29·591	44·3	43·9	0·4	..	..	..	..	S	..	..	..	Pos.	10	18	7	10	3. 30
22	29·641	45·7	45·2	0·5	44·5	1·2	..	..	SSW	..	..	..	Pos.	10	12	7	7	3. 10
Jan. 15. 0	29·680	47·8	47·2	0·6	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
2	29·678	49·5	48·2	1·3	..	..	..	..	SSW	..	..	..	Pos.	40	50	30	30	1. 5
4	29·706	48·0	46·9	1·1	46·0	2·0	50·8	..	Calm	..	..	..	Pos.	20	35	15	20	3. 20
6	29·720	43·8	43·4	0·4	..	..	40·2	0·00	Calm	..	..	..	Pos.	5	8	3	5	10. 0
8	29·715	44·0	43·7	0·3	..	..			Calm	..	..	..	Pos.	40	..	30	40	recovered instantly
10	29·760	44·2	44·2	0·0	44·0	0·2	55·5	0·00	Calm	..	..	..	Pos.	20	30	15	20	3. 0
12	29·792	44·4	44·2	0·2	..	..	35·0		Calm	..	..	..	Pos.	40	50	30	30	0. 35
14	29·786	43·5	43·5	0·0	..	..		0·035	Calm	..	..	..	Pos.	38	40	25	25	1. 10
16	29·768	42·8	42·7	0·1	..	..	42·0		Calm	..	..	..	Pos.	27	35	20	20	1. 17
18	29·749	41·5	41·5	0·0	41·8	−0·3	40·5	..	Calm	..	..	..	Pos.	23	30	18	18	1. 10
20	29·749	40·2	40·2	0·0	..	..	..	..	Calm	..	..	..	Pos.	25	30	20	20	3. 0
22	29·758	40·7	40·9	−0·2	41·0	−0·3	..	..	Calm	..	..	..	Pos.	10	16	8	10	0. 15

DRY THERMOMETER.
Jan. 15d. 22h. The reading was lower than that of the Wet Thermometer.

DEW POINT THERMOMETER.
Jan. 15d. 18h and 22h. The reading was higher than that of the Dry Thermometer.

MAXIMUM FREE THERMOMETER.
Jan. 12d. 22h. The reading was lower than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	Overcast: the Moon's place is still visible.	T D
10	..	At $14^h.30^m$ the clouds became less dense, and the Moon became visible through a thin cirro-stratus, with a fine halo round her: at $15^h.20^m$ the clouds became broken in every direction, and the Moon and stars shone brightly; this was the only time that a heavenly body had been visible since January 7^d: at $15^h.45^m$ the sky again became overcast, and it is now covered with dense cirro-stratus.	
10	..	Cirro-stratus and fleecy clouds: the Moon's place is visible.	
9	Apogee	With the exception of a small clear break in the E., the sky is covered with cirro-stratus.	T D
9	..	Cirro-stratus, fleecy clouds, and scud: a few breaks about the zenith: the clouds are very thin in various directions.	L
3	..	Cirro-stratus round the horizon: a few cirro-cumuli and cirri about the zenith.	
7	..	Thin cirro-stratus and reticulated cirri in every direction.	L
7	..	Thin cirro-stratus and light cirri cover three-fourths of the sky.	T D
8	..	Thin cirro-stratus, through which a few stars are dimly seen, a long clear break extending from W. to S.	
8	..	Cirro-stratus and fleecy clouds: the wind is blowing in gusts to $\frac{3}{4}$.	
2	..	A few light cirri in the zenith and about the Moon, the remainder of the sky is clear: a corona is visible around the Moon.	T D
2	..	Fleecy clouds in various directions. Since the last observation the amount of cloud has been constantly changing, at one time nearly eight-tenths of the sky being covered, and at other times only a very small portion. A fine corona has frequently been visible around the Moon; one at $12^h.20^m$ was beautifully coloured.	H B
1	Transit	At present the only part of the sky covered with cloud is near the horizon, where there is a bank of cirro-stratus.	
8	..	Fleecy clouds and cirro-stratus. There is a corona at present around the Moon, and also a well coloured ring of about 8° in diameter.	
10	..	Fleecy clouds and cirro-strati.	
8	..	Cirri and cirro-strati of various densities.	L
10	..	Cirri, thin cirro-stratus, and scud: a small break towards the E. horizon to no numerical extent.	H B
10	..	Overcast: cirro-stratus and fleecy clouds.	
10	..	,, ,,	L
$9\frac{3}{4}$	..	Clouds slightly broken S. of the zenith in various places.	H B
8	..	Cirro-stratus and large quantities of scud.	
8	..	Cirro-stratus and scud in every direction: there is an extensive break in the S. E.	
5	..	Cirro-stratus near the horizon, and light clouds in other directions. The Moon is occasionally surrounded by an imperfect corona.	H B
9	..	Cirro-stratus and fleecy clouds: clear about the zenith. The Moon is occasionally surrounded by a corona.	L
10	Transit	Overcast: the Moon is visible through the clouds: a faint lunar halo is occasionally visible.	
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	,,	T D
8	..	Cirro-stratus, with a few faint patches of blue sky.	
9	..	Cirro-stratus, with a few fleecy clouds in the zenith.	T D
2	..	Cirro-stratus towards the horizon in the N.: a few cirri in and about the zenith.	L
3	..	Cirro-stratus, and a few mottled cirri towards the W.	
6	..	Thin cirro-stratus in every direction.	
10	..	Overcast.	L
10	..	,,	T D
10	..	,,	
$9\frac{1}{2}$	Transit	,, cirro-stratus: the clouds slightly broken in the zenith: the Moon's place is visible.	
8	..	Cirro-stratus and fleecy clouds. There is a corona round the Moon: a thick haze prevails.	
10	..	Overcast: a thick fog.	T D
10	..	,, cirro-stratus: a thick fog.	L

ELECTRICITY.

Jan. $15^d.8^h$. There was a spark at the distance of $0^{in}.01$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 16. 0	29·750	45·5	45·0	0·5	..	..	..	..	Calm	..	..	..	Pos.	40	..	..	50	0. 40
2	29·706	50·5	47·9	2·6	..	..	..	..	Calm	..	..	..	Pos.	20	30	15	20	0. 26
4	29·692	48·8	46·7	2·1	45·0	3·8	50·5	..	Calm	..	..	..	Pos.	15	20	10	12	0. 20
6	29·676	45·7	44·0	1·7	..	..	41·4	..	Calm	..	..	..	Pos.	20	30	15	15	1. 15
8	29·665	44·2	42·7	1·5	..	..	———	0·00	Calm	..	..	..	Pos.	15	20	10	10	2. 27
10	29·656	44·9	43·7	1·2	42·0	2·9	52·5	———	Calm	..	..	..	Pos.	17	20	12	12	1. 30
12	29·627	44·4	43·7	0·7	..	..	39·0	0·04	Calm	..	..	..	Pos.	30	30	15	20	6. 15
14	29·603	44·5	44·2	0·3	..	..	———	———	Calm	..	..	..	Pos.	5	10	3	..	5. 30
16	29·586	44·0	43·7	0·3	43·0	1·0	42·5	0·075	Calm	..	..	..	Pos.	10	8	5	..	9. 0
18	29·551	43·5	43·2	0·3	..	..	40·8	..	Calm	..	..	..	..	0	0	0	..	..
20	29·566	43·0	42·7	0·3	..	..	..	..	Calm	..	..	..	Pos.	10	8	5	..	0. 36
22	29·590	43·2	43·0	0·2	42·0	1·2	..	..	Calm	..	..	..	..	0	0	0	..	..
Jan. 17. 0	29·597	45·5	45·2	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·568	48·5	48·0	0·5	..	..	..	..	Calm	..	..	..	Pos.	5	8	3	5	2. 0
4	29·574	48·6	47·9	0·7	46·0	2·6	49·7	..	Calm	..	..	..	Pos.	40	45	20	25	1. 40
6	29·585	47·0	46·4	0·6	..	..	~~35·7~~	0·00	Calm	..	..	..	Pos.	35	40	20	25	0. 58
8	29·598	45·1	44·7	0·4	..	..	———	———	S by W	..	..	..	Pos.	35	30	15	20	0. 6
10	29·625	44·5	44·2	0·3	43·5	1·0	52·5	0·00	Calm	..	..	..	Pos.	25	20	10	15	0. 55
12	29·627	41·5	41·2	0·3	..	..	33·5	———	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	———	0·085	WSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	43·2	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	41·0	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·642	35·5	35·8	–0·3	..	..	..	..	Calm	..	..	..	Pos.	6	10	5	5	0. 6
Jan. 18. 0	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	29·612	41·0	41·0	0·0	..	..	..	..	Calm	..	..	..	Pos.	10	16	8	10	0. 35
4	29·596	43·5	43·4	0·1	..	..	45·8	..	Calm	..	..	..	Pos.	15	20	10	10	1. 30
6	..	..	..	..	..	..	~~35·7~~	0·00	Calm	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	———	———	Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	45·8	0·21	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	35·7	———	SSE	..	..	..	..	..	..	..	..	..
14	29·414	42·3	41·2	1·1	..	..	———	0·265	SSE	0 to ½	..	..	..	0	0	0	..	..
16	29·322	42·5	41·6	0·9	40·0	2·5	43·5	———	SSE	0 to ½	..	..	..	0	0	0	..	..
18	29·235	43·0	42·2	0·8	..	..	41·2	..	SSE	½ to 1½	..	..	Pos.	10	20	8	10	0. 8
20	29·133	44·2	43·7	0·5	..	..	..	..	S by E	½ to 1	..	..	Neg.	10	15	8	10	0. 10
22	29·078	45·8	45·6	0·2	45·0	0·8	..	..	S by E	½ to 2½	..	..	..	0	0	0	..	..
Jan. 19. 0	29·055	51·5	51·5	0·0	..	..	..	..	SSW	¾ to 1½	..	..	..	0	0	0	..	..
2	29·034	52·4	52·0	0·4	..	..	..	..	S by W	1 to 2½	..	..	Neg.	30	40	12	12	7. 0
4	29·016	52·6	51·3	1·3	50·0	2·6	..	..	S by W	2 to 5	..	..	..	0	0	0	..	..
6	28·987	51·2	50·4	0·8	..	..	52·9	..	S	2 to 3½	..	..	Pos.	..	2	0	..	..
8	28·925	51·0	49·0	2·0	..	..	42·4	0·09	S	2 to 5	..	..	..	0	0	0	..	..
10	28·843	50·0	49·2	0·8	48·0	2·0	———	———	S by E	3½ to 7	..	..	Neg.	10	16	8	10	Recovered instantly.
12	28·805	48·9	48·6	0·3	..	..	53·0	0·28	S by W	5 to 11	..	..	..	0	0	0	..	..
14	28·830	48·0	47·6	0·4	..	..	38·2	———	SSW	4 to 8	..	..	..	0	0	0	..	..
16	28·938	47·0	44·7	2·3	42·0	5·0	———	0·580	SW	4 to 8	..	..	..	0	0	0	..	..
18	29·083	45·0	41·7	3·3	..	..	45·0	..	SW	3 to 5	..	..	..	0	0	0	..	..
20	29·189	43·0	40·2	2·8	..	..	42·5	..	SSW	2½ to 3	..	..	..	0	0	0	..	..
22	29·252	43·5	40·6	2·9	37·0	6·5	..	..	SSW	1½ to 3	..	..	Pos.	8	5	0	..	0. 30

BAROMETER.

Jan. 18d. 20h. The reading was 0in·102 lower than at 18h, and it continued to decrease till 19d. 12h.
Jan. 19d. 22h. The reading was 0in·447 higher than at 12h, and it continued to increase till 20d. 10h.

DRY THERMOMETER.

Jan. 17d. 22h. The reading was lower than that of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

Jan. 17d. 22h. The reading was higher than that of the Dry Thermometer at this time.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: the fog has nearly cleared off: a fine drizzling rain has been falling occasionally since the last observation: it ceased about a quarter of an hour since.	L
10	..	Overcast.	
9	..	A break towards the W. horizon; cloudy elsewhere.	L
9	..	Cirro-stratus all around with the exception of a few breaks of small extent here and there.	T D
10	..	Overcast.	
10	..	,, rain is falling.	T D
10	..	,, cirro-stratus and scud: a few drops of rain are occasionally falling.	H B
10	..	,, a few drops of rain are occasionally falling.	
10	Transit	,, ,,	
10	..	,, slight rain.	
10	..	,, no rain.	H B
10	..	,,	L
10	In Equator	Overcast: a fine drizzling rain is falling.	
9	..	Cirro-stratus and fleecy clouds: small breaks in various directions.	L
10	..	Overcast: cirro-stratus and scud.	H B
10	..	,, ,, light rain is falling.	
4	..	Cirro-stratus in the N. and N. E. to a considerable altitude. Venus is shining brilliantly.	
10	..	Overcast: cirro-stratus: there is a light rain.	H B
0	..	Cloudless.	L
..	..		
..	Transit		
..	..		
..	..		
10	..	Overcast: a very thick fog.	
..	..		
10	..	Overcast: a very thick fog.	
10	..	,, the clouds are less dense.	
..	..		
..	..		
..	..		
..	..		
10	..	,,	
10	..	,,	
10	Transit	,, rain commenced at $16^h.30^m$, and still continues to fall.	
10	..	,, rain is falling: gusts of wind to $\frac{3}{4}$.	L
10	..	,, rain is falling heavily.	H B
10	..	Overcast: heavy rain is falling.	T D
10	..	,, ,,	T D
10	..	,, very slight rain is falling: wind in gusts to 1 and $1\frac{1}{2}$.	L
10	..	,, a fine drizzling rain is falling: wind in gusts to $1\frac{1}{2}$	
9	..	,, a few stars are visible in the zenith: wind in gusts to 2.	
10	..	,, heavy rain is falling: wind in gusts to 2 and $2\frac{1}{2}$.	L
10	..	,, heavy squalls of wind and rain: wind in gusts to $3\frac{1}{2}$.	T D
10	..	,, ,, wind in gusts to 3 and 4.	
10		,, dark masses of scud and cirro-stratus in all directions: at present no rain is falling: wind in gusts to 3.	
0	Transit	Cloudless: wind in gusts to $2\frac{1}{2}$.	
0	..	,, wind in gusts to 2.	T D
0	..	,, wind in gusts to $2\frac{1}{2}$.	H B

OSLER'S ANEMOMETER.

Jan. $19^d.13^h.20^m$. A gust recording a pressure of 12 lbs. took place.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 20. 0	29·291	46·8	42·9	3·9	..	..	..			..			..	½ to 4	..	..	..	..	..	..	..	..
2	29·309	46·3	42·7	3·6	..	..	..			..			..	½ to 3½	..	..	..	..	..	..	..	..
4	29·362	45·6	42·2	3·4	..	..	47·3			..			..	0 to 2	..	..	..	..	..	..	..	..
6	29·395	43·5	40·7	2·8	..	..	41·9			0·09			..	0 to 1	..	..	..	..	..	..	..	..
8	29·418	41·8	39·8	2·0	..	..	———						..	0 to 1½	..	..	..	..	..	..	..	..
10	29·428	42·8	41·0	1·8	38·8	4·0	56·2			0·06			..	..	..	..	Pos.	20	30	12	12	0. 27
12	29·418	43·3	42·2	1·1	..	..	37·3						..	..	..	..	Pos.	3	5	2	..	2. 0
14	29·385	45·5	44·7	0·8	..	..	———			0·580			..	..	..	..	Pos.	5	5	3	..	5. 0
16	29·354	45·5	45·0	0·5	44·5	1·0	45·8						..	..	..	..	Neg.	3	5	0	..	2. 0
18	29·301	44·8	44·2	0·6	..	..	43·5			..			..	0 to ½	..	..	Pos.	1	1	0	..	3. 0
20	29·255	43·5	42·5	1·0	..	..	..			..			..	..	..	..	Pos.	3	5	0	..	0. 30
22	29·218	44·7	44·4	0·3	44·0	0·7	..			..			..	..	..	..	..	0	0	0	..	..
Jan. 21. 0	29·235	52·0	51·4	0·6	..	..	..			..			SW	½ to 1½	..	..	..	0	0	0	..	..
2	29·224	52·2	51·2	1·0	..	..	..			..			SW	0 to ½	..	..	..	0	0	0	..	..
4	29·208	52·2	50·5	1·7	49·0	3·2	55·0			..			SSW	½ to 1½	..	..	..	0	0	0	..	1. 0
6	29·195	51·0	50·6	0·4	..	..	~~41·6~~			0·23			SSW	..	..	..	Pos.	2	2	0	..	1. 0
8	29·151	50·7	50·7	0·0	..	..	———						SSW	..	..	..	Pos.	10	10	3	..	3. 30
10	28·977	51·3	51·2	0·1	51·0	0·3	54·6			0·27			SSW	½ to 3	..	..	Neg.	5	5	0	..	recovery not perceptible
12	29·025	51·6	51·7	−0·1	..	..	50·0						SSW	2 to 4	..	..	Neg.	10	5	0	..	..
14	28·910	54·0	52·7	1·3	..	..	———			0·990			SW	3½ to 6	..	..	..	0	0	0	..	..
16	28·921	52·8	50·7	2·1	48·8	4·0	46·2						SW	4½ to 7	..	..	..	0	0	0	..	..
18	28·920	51·7	50·4	1·3	..	..	44·2			..			SW	3 to 6	..	..	..	0	0	0	..	..
20	28·932	51·5	49·5	2·0	..	..	..			..			SW	4½ to 7	..	..	..	0	0	0	..	..
22	28·923	51·5	49·7	1·8	48·0	3·5	..			..			SW	5½ to 10	..	..	..	0	0	0	..	..
Jan. 22. 0	28·988	53·7	50·9	2·8	..	..	..			..			SW	3 to 7½	..	..	..	0	0	0	..	..
2	29·041	53·3	51·2	2·1	..	..	..			..			SW	2 to 4	..	..	..	0	0	0	..	..
4	29·068	52·6	50·2	2·4	48·0	4·6	..			..			SW	2 to 4	..	..	..	0	0	0	..	..
6	29·085	51·0	48·9	2·1	..	..	54·3			..			SW	1 to 2½	..	..	Pos.	2	5	0	..	..
8	29·105	49·5	47·7	1·8	..	..	45·4			0·23			SW	½ to 1	..	..	Pos.	20	10	5	..	10. 0
10	29·111	48·0	46·9	1·1	45·5	2·5	———						SSW	..	..	..	Pos.	30	30	10	..	5. 0
12	29·106	47·5	46·7	0·8	..	..	56·5			0·06			SW	..	..	..	..	0	0	0	..	..
14	29·122	45·7	45·2	0·5	..	..	41·5						SW	..	..	..	..	0	0	0	..	..
16	29·127	46·2	45·7	0·5	45·0	1·2	———			1·000			SW	..	..	..	..	0	0	0	..	..
18	29·137	47·0	46·5	0·5	..	..	47·8			..			SSW	..	..	..	..	0	0	0	..	..
20	29·137	47·0	46·6	0·4	..	..	45·2			..			SSW	..	..	..	..	0	0	0	..	..
22	29·107	47·7	47·2	0·5	46·5	1·2	..			..			S	..	..	..	Neg.	40	30	15	20	0. 5
Jan. 23. 0	29·083	49·9	48·4	1·5	..	..	..			..			SSW	½ to 1½	..	..	Pos.	30	20	10	12	1. 12
2	29·046	52·8	50·9	1·9	..	..	..			..			SW	½ to 2½	..	..	Pos.	30	30	10	10	8. 0
4	29·053	48·0	47·7	0·3	47·0	1·0	..			..			SSW	0 to ¼	..	..	..	0	0	0	..	..
6	29·067	48·5	47·7	0·8	..	..	53·1			..			WSW	½ to 1	..	..	..	0	0	0	..	..
8	29·099	46·7	45·7	1·0	..	..	45·6			0·35			SSW	..	..	..	..	0	0	0	..	..
10	29·082	47·2	46·7	0·5	46·0	1·2	———						SSW	..	..	..	..	0	0	0	..	..
12	29·078	47·5	47·0	0·5	..	..	55·4			0·25			SSW	..	..	..	..	0	0	0	..	..
14	29·078	46·0	45·7	0·3	..	..	41·7						Calm	..	..	..	..	0	0	0	..	..
16	29·088	46·3	46·2	0·1	46·0	0·3	———			1·310			Calm	..	..	..	..	0	0	0	0	..
18	29·128	46·4	46·2	0·2	..	..	48·2			..			Calm	..	..	..	..	0	0	0	0	..
20	29·184	46·0	45·7	0·3	..	..	46·2			..			Calm	..	..	..	..	0	0	0	0	..
22	29·282	45·9	45·8	0·1	45·0	0·9	..			..			Calm	..	..	..	Pos.	8	10	5	..	0. 50

BAROMETER.

Jan. 21d. 10h. The reading was 0in·174 lower than at 8h; and at 14h the reading was 0in·115 lower than at 12h.

DRY THERMOMETER.

Jan. 21d. 12h. The reading was lower than that of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

Jan. 20d. 22h. The reading was higher than that of the Dry Thermometer at 8h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
2	..	Heavy cumuli near the N. and N.W. horizon: light clouds and fragments of scud scattered in various directions.	H B
5	..	Cumuli and scud in every direction.	H B
6	3rd Qr.	Cumuli, cirri, and light clouds scattered over the sky.	T D
0	..	Cloudless.	
2	..	A mass of dark cloud in the S.W.; the remainder of the sky is very clear.	
0	..	Cloudless.	T D
10	..	Overcast: cirro-stratus.	H B
10	..	,,	
10	..	,, rain is falling.	
10	..	,, cirro-stratus.	
10	Transit	,, cirro-stratus and heavy scud.	H B
10	..	,, cirro-stratus: drizzling rain is falling.	L
10	..	Overcast: cirro-stratus.	
10	..	,, ,,	L
10	..	,, cirro-stratus and scud.	H B
10	..	,, scud: drizzling rain.	
10	..	,, rain is falling.	H B
10	..	,, a slight rain is falling.	G
10	..	,, frequent squalls: a very black night.	G
4	..	Cirro-stratus and loose scud in every direction: gusts of wind to 4.	L
4	..	Cirro-stratus round the horizon; the remainder of the sky is clear: wind in gusts to $3\frac{1}{2}$.	T D
8	..	Cirro-stratus and masses of dark scud scattered over the sky: wind in gusts to 3.	T D
8	Transit	Cirro-stratus and scud: frequent gusts of wind to $3\frac{1}{2}$.	H B
8	..	Clouds flying rapidly: occasional faint gleams of sunshine: wind in frequent gusts to 3.	G
10	..	Overcast: cirro-stratus and large masses of scud: wind in gusts to $2\frac{1}{2}$ and 3.	L
10	..	,, cirro-stratus: wind in gusts to 2.	T D
3	..	Cirro-stratus and large masses of loose scud: wind in gusts to $1\frac{1}{2}$ and 2.	L
10	..	Overcast: cirro-stratus and scud: wind in gusts to 2.	T D
9	..	Several stars are now visible S. of the zenith, to about 10°: the rest of the sky is covered with cirro-stratus.	H B
7	..	A few of the larger stars are visible near the zenith all around: below 30° from the zenith the sky is black and overcast.	G
7	..	Clear about the zenith, and for some distance S. of it; cloudy elsewhere.	L
0	..	Cloudless.	
10	..	Overcast: the clouds are thin in some places.	
10	..	,,	
10	Transit	,, slight rain is falling.	L
10	..	,, a thin rain is falling.	T D
10	..	Overcast: heavy rain is falling.	T D
10	..	,, cirro-stratus and scud.	H B
10	..	,, ,, the rain has just ceased.	L
10	..	,, cirro-stratus, fleecy clouds, and large masses of scud: wind in gusts to $\frac{1}{2}$.	
0	..	Cloudless.	
0	..	Overcast.	
10	..	,, rain commenced falling at $11^h.47^m$, and still continues.	L
8	..	The sky is covered with a thin cirro-stratus, with the exception of a few breaks in the E., through which a few stars are visible.	T D
4	..	Thin cirro-stratus in several directions: the stars look dim and watery.	
10	..	Overcast: cirro-stratus.	
10	Greatest declination S.	,, ,,	T D
10	Transit.	The clouds are slightly broken in some places.	H B

OSLER'S ANEMOMETER.

Jan. $20^d.22^h$. The direction-pencil was found off the rack-work, and it had been off since Jan. $19^d.23^h$.

ELECTRICAL APPARATUS.

Between Jan. $20^d.0^h$ and $20^d.8^h$ it was under repair.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div	m s
Jan. 24. 0	29·350	47·7	47·2	0·5	..	..	..	..	WSW	..	..	..	Pos.	45	..	30	50	3. 0
2	29·415	49·2	48·4	0·8	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
4	29·461	51·2	49·4	1·8	48·0	3·2	52·8	..	WSW	..	..	..	..	0	0	0	..	..
6	29·525	48·8	47·2	1·6	..	..	46·1	0·48	WSW	..	..	..	Pos.	12	17	8	10	1. 27
8	29·561	46·0	45·0	1·0	..	..			SSW	..	..	..	Pos.	15	20	7	10	2. 0
10	29·542	45·5	45·1	0·4	45·0	0·5	57·0	0·26	SSW	..	..	..	Pos.	17	25	10	12	1. 10
12	29·513	46·4	45·7	0·7	..	..	44·0		SSW	..	..	..	Pos.	5	5	3	..	3. 0
14	..	..	..	..	..	..		1·540	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	50·5		..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	47·0	..	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	29·233	51·8	51·7	0·1	..	..	..	..	..	..	..	..	..	0	0	0	..	..
Jan. 25. 0	29·211	52·0	52·1	−0·1	..	..	..	..	SSW	0 to ½	..	..	Neg.	3	3	..	..	0. 30
2	..	..	..	..	..	..	..	..	SW	1 to 3	..	..	..	..	..	..	..	..
4	29·167	53·8	53·0	0·8	..	..	55·3	..	SW	0 to ½	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	47·4	0·80	WSW	0 to 2	..	..	..	..	..	..	..	..
8	29·124	50·2	49·5	0·7	..	..			SSW	0 to ½	..	..	Pos.	3	3	0	..	0. 10
10	..	..	..	..	..	..	58·5	0·60	SSW	..	..	..	..	..	..	..	..	..
12	29·030	50·6	50·1	0·5	..	..	44·5		SSW	..	..	..	Pos.	2	2	0	..	..
14	28·994	50·5	50·2	0·3	..	..		2·155	WSW	1½ to 2½	..	..	Neg.	20	20	10	10	..
16	29·018	47·8	47·5	0·3	47·5	0·3	49·5		WSW	1 to 3½	..	..	Pos.	2	2	0	..	..
18	29·051	46·7	46·2	0·5	..	..	47·2	..	WSW	0 to ½	..	..	Pos.	3	3	0	..	6. 0
20	29·063	48·2	47·4	0·8	..	..	..	..	WSW	..	..	..	Pos.	8	5	5	..	3. 30
22	29·083	49·5	48·5	1·0	47·0	2·5	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
Jan. 26. 0	29·086	48·0	47·5	0·5	..	..	..	..	WSW	0 to ¾	..	..	..	..	..	..	out of range	..
2	29·066	49·8	49·4	0·4	..	..	..	..	WSW	0 to ½	..	..	..	0	0	0	..	..
4	29·065	49·1	46·9	2·2	46·0	3·1	52·1	..	SW	..	..	..	..	0	0	0	..	..
6	29·046	46·8	46·1	0·7	..	..	43·2	0·85	SW	0 to ½	..	..	Neg.	8	5	3	..	0. 21
8	29·068	46·6	46·2	0·4	..	..			WSW	0 to ½	..	..	..	0	0	0	..	..
10	29·104	47·1	46·4	0·7	45·5	1·6	58·2	0·17	WSW	..	..	..	Pos.	2	3	0	..	2. 0
12	29·135	46·0	45·4	0·6	..	..	39·0		WSW	..	..	..	..	0	0	0	..	..
14	29·164	45·7	45·2	0·5	..	..		2·250	WSW	..	..	..	..	0	0	0	..	..
16	29·190	45·5	44·4	1·1	43·0	2·5	49·5		WSW	..	..	..	..	0	0	0	..	..
18	..	..	..	..	..	..	48·0	..	WSW	..	..	..	..	..	..	..	..	..
20	29·271	43·2	42·0	1·2	..	..	..	..	WSW	0 to ½	..	..	..	0	0	0	..	..
22	29·315	45·3	43·8	1·5	42·0	3·3	..	..	WSW	½ to 1	..	..	Pos.	15	20	7	7	1. 5
Jan. 27. 0	29·371	49·3	48·1	1·2	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
2	29·406	50·8	48·7	2·1	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
4	29·441	50·7	48·2	2·5	46·0	4·7	51·4	..	WSW	0 to ½	..	..	..	0	0	0	..	..
6	29·479	49·0	46·9	2·1	..	..	43·3	0·85	WSW	..	..	..	..	0	0	0	..	..
8	29·517	47·5	46·0	1·5	..	..			WSW	..	..	..	..	0	0	0	..	..
10	29·533	46·5	45·2	1·3	44·0	2·5	53·2	0·01	WSW	..	..	..	..	0	0	0	..	..
12	29·531	46·0	44·6	1·4	..	..	39·3		SW	..	..	..	..	0	0	0	..	..
14	29·491	43·3	42·2	1·1	..	..		2·260	SSW	..	..	..	..	0	0	0	..	..
16	29·457	44·0	43·5	0·5	43·0	1·0	49·0		S by W	..	..	..	..	0	0	0	..	..
18	29·391	46·3	45·1	1·2	..	..	47·0	..	S by W	..	..	..	..	0	0	0	..	..
20	29·330	46·2	45·8	0·4	..	..	..	..	S	..	..	..	..	0	0	0	..	..
22	29·274	47·3	47·0	0·3	45·5	1·8	..	..	S	0 to ½	..	..	..	0	0	0	..	..
Jan. 28. 0	29·245	49·5	49·2	0·3	..	..	..	..	SW	½ to 2	..	..	..	0	0	0	..	..

DRY THERMOMETER.

Jan. 25d. 0h. The reading was lower than that of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

Jan. 24d. 22h. The reading was higher than that of the Dry Thermometer at 8h.

Jan. 25d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

Jan. 26d. 18h. The observations were omitted through inadvertence.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus.	L
10	..	,, ,,	L
6	..	Cirro-stratus, and light fleecy clouds.	T D
7	..	,,	
6	..	Cirro-stratus in the horizon extending from N. E. to S. W. to an altitude of 70°; the remainder of the sky is clear.	
0	..	Cloudless: hazy in the horizon.	T D
10	..	Overcast: cirro-stratus. There is a very strong reflexion from the London lights.	H B
..	..		
..	..		
..	..		
..	..		
10	Transit	Rain has just ceased falling: the clouds are slightly broken.	
10	..	Rain has commenced to fall again, and with greater violence.	
..	..		
10	..	Overcast: cirro-stratus and scud: the latter passes with great rapidity from the S. W.: wind in frequent gusts to 1:	
..	..	rain has been falling heavily since the last observation: it ceased before 1^h.	
..	..	A thin cirro-stratus covers a large portion of the sky, the larger stars being visible; near the horizon it is more dense.	
..	..		
10	..	Overcast: cirro-stratus.	
10	..	,, rain falling heavily; it commenced shortly after 13^h: occasional gusts of wind to $1\frac{1}{2}$.	
10	..	,, slight rain is falling: gusts of wind to 2+.	
10	..	,, no rain.	
10	..	,, Cirro-stratus, and scud.	H B
10	..	,, slight rain is falling.	L
10	Transit	Overcast: heavy rain is falling.	
3	..	A few light cumuli towards the N.: cirro-stratus and light clouds round the horizon.	L
7	..	The sky is covered with cirro-stratus and light scud, excepting portions to the N. and E.	H B
10	..	Overcast: heavy rain is falling.	
10	..	Cirro-stratus and scud: a few stars are visible.	
10	..	Overcast: cirro-stratus and scud: wind in gusts to 1.	H B
2	..	Cloudy round the horizon.	L
6	..	The E. part of the sky is principally clear; cloudy elsewhere.	
0	Perigee	Cloudless.	
..	..		
2	..	A few fleecy and light clouds towards the S. and W.	L
7	New	Cirro-stratus and scud, with a few breaks of small extent in all directions.	T D
10	Transit	Overcast: cirro stratus and scud.	
10	..	,,	T D
10	..	,, cirro-stratus and fleecy clouds.	L
10	..	,, ,,	
10	..	,, a few drops of rain are falling.	
9	..	A few stars are visible about the zenith and a little S. of it.	L
10	..	Overcast.	T D
10	..	,, a star or two are dimly seen through the cirro-stratus.	
10	..	,,	
10	..	,,	
10	..	,, a thin rain is falling.	T D
10	..	Overcast, with a thin drizzling rain falling.	H B
10	..	Overcast: cirro-stratus and scud.	

HENLEY'S ELECTROMETER.
Jan. $26^d.\ 0^h$. The reading was 20°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 28. 2	29·298	52·0	47·0	5·0	..	..	..	..	W	1 to 4½	..	..	..	0	0	0	..	..
4	29·349	50·5	47·5	3·0	45·0	5·5	52·9	..	W by S	½ to 1½	..	..	..	0	0	0	..	..
6	29·376	47·4	44·5	2·9	..	..	41·9	0·85	WSW	0 to ½	..	..	..	0	0	0	..	..
8	29·414	47·5	44·6	2·9	..	..			WSW	½ to 4½	..	..	..	0	0	0	..	..
10	29·426	44·4	43·2	1·2	42·0	2·4	60·5	0·10	SW	½ to 1	..	..	..	0	0	0	..	..
12	29·461	43·2	41·7	1·5	..	..	42·8		SW	¼ constant	..	..	..	0	0	0	..	..
14	29·488	42·0	40·8	1·2	..	..		2·360	SW	..	..	..	..	0	0	0	..	..
16	29·485	43·0	41·7	1·3	40·0	3·0	48·0		SW	0 to ½	..	..	..	0	0	0	..	..
18	29·459	44·0	42·8	1·2	..	..	46·2	..	SSW	..	..	..	..	0	0	0	..	..
20	29·422	45·9	45·0	0·9	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·351	45·2	44·9	0·3	44·0	1·2	..	..	SSW	0 to ½	..	..	..	0	0	0	..	..
Jan. 29. 0	29·283	49·6	49·2	0·4	..	..	..	..	SW	0 to 3	..	..	..	0	0	0	..	..
2	29·253	53·2	50·5	2·7	..	..	54·3	..	WSW	1 to 4	..	..	..	0	0	0	..	..
4	29·260	51·5	49·1	2·4	46·0	5·5	40·2	..	W by S	0 to 2½	..	..	..	0	0	0	..	..
6	29·348	49·8	45·8	4·0	..	..		0·85	NW	½ to 3½	..	..	..	0	0	0	..	..
8	29·435	47·5	43·9	3·6	..	..	56·0		WNW	½ to 3	..	..	..	0	0	0	..	..
10	29·529	46·5	43·5	3·0	41·5	5·0	34·5	..	W by N	½ to 2	..	..	..	0	0	0	..	..
12	29·618	46·7	43·9	2·8	..	..			W by N	¼ steady	..	..	..	0	0	0	..	..
14	29·680	44·5	42·2	2·3	..	..	47·8	2·515	W	..	..	..	..	0	0	0	..	..
16	29·744	41·7	40·2	1·5	38·0	3·7	45·5	..	W by S	..	..	..	..	0	0	0	..	..
18	29·804	39·8	39·0	0·8	..	..		..	WSW	..	..	..	..	0	0	0	..	..
20	29·828	40·5	39·4	1·1	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
22	29·845	43·8	42·5	1·3	41·0	2·8	..	..	SW	..	..	..	..	0	0	0	..	..
Jan. 30. 0	29·839	47·3	46·1	1·2	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
2	29·781	47·3	46·9	0·4	..	..	..	..	SSW	0 to ½	..	..	Pos.	30	20	10	10	3. 17
4	29·765	50·5	49·6	0·9	49·0	1·5	52·6	..	WSW	½ to 2½	..	..	..	0	0	0	..	..
6	29·785	51·7	50·7	1·0	..	..	43·6	0·85	WSW	1 to 2	..	..	Pos.	2	5	0	..	10. 0
8	29·784	51·7	50·9	0·8	..	..			WSW	1½ to 2½	..	..	..	0	0	0	..	..
10	29·790	51·7	50·7	1·0	49·0	2·7	52·5	0·08	WSW	2 to 3	..	..	..	0	0	0	..	..
12	29·811	51·0	49·7	1·3	..	..	41·2		WSW	1 to 2½	..	..	Pos.	2	2	0	..	..
14	29·834	50·4	49·7	0·7	..	..		2·520	WSW	0 to ½	..	..	..	0	0	0	..	..
16	29·860	50·4	49·7	0·7	49·3	1·1	46·8		WSW	..	..	..	..	0	0	0	..	..
18	29·852	50·3	49·4	0·9	..	..	45·2	..	WSW	0 to 1½	..	..	..	0	0	0	..	..
20	29·873	48·8	47·8	1·0	..	..	..	..	WSW	1 to 3½	..	..	..	0	0	0	..	..
22	29·873	48·8	47·7	1·1	45·0	3·8	..	..	WSW	1½ to 4½	..	..	..	0	0	0	..	..
Jan. 31. 0	29·860	51·0	48·8	2·2	..	..	..	..	SW	1½ to 3½	..	..	Pos.	5	10	5	..	2. 0
2	29·828	52·0	49·1	2·9	..	..	..	..	SW	½ to 1	..	..	Pos.	10	12	6	..	3. 0
4	29·797	53·0	49·0	4·0	46·0	7·0	53·1	..	SW	½ to 2½	..	..	Pos.	20	30	15	20	7. 0
6	29·765	51·0	47·7	3·3	..	..	46·4	0·85	WSW	½ to 1½	..	..	Pos.	10	10	0	..	very slow
8	29·750	49·0	47·4	1·6	..	..			WSW	2 to 4½	..	..	Pos.	2	5	0	..	..
10	29·730	48·7	46·4	2·3	44·0	4·7	55·5	0·00	WSW	2 to 4	..	..	Pos.	5	0	0	..	..
12	29·672	49·5	47·3	2·2	..	..	38·8											
14	..	..	..	..	..	..		2·520	WSW	2½ to 5	..	..	..	0	0	0	..	..
16	..	..	..	..	..	..	47·2	..	WSW	2½ to 4	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	45·2	..	WSW	2 to 4	..	..	..	..	..	..	..	..
							..	..	W by S	½ to 2	..	..	..	..	..	..	..	..

MINIMUM FREE THERMOMETER.

Jan. 29d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

OSLER'S ANEMOMETER.

Jan. 29d. 5h. 20m. A gust recording a pressure of 7½ lbs. took place.

Jan. 31d. 8h. 55m and 10h. 40m. Gusts recording pressures of 7 lbs. took place.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
2	..	At 1h the clouds became slightly broken, and at present the sky is generally free from cloud, a few cumuli and	H B
	..	fleecy clouds exeepted.	
4	..	Cumuli and light clouds are scattered over the sky.	T D
5	..	Cumuli and dark flying scud in the S. W. with a few detached portions in the zenith; hazy in the horizon.	
10	..	Overcast: rain is falling: wind in gusts to 1½ and 2.	
0	..	Cloudless.	T D
0	..	,,	H B
½	..	Cirro-stratus around the horizon: the sky is very hazy in some places.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, slight rain.	H B
10	..	,, rain is falling heavily.	L
8	..	Cirro-stratus, fleecy clouds, and masses of loose scud: at 23h there was a sudden gust of wind: the rain ceased at about 23h. 15m.	
10	Transit	Overcast: cirro-stratus and scud: rain has just commenced falling.	L
9	..	Cirro-stratus and masses of scud of various densities nearly cover the sky.	H B
10	..	Cirro-stratus, light clouds, and scud: the wind in gusts to 2½.	
3	..	Cirro-stratus and scud near the horizon in every direction: the wind in gusts to 2.	
5	..	Cirro-stratus and scud continually passing over the sky: the amount of cloud is exceedingly variable.	H B
10	..	Overcast: at 10h. 20m it was nearly overcast towards the N.	L
0	..	Cloudless.	
0	..	,,	
8	..	Clear about the zenith.	
0	In Equator	Cloudless: ten minutes before this time the sky was overcast; it is beautifully red towards the E.	L
10	..	A thin cirro-stratus covers the sky.	T D
10	..	A thin cirro-stratus covers the sky.	
10	..	Overcast: a thin rain is falling.	T D
10	Transit	,,	L
10	..	,, at times a thin rain has been falling.	G
10	..	,, there is no rain falling.	L
10	..	,,	L
10	..	,,	T D
10	..	,,	
10	..	,,	
10	..	,,	
10	..	,,	T D
7	..	About 21h. 40m the clouds became slightly broken, and since that time the breaks have gradually increased: at present cirro-stratus is near the horizon, and light clouds of a fleecy nature are around the zenith.	H B
10	..	Cirro-stratus and scud: gusts of wind to 1½.	
8	..	Cirro-stratus of various densities, and light scud in every direction.	H B
10	Transit	Overcast: thin cirro-stratus and light scud.	L
½	..	Nearly cloudless.	G
4	..	Much scud has passed since the last observation: the wind has increased in force: gusts of wind to 1 and 1½.	
10	..	Almost immediately after the last observation the sky became overcast with scud, vast quantities of which have passed, and the sky is still cloudy: the wind in gusts to 2 and 2½.	G
10	..	Overcast: frequent gusts of wind to 3. At this time there is a strong reflexion from the London lights.	H B
..	..		
..	..		
..	..		

RAIN.

Jan. 31d. 12h. The amount collected during the month of January in the rain-gauge No. 4. was 2in.82, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period was 2in.66.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Jan. 31. 20	..	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..
22	29·762	47·0	44·0	3·0	..	..	..	..	WNW	..	..	..	Pos.	10	5	5	..	recovered very slowly
Feb. 1. 0	..	..	..	..	..	..	..	..	WNW	0 to 1	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	W	½ to 1½	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	49·1	..	W by N	1 to 2	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	40·0	1·12	W	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			WSW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	60·0	0·70	WSW	..	..	..	..	..	..	..	..	..
12	29·692	41·5	39·5	2·0	..	..	37·5		WSW	..	..	..	..	0	0	0	..	..
14	29·627	41·5	40·4	1·1	..	..		3·060	WSW	..	..	..	Neg.	35	30	20	30	0. 50
16	29·526	41·0	40·8	0·2	40·5	0·5	48·2		Calm	..	..	..	Neg.	20	25	10	10	0. 45
18	29·421	41·6	41·6	0·0	..	..	46·0	..	Calm	..	..	..	Pos.	5	5	0	0	1. 15
20	29·430	40·6	40·5	0·1	..	..	..	..	Calm	..	..	..	Neg.	40	40	20	30	0. 12
22	29·557	39·8	38·3	1·5	37·0	2·8	..	..	NE	..	..	..	..	0	0	0	..	..
Feb. 2. 0	29·647	42·2	40·9	1·3	..	..	..	..	N	..	..	..	Pos.	15	30	12	15	3. 0
2	29·684	45·2	42·4	2·8	..	..	..	..	NW	..	..	..	Pos.	5	8	4	5	0. 40
4	29·738	45·7	42·7	3·0	41·0	4·7	46·1	..	WNW	..	..	..	Pos.	3	5	3	..	0. 50
6	29·797	43·7	41·5	2·2	..	..	39·3	1·12	W	..	..	..	Pos.	25	30	10	15	1. 30
8	29·826	40·3	38·9	1·4	..	..			WSW	..	..	..	Pos.	40	30	10	15	1. 5
10	29·849	40·1	38·7	1·4	38·5	1·6	55·7	0·00	SW	..	..	..	Pos.	35	40	15	20	3 0
12	29·849	40·2	39·0	1·2	..	..	35·5		SW	..	..	..	Pos.	10	18	8	10	1. 40
14	29·844	40·3	39·2	1·1	..	..		3·060	SSW	..	..	..	Pos.	7	10	5	5	5. 0
16	29·819	40·3	39·2	1·1	37·0	3·3	48·2		SSW	..	..	..	Pos.	8	12	5	7	3. 0
18	29·805	40·6	39·7	0·9	..	..	45·8	..	SW	..	..	..	..	0	0	0	..	..
20	29·794	43·8	43·0	0·8	..	..	..	..	SSW	..	..	..	Pos.	10	18	12	10	0. 50
22	29·796	45·5	44·7	0·8	44·0	1·5	..	..	SW	..	..	..	Pos.	23	20	10	10	0. 43
Feb. 3. 0	29·775	48·5	47·6	0·9	..	..	..	..	SSW	..	..	..	Pos.	5	5	3	..	0. 48
2	29·723	50·7	49·9	0·8	..	..	..	..	SSW	0 to ½	..	..	Pos.	5	5	3	..	1. 5
4	29·689	51·5	50·7	0·8	50·0	1·5	..	..	SSW	0 to ½	..	..	..	0	0	0	..	..
6	29·651	50·0	49·2	0·8	..	..	..	..	SW	1 to 3	..	..	..	0	0	0	..	..
							52·3											
8	29·621	49·0	47·0	2·0	..	..	39·5	1·12	SW	1½ to 4½	..	..	..	0	0	0	..	..
10	29·613	49·7	48·2	1·5	47·0	2·7			WSW	½ to 4	..	..	..	0	0	0	..	..
12	29·627	50·5	49·1	1·4	..	..	53·5	0·00	WSW	0 to 2	..	..	Pos.	5	10	..	..	..
							34·2											
								3·070										
							47·0											
							45·5	..										
14	29·670	48·3	46·9	1·4	..	..			WSW	..	..	..	..	5	10	..	..	..
16	29·733	45·7	44·4	1·3	43·5	2·2	..	..	WSW	..	..	..	Pos.	15	15	..	..	recovered very slowly
18	29·778	42·8	41·6	1·2	..	..	..	..	WSW	..	..	..	Pos.	5	10	..	..	..
20	29·836	40·3	38·7	1·6	..	..	..	..	WSW	..	..	..	Pos.	10	15	0	..	..
22	29·910	40·6	38·6	2·0	36·0	4·6	..	..	WSW	..	..	..	Pos.	15	20	10	10	9. 15

BAROMETER.

Feb. 1d. 18h. The reading was 0in·206 lower than at 14h, and at 22h the reading was 0in·127 higher than at 20h.

MINIMUM FREE THERMOMETER.

Feb. 1d. 22h. The reading was higher than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	An exceedingly mild morning; the air is soft and pleasant: the sky is overcast with a thin cirro-stratus; the Sun occasionally gleams through it: a very fine morning for the 1st of February.	G
..	..		
..	..		
..	..		
..	Transit		
..	..		
..	..		
10	..	Overcast.	H B
10	..	,, rain is falling.	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, heavy rain is falling.	H B
10	..	,, no rain is falling.	L
9	..	Thin cirro-stratus and light scud: a few cumuli towards the N.	
4	..	Loose scud and scattered cumuli in every direction.	L
9	..	Cumuli, cirro-stratus, and dark scud.	H B
10	Transit	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
9½	..	There are a few breaks in the clouds S. of the zenith.	H B
10	..	A few stars have been occasionally visible in all directions.	L
10	..	Overcast.	
10	..	,,	
10	1st Qr.	,,	
10	..	,,	L
10	..	,, cirro-stratus and scud.	H B
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, gusts of wind to ¾.	H B
10	..	,,	L
10	..	,, the clouds are very thin in some places: drizzling rain has been occasionally falling since the last observation.	
10	Transit	Overcast: cirro-stratus and fleecy clouds: a few stars are occasionally visible in the zenith.	
10	..	,,	L
10	..	The sky was covered by cirro-stratus of a uniform appearance till $11^h.\ 50^m$, with a very slight rain occasionally falling; at this time the clouds in the W. became of a light colour, and slightly broken: the wind has been in frequent gusts to 1½: the night is remarkably warm, with rising temperatures both of the air and of the dew-point: the direction of the wind on the surface of the Earth is W. S.W.: the mass of cloud, as shewn by its passage before the Moon is N.W., and the upper current as shewn by the motion of another larger mass of cloud is W.	G
8	..	Since 12^h the N.W. portion of the sky has frequently been clear; every other part has continued covered with cloud, but with an apparent tendency to break: the different currents in the atmosphere have continued, and they are as noted at 12^h: the wind has somewhat abated, particularly in the frequency of the gusts.—The preceding remarks were written between the times of making the magnetic observations, and on their completion, it was found that very sudden meteorological changes had taken place: the sky was very nearly free from cloud; the readings of the dry and wet-bulb thermometers, which had been increasing, suddenly decreased from 51°·0 and 49½°, which were the readings at $13^h.\ 55^m$, to 48°·3 and 46°·7 at $14^h.4^m$; and the wind had nearly subsided.	
1	..	Cloudless: there is an occasional gust of wind to 1.	
2	..	Cloudless, with the exception of a few clouds scattered about the sky.	
2	..	,,	G
0	..	Cloudless: hazy in the horizon.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°		in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 4. 0	29·946	44·4	40·2	4·2	..	..	..	..	..		..	WSW	..	..	..	Pos.	12	10	5	..	6. 0
2	29·941	46·3	40·8	5·5	..	..	..	..	..		..	WSW	..	..	..	..	0	0	0	..	..
4	29·944	45·8	41·9	3·9	37·0	8·8	..	..	..		..	WSW	0 to ½	..	..	Pos.	5	10	..	..	recovered very slowly
6	29·951	42·5	39·9	2·6	..	..		..	..		..	SW	..	..	..	Pos.	30	50	20	20	3. 0
8	29·945	41·5	39·2	2·3	..	..	46·5 / 39·3	..	1·35		..	SSW	..	..	..	Pos.	30	30	20	20	3. 0
10	29·919	40·5	38·5	2·0	36·0	4·5	60·2 / 32·0	..	0·35		..	SSW	..	..	..	Pos.	15	20	20	20	10. 0
12	29·877	41·8	40·2	1·6	..	..	46·8 / 45·2	..	3·370		..	SSW	..	..	..	Pos.	10	12	7	7	7. 10
14	29·828	42·0	41·1	0·9	..	..		..	..		..	SSW	..	..	..	Pos.	17	20	10	10	4. 17
16	29·757	41·5	41·2	0·3	41·0	0·5	..	..	..		..	SSW	..	..	..	..	0	0	0	..	..
18	29·637	41·6	41·5	0·1	..	..	..	..	..		..	S by E	..	..	..	Neg.	10	10	0	..	..
20	29·645	40·3	40·2	0·1	..	..	..	..	..		..	N	..	..	..	Neg.	2	2	0	..	..
22	29·671	39·7	39·7	0·0	39·3	0·4	..	..	..		..	N	..	..	..	Pos.	8	10	3	..	1. 5
Feb. 5. 0	29·705	42·2	40·9	1·3	..	..	..	..	..		..	Calm	..	..	..	Pos.	7	5	5	..	0. 32
2	29·703	44·7	42·7	2·0	..	..	..	..	..		..	..	..	..	..	Pos.	25	20	8	10	1. 45
4	29·716	44·9	42·2	2·7	39·0	5·9	45·3 / 35·5	..	..		..	W	..	..	..	Pos.	12	10	7	7	2. 10
6	29·723	43·0	41·6	1·4	..	..		..	1·35		..	WSW	..	..	..	Pos.	20	20	12	12	0. 27
8	29·730	42·0	40·5	1·5	..	..	47·3 / 29·0	..	0·00		..	WSW	..	..	..	Pos.	30	30	20	20	0. 30
10	29·728	41·7	40·4	1·3	39·0	2·7		..	3·370		..	Calm	..	..	..	Pos.	30	30	20	20	0. 25
12	29·731	40·7	39·8	0·9	..	..		..	..		..	WSW	..	..	..	..	0	0	0	..	..
14	29·729	41·0	38·6	2·4	..	..	46·5 / 44·8	..	..		..	WNW	..	..	..	Pos.	8	10	3	..	6. 0
16	29·739	38·4	37·1	1·3	36·0	2·4	..	..	..		..	W by N	..	..	..	Pos.	1	1	0	..	..
18	29·767	36·5	35·6	0·9	..	..	..	..	..		..	W	..	..	..	Pos.	1	1	0	..	..
20	29·798	36·8	35·7	1·1	..	..	..	..	..		..	WSW	..	..	..	Pos.	2	2	0	..	..
22	29·857	37·8	36·4	1·4	35·0	2·8	..	..	..		..	WSW	..	..	..	..	0	0	0	..	..
Feb. 6. 0	29·884	42·7	40·0	2·7	..	..	..	..	..		..	WSW	½ to 1	..	..	Pos.	10	18	12	10	0. 40
2	29·909	44·8	41·0	3·8	..	..	..	..	..		..	W by S	½ to 1	..	..	Pos.	3	5	2	..	1. 10
4	29·910	46·5	41·9	4·6	36·5	10·0	48·3 / 35·5	..	1·35		..	WSW	½ to 2	..	..	Pos.	5	5	2	..	2. 0
6	29·895	43·5	40·5	3·0	..	..	54·8 / 32·7	..	0·00		..	WSW	½ to 2	..	..	Pos.	18	10	8	..	10. 0
8	29·889	43·6	41·0	2·6	..	..		..	3·370		..	WSW	1 to 2½	..	..	Pos.	25	20	10	10	12. 0
10	29·866	43·6	41·4	2·2	39·5	4·1	45·5 / 44·0	..	..		..	WSW	1 to 3	..	..	Pos.	40	30	20	20	15. 0
12	29·826	44·3	42·2	2·1	..	..	..	..	..		..	WSW	1½ to 4	..	..	Pos.	13	20	10	10	4. 20
14	29·796	45·7	43·2	2·5	..	..	..	..	..		..	WSW	2 to 5	..	..	Pos.	6	10	5	6	5. 0

BAROMETER.

Feb. 4d. 18h. The reading was 0in.120 lower than at 16h.

OSLER'S ANEMOMETER.

Feb. 5d. The clock was with Mr. Bennett from 0h. 30m to 2h. 10m for slight repairs.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
1½	..	A few detached cumuli scattered over the sky: hazy in the horizon.	T D
4	..	Cumuli in the zenith in large detached masses; hazy in the horizon; that portion of the sky which is free from cloud is of a fine deep blue.	
8	..	The sky is nearly covered with a loose white cloud of no particular modification, but approaching to cirro-cumulus; the direction is from the W.	G
4	..	The sky is partially covered with a thin veil of cloud, particularly to the S: at times the sky has been nearly cloudless.	
10	Transit	A short time after the last observation the sky was wholly covered with scud, and since that time the scud has flowed into a thin cirro-stratus uniformly spread everywhere; the Moon, Mars, and Jupiter being the only objects visible, and they but dimly.	
5	..	A portion of the sky was clear near the zenith a little after 8^h, and since that time the sky has been covered with a thin veil of cloud, and partially clear at intervals: at present about one half of the sky is covered by a thin cloud. A halo of 23° radius surrounds the Moon, and the shadow cast by the Moon is very faint.	G
10	..	The sky is covered with dense cirro-stratus: the Moon's place is visible.	T D
10	..	Overcast: cirro-stratus: rain is falling.	
10	..	,, rain is falling.	
10	..	,, ,,	
10	..	,, ,,	
5	..	Cirro-stratus around the horizon, and light clouds of a fleecy kind in other directions: the air is nearly calm.	T D
9½	..	Since the last observation a great gloom has for the most part prevailed: at $22^h.35^m$ the sky was covered with cirro-stratus and dark scud, which was moving from the W.; the direction of the wind on the surface of the earth was N.	H B
10	..	The sky is now generally covered with a thin cirro-stratus cloud, but near the horizon it is dense. The Sun is at present surrounded by a very faint halo, but it is too faint for measurement: scud occasionally has passed over the Sun.	H B
10	..	The sky is covered with dense cirro-stratus, with low scud in the W.	T D
10	..	The sky is covered with a thin cirro-stratus, through which the Moon is faintly visible.	
10	Transit	No change since the last observation.	
10	..	,,	T D
10	..	Cirro-stratus at present covers the sky, through which the Moon is the only object visible. A faint and imperfectly-formed halo surrounds the Moon, but it is too indistinct for measurement.	H B
10	..	The cirro-stratus has increased in density, and at the present time the Moon is scarcely visible: at $13^h.20^m$, the halo being a little better defined, its semidiameter was found to be equal to 22°; at $13^h.35^m$ it disappeared.	
8	..	The cirro-stratus is not so dense as at the previous observation, and several stars are visible through it: near the Moon it is exceedingly thick.	
2	Greatest declination N.	Cirro-stratus around the horizon.	
1	..	Hazy all around the horizon, with cirro-stratus near the N.W.	H B
0	..	A few cirri of no numerical extent; towards the W. are the only clouds: there is a slight haze.	L
0	..	Cloudless: a whitish blue sky: the sky has remained clear since the last observation.	
5	..	Cumuli towards the W., and in various directions: light scud and fleecy clouds are passing over from the W.: the sky has been mostly free from cloud since the last observation: the wind is blowing in gusts to ½.	L
7	..	Cirro-stratus N. of the zenith, and cumuli near the N.W. horizon: some fine specimens of cirro-cumuli are visible to the S. of the zenith, with fragments of loose scud passing from the W.: the wind is blowing in gusts to 1.	H B
8	..	The sky is nearly covered with cirro-stratus, the Moon being visible through the clouds.	
10	..	Overcast: cirro-stratus and scud; the latter passing quickly over the sky. At $7^h.35^m$ a halo was observed around the Moon, which continued only a short time: the wind is blowing in occasional gusts to 1½.	
10	Transit	Overcast: cirro-stratus and scud: the wind is blowing in frequent gusts to 2 and upwards. The Moon has been frequently surrounded by imperfect halos and uncoloured coronæ.	H B
10	..	Overcast: cirro-stratus: a few stars are occasionally visible about the zenith. A halo has been visible at intervals around the Moon: the wind is blowing in gusts to 1½ and 2.	L
10	..	Overcast: cirro-stratus: the Moon is visible through the clouds: the wind is blowing in gusts to 2.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 6. 16	29·774	46·2	43·9	2·3	41·0	5·2	..	..	WSW	2 to 4½	..	..	Pos.	6	6	4	3	3. 0
18	29·748	46·5	44·0	2·5	..	..	..	..	WSW	2 to 4½	..	..	..	0	0	0	..	..
20	29·720	47·0	44·7	2·3	..	..	..	..	WSW	2 to 4½	..	..	..	0	0	0	..	..
22	29·735	48·0	46·5	1·5	45·0	3·0	..	..	WSW	3 to 5	..	..	Pos.	2	2	0	..	..
Feb. 7. 0	29·729	48·0	47·7	0·3	..	..	..	..	WSW	1 to 3½	..	..	..	0	0	0	..	..
2	29·684	51·0	48·5	2·5	..	..	51·3 / 35·5	..	W by S	1 to 5	..	..	..	0	0	0	..	..
								1·35										
							52·3 / 31·8	0·06										
4	29·704	49·3	43·9	5·4	40·0	9·3			W by S	1 to 5½	..	..	..	0	0	0	..	..
								3·470										
6	29·721	46·0	40·7	5·3	..	..	45·2 / 43·5		WSW	1 to 4	..	..	Pos.	3	5	2	..	0. 50
8	29·767	44·5	40·2	4·3	..	..	..	..	WSW	1 to 4	..	..	..	0	0	0	..	..
10	29·813	43·0	39·4	3·6	35·0	8·0	..	..	WSW	..	..	..	..	0	0	0	..	..
12	29·849	41·0	38·6	2·4	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
22	29·884	39·5	37·2	2·3	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
Feb. 8. 0	..	..	..	..	..	..	..	..	WNW	¾ to 2½	..	..	..	..	..	..	..	..
2	29·893	..	..	..	..	..	..	..	WNW	1 to 2	..	..	..	0	0	0	..	..
4	..	..	..	..	..	..	..	..	WNW	1 to 3	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	WNW	½ constant	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	43·2 / 30·7	..	W by N	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..		1·35	W by N	0 to ¼	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	49·4 / 23·2		WNW	0 to ½	..	..	..	..	..	..	..	..
14	29·967	32·5	30·2	2·3	..	..		0·00	W by N	..	..	..	..	0	0	0	..	..
16	29·973	33·0	30·4	2·6	26·0	7·0			NW	..	..	..	..	0	0	0	..	..
							44·2 / 41·2	3·470										
18	29·986	32·0	29·7	2·3	..	..		..	NW	..	..	..	..	0	0	0	..	..
20	30·002	31·5	29·7	1·8	..	..	..	..	NW	..	..	..	..	0	0	0	..	..
22	30·023	33·4	31·4	2·0	28·0	5·4	..	..	NW	..	..	..	..	0	0	0	..	..
Feb. 9. 0	30·034	34·3	33·5	0·8	..	..	..	..	NNW	0 to 1	..	..	..	0	0	0	..	..
2	30·032	36·4	34·3	2·1	..	..	..	..	N by W	0 to 1½	..	..	..	0	0	0	..	..
4	30·018	36·4	34·2	2·2	31·0	5·4	..	..	NNW	..	..	..	..	0	0	0	..	..
6	30·037	33·4	32·2	1·2	..	..	..	..	Calm	..	..	..	Pos.	25	30	20	20	0. 27
8	30·059	30·5	29·7	0·8	..	..	..	..	Calm	..	..	..	Pos.	25	30	20	20	instantly

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus: the wind is blowing in gusts to 2 and upwards.	L
10	..	,, ,, the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	
10	..	,, cirro-stratus and scud; the latter moving quickly from the W.: the wind is blowing in gusts to 3.	L
10	..	,, cirro-stratus and low scud passing from the S.W.: shortly before this observation a heavy squall of rain fell, which lasted but a few minutes: the wind is blowing in gusts to $1\frac{1}{2}$.	T D
10	..	At $22^h.30^m$ rain commenced falling, and continued without intermission till $23^h.10^m$: the clouds in several directions now became broken, through which the Sun was visible: at $23^h.45^m$ rain again began falling very heavily: the wind is blowing to about $\frac{1}{2}$ or $\frac{3}{4}$.	
10	..	Rain continued falling till $1^h.10^m$, when it suddenly ceased: large masses of dark scud are passing quickly from the W.: the clouds are broken in several directions, and through them the Sun is occasionally visible: some fine cumuli with lines of cirri are in the N. horizon: the wind is blowing in gusts to $1\frac{1}{2}$: at $2^h.5^m$ a violent squall of rain occurred, which lasted about ten minutes: and at $2^h.26^m$ a violent squall of hail occurred.	T D
6	..	Cirro-stratus and cirri forming into cirro-stratus: the sky is alternately clear and cloudy: the wind is blowing in gusts to 2, and occasionally to $2\frac{1}{2}$.	L
0	..	A few light clouds are in various parts of the sky, but to no numerical amount: since the last observation the southern part has been mostly covered with cirro-stratus and reticulated cirri: the wind is blowing in gusts to $1\frac{1}{2}$.	
0	..	Cloudless: the wind is blowing in gusts to $1\frac{1}{2}$, and occasionally to 2.	L
0	Transit	,, the Moon is shining very brightly.	T D
0	..	At $11^h.40^m$ a few lines of cirri were visible in the S.W. horizon; since which time they have increased in extent,	
..	..	but to no numerical amount; every other portion of the sky is brilliantly clear.	
..	..		
..	..		
..	..		
0	..	Cloudless: hazy in the horizon, and a thin mist prevails in the lower part of the Park: a very fine morning.	
..	..		
8	..	The appearance of the sky has been very variable during the morning, being sometimes covered with dark cirro-	G
..	..	stratus and scud; and, suddenly clearing, leaving some fine breaks of blue sky, through which the Sun shone	
..	..	brightly: at present it is covered with dark cirro-strati, cumuli, and scud: the wind is blowing in gusts to 2.	
..	..		
..	..		
..	..		
0	Transit.	Cloudless; it has been so throughout the night.	
4	..	At $14^h.50^m$ some masses of finely-formed cumuli and fleecy clouds came up from the N., and covered nearly three-	T D
		fourths of the sky: at $15^h.35^m$ they had considerably decreased: at present a bank of cumuli and cirri extends half over the S.W. horizon, to an altitude of about 40°; every other portion of the sky is cloudless.	
0	..	Cloudless: the bank of cloud mentioned in the last observation had disappeared at $16^h.50^m$.	
8	..	Cirro-stratus all around the horizon; cirri and fleecy clouds are scattered over the remainder of the sky: the sky was free from cloud till $19^h.25^m$, when clouds began to come from the N.	T D
10	Apogee.	The clouds have gradually increased since the last observation: at present cirro-stratus and a low scud cover the sky; the latter is moving apparently from the N.: small breaks frequently appear.	H B
$9\frac{3}{4}$	..	Shortly after 23^h snow commenced falling in large flakes, and continued about fifteen minutes; it has partly covered the ground: cirro-stratus and scud nearly cover the sky, though there are several breaks of small extent.	H B
10	..	Cirro-stratus and scud of various densities cover the sky: the wind is blowing in gusts to $\frac{1}{2}$.	L
7	..	Masses of finely formed cumuli in every direction: cirro-stratus and scud in the S.W. horizon: at $3^h.40^m$ there was a shower of snow, but its duration did not exceed five minutes.	T D
5	..	Cirro-stratus all around the horizon: the zenith is entirely free from cloud; some cumuli and light clouds have prevailed in a greater or less degree during the last two hours.	
0	..	With the exception of a few lines of cirri near the Moon the sky is cloudless: at $6^h.40^m$ some dark clouds were exhibited around the Moon, but they soon after entirely disappeared.	

ELECTRICITY.

Feb. $8^d.14^h$. The conducting wire was found broken.

OSLER'S ANEMOMETER.

Feb. $7^d.0^h.40^m$, 1^h, and $2^h.20^m$. Pressures of 6, 6, and 7 lbs. respectively were recorded.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div	m s
Feb. 9. 10	30·092	30·6	30·2	0·4	28·5	2·1	..		..	..			N by E	..	..	..	Pos.	25	25	20	20	0. 30
12	30·129	30·9	28·8	2·1	24·0	6·9	..		..	..			N	..	..	..	Pos.	2	5	0	..	0. 30
14	30·148	31·7	29·5	2·2	..	..	36·1 / 29·0 / 49·0		19·8 / 43·2 / 39·2	.. / 1·35 / 0·00		3·480	N	..	..	..	Pos.	25	23	10	..	7. 30
16	30·156	29·1	28·4	0·7	25·0	4·1							N by W	..	..	..	Pos.	25	30	10	10	5. 0
18	30·170	30·0	29·6	0·4	..	..				..			NNW	..	..	..	Pos.	20	15	8	10	12. 0
20	30·199	30·0	28·7	1·3	..	..	..		..	..			NNW	..	..	..	Pos.	20	20	10	10	9. 0
22	30·238	30·5	30·5	0·0	30·0	0·5	..		..	..			N	..	..	..	Pos.	6	10	4	6	2. 30
Feb. 10. 0	30·257	33·7	31·4	2·3	..	..	..		..	..			Calm	..	..	..	Pos.	25	30	15	20	..
2	30·257	33·4	31·6	1·8	..	..	..		..	..			NNE	..	NNE	1·00	Pos.	25	30	20	20	3. 0
4	30·255	34·0	31·9	2·1	25·5	8·5	..		..	..			Calm	..	..	..	Pos.	35	30	20	20	2. 0
6	30·257	31·0	30·4	0·6	..	..	35·8 / 26·9 / 44·0		18·0 / 41·8 / 37·5	.. / 1·35 / 0·00		3·485	Calm	..	..	..	Pos.	32	30	20	20	6. 0
8	30·255	30·3	29·9	0·4	..	..							Calm	..	..	..	Pos.	40	..	20	30	0. 50
10	30·250	28·2	27·5	0·7	23·0	5·2				..			Calm	..	..	..	Pos.	40	..	30	50	0. 20
12	30·238	31·2	29·9	1·3	..	..	..		..	..			Calm	..	..	..	Pos.	10	16	8	10	3. 0
14	30·203	29·5	28·2	1·3	..	..	..		..	..			Calm	..	..	..	Pos.	7	10	5	7	1. 20
16	30·153	27·0	26·2	0·8	24·0	3·0	..		..	..			WSW	..	..	..	Pos.	8	14	7	8	3. 0
18	30·107	26·7	25·9	0·8	..	..	..		..	..			SW	..	..	..	Pos.	7	10	5	7	5. 0
20	30·042	29·5	28·2	1·3	..	..	..		..	..			WSW	..	..	..	Pos.	12	20	10	10	4. 0
22	30·023	32·0	30·7	1·3	27·6	4·4	..		..	..			WSW	..	WSW	0·30	Pos.	40	60	40	40	1. 10
Feb. 11. 0	29·997	37·6	33·9	3·7	..	..	..		..	..			WNW	..	..	..	Pos.	35	40	25	25	1. 0
2	29·969	42·4	38·7	3·7	..	..	..		..	..			WNW	..	..	..	Pos.	20	20	15	15	1. 40
4	29·952	42·7	39·7	3·0	35·0	7·7	43·0			..			NNW	..	..	..	Pos.	5	7	3	2	4. 0
6	29·958	39·7	37·9	1·8	..	..	30·8			1·35			Calm	..	..	..	..	0	0	0	..	..
8	29·971	38·0	35·2	2·8	..	..							Calm	..	NW	0·88	..	0	0	0	..	..
10	29·983	37·2	34·7	2·5	31·0	6·2	50·8 / 27·2 / 41·0			0·00			Calm	..	..	..	Pos.	20	35	12	15	5. 20
12	29·994	35·0	34·2	0·8	..	..				3·485			Calm	..	..	..	Pos.	15	20	10	10	2. 0
14	29·973	33·4	32·7	0·7	..	..	37·0			..			Calm	..	..	..	Pos.	20	25	12	12	1. 55
16	29·982	32·0	31·7	0·3	31·0	1·0	..		..	..			Calm	..	..	..	Pos.	25	30	20	20	0. 30
18	30·000	32·2	32·2	0·0	..	..	..		..	..			Calm	..	..	..	..	0	0	0	..	..
20	30·027	32·5	32·2	0·3	..	..	..		..	..			Calm	..	..	..	Pos.	40	60	40	40	0. 3

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	A few light clouds in the N.; the remainder of the sky is cloudless, and has been so since the preceding observation.	T D
½	Transit	With the exception of a few lines of cirro-stratus around the horizon the sky is cloudless: about fifteen minutes since the amount of cloud was nearly 3, chiefly of a fleecy modification, but it has gradually decreased since that time. At 11h. 43m. 55s a splendid meteor passed from about 20° Z. D. between the Moon and α Hydræ, describing an arc of about 50°; its duration was about 2s.	H B
9¾	..	Soon after the last observation fleecy clouds rapidly came up from the E., and in a short time covered the sky: it has retained the same appearance, except that the clouds are more dense, and there is a low scud moving from the N.	
5	..	Fleecy clouds in every direction, and coming up from the N. N. E.: about 15h. 30m the sky was cloudless. The Moon is occasionally surrounded by a corona.	
9¾	..	The sky at present is nearly covered with cirro-stratus and scud: the amount of clouds has been variable since the last observation; ten minutes afterwards the amount was only 5.	
5	..	Cirro-stratus and fragments of scud in every part of the sky: a light fleecy cloud moves slowly from the N. E.	H B
3	..	A bank of cirro-stratus extending around the horizon: fleecy clouds and light scud in all directions.	L
8	..	Cirro-stratus and fleecy clouds cover the greater part of the sky: it is clear about the zenith.	L
7	..	Massive cumuli extending to an altitude of 30° in the N. horizon: cirro-stratus in the E.: the remainder of the sky is covered with small detached cumuli and a few fleecy clouds; through the breaks the sky is of a fine deep blue: snow has occasionally fallen since the last observation.	T D H B
9½	..	With the exception of a few breaks near the N. E. horizon, the sky is covered with cirro-stratus.	
3	..	About half an hour since several extensive breaks took place in the clouds, which have gradually increased to the present time: the only clouds at present are cirro-stratus, in extensive masses near the S. S. E. and S.W. portions of the horizon: light cirri and fragments of scud in the other portions of the sky; there is also a large mass of scud near the N. horizon.	
7	..	Cirro-stratus and light scud cover the greater part of the sky. At 7h. 40m the Moon was surrounded by a small coloured corona, and has been frequently so during the evening: there is a peculiar whiteness in the cirro-stratus near N., N.W., and N.E. parts of the horizon.	
5	..	Light clouds in every direction: cirro-stratus in masses around the horizon: the sky assumed its present appearance shortly after the last observation. The Moon is surrounded by a corona.	H B
9½	Transit.	Cirro-stratus and fleecy clouds nearly cover the sky; the only part clear is a little N. of the zenith.	L
0	..	Cloudless.	
0	..	A few light clouds, to no numerical extent.	
0	..	Cloudless.	
9	..	Cirro-stratus and fleecy clouds began to collect soon after the last observation, and now nearly cover the sky, with the exception of the neighbourhood of the zenith.	L
0	Full.	Cloudless: a thick haze is prevalent.	T D
8	..	Cirri, and fleecy clouds in several directions, through the breaks of which the blue sky is faintly seen: the haze mentioned in the last observation has continued to the present time.	
9	..	The sky is nearly covered with cirro-stratus, through which the Sun is shining: several fine cumuli are exhibited around him: the haze that prevailed during the morning disappeared at 0h. 40m.	T D
9	..	Cirro-stratus and cirri; the latter forming into cirro-stratus: there is a light haze.	L
8	..	Cirro-stratus and haze in all directions: clear about the zenith: fleecy clouds towards the N.	
9	..	Cirro-stratus, fleecy clouds, and large masses of scud: a slight haze.	
3	..	Thin cirro-stratus towards the N.: at 9h. 45m the sky was nearly covered with cirro-stratus and fleecy clouds. A very fine corona (the outer rim beautifully coloured) was visible from 9h. 12m to 9h. 35m.	L
2	..	The sky is at present cloudless, but its aspect has been very variable since the last observation, being sometimes covered with cirro-stratus and fleecy clouds, and then suddenly clearing, and becoming beautifully bright.	T D
0	Transit	Cloudless: the sky has been uniformly clear during the last two hours.	
4	..	Fleecy clouds and a few cirri in the S. horizon, and around the Moon: a dense haze envelops every object.	
10	..	At 17h. 10m the sky became overcast, and it still continues so: a dense haze prevails.	
10	..	Overcast: cirro-stratus: a dense fog.	T D

WHEWELL'S ANEMOMETER.

Feb. 10d. 0h. The instrument was returned by Mr. Simms and set going.

ELECTRICITY.

Feb. 9d. 6h. Previously to this observation the conducting wire was repaired.

Feb. 10d. 22h. There was a spark at the distance of 0in·02.

Feb. 11d. 16h, 20h, and 22h there were sparks at the distances of 0in·02, 0in·03, and 0in·04 respectively.

HENLEY'S ELECTROMETER.

Feb. 11d. 22h. The reading was 10°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div	m s
Feb. 11. 22	30·065	32·2	32·2	0·0	32·0	0·2	..	..	Calm	..	WSW	0·29	Pos.	40	..	..	60	0. 5
Feb. 12. 0	30·077	34·9	35·0	−0·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	20	35	8. 0
2	30·067	38·4	38·2	0·2	..	..	..	..	Calm	..	..	..	Pos.	30	20	20	20	2. 0
4	30·045	42·4	40·4	2·0	37·5	4·9	..	..	Calm	..	..	..	Pos.	40	50	30	30	0. 25
							42·3	..										
6	30·056	39·6	38·2	1·4	..	..	32·0	1·35	Calm	..	..	..	Pos.	35	40	20	20	1. 5
8	30·075	39·5	38·2	1·3	..	..	———		Calm	..	..	..	Pos.	25	30	15	15	1. 15
10	30·055	40·0	38·8	1·2	37·0	3·0	44·0	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·049	39·8	38·5	1·3	..	..	31·0		Calm	..	..	..	Pos.	2	2	0	..	..
14	30·021	39·5	38·5	1·0	..	..	———		WSW	..	..	..	Pos.	30	20	10	15	2. 30
							39·8	3·490										
16	30·005	40·0	38·8	1·2	37·0	3·0	37·0	..	WSW	..	..	..	Pos.	8	10	5	..	3. 0
18	29·994	40·7	39·0	1·7	..	..	..	..	WSW	..	..	..	Pos.	30	20	10	10	3. 30
20	30·006	40·6	39·2	1·4	..	..	..	..	WSW	..	..	..	Pos.	25	20	10	10	3. 0
22	30·016	41·3	39·2	2·1	37·0	4·3	..	..	WSW	..	WSW	0·25	Pos.	10	15	8	10	0. 30
Feb. 13. 0	30·028	43·0	39·0	4·0	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
2	30·033	43·5	38·5	5·0	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
4	30·016	43·7	40·0	3·7	35·6	8·1	..	..	NNW	..	..	..	Pos.	10	10	5	8	7. 0
6	30·018	41·8	38·7	3·1	..	..	44·3	..	Calm	..	NNW	0·33	Pos.	8	10	5	..	0. 55
							32·5	1·35										
8	30·032	39·3	38·3	1·0	..	..	45·3	0·00	Calm	..	..	..	Pos.	40	40	20	30	1. 15
10	30·035	39·6	38·7	0·9	36·5	3·1	30·5		Calm	..	..	..	Pos.	1	1	0	..	..
12	30·044	40·0	38·9	1·1	..	..	———	3·490	Calm	..	..	..	..	0	0	0	..	..
14	30·034	40·7	39·4	1·3	..	..	39·5		WNW	..	..	..	..	0	0	0	..	..
16	30·017	38 0	37·0	1·0	36·0	2·0	37·2	..	WNW	..	..	..	..	0	0	0	..	..
18	30·006	35·7	34·9	0·8	..	..	..	..	W	..	..	..	..	0	0	0	..	..
20	30·008	35·2	34·7	0·5	..	..	..	..	WNW	..	..	..	..	0	0	0	..	.
22	30·015	38·8	37·7	1·1	35·7	3·1	..	..	W by S	..	SW	0·45	Pos.	25	30	20	20	1. 17
Feb. 14. 0	30·021	43·8	41·2	2·6	..	..	..	..	NNW	0 to ½	..	..	Pos.	35	40	20	20	3. 40
2	30·029	46·0	42·7	3·3	..	..	..	..	NNW	..	..	..	Pos.	10	12	7	7	5. 0
4	30·032	44·6	41·7	2·9	38·0	6·6	..	..	Calm	..	..	..	..	0	0	0	..	..
6	30·052	43·5	41·2	2·3	..	..	46·1	..	Calm	..	..	..	Pos.	4	5	3	..	1. 0
8	30·080	43·3	41·2	2·1	..	..	29·8	1·35	Calm	..	..	..	..	0	0	0	..	..
10	30·100	42·7	40·7	2·0	38·0	4·7	———		Calm	..	..	..	Pos.	2	4	0	..	2. 0
12	30·118	41·0	39·2	1·8	..	..	49·0	0·00	Calm	..	..	..	Pos.	10	12	7	7	3. 10
14	..	..	..	..	..	..	25·5		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	———	3·490	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	39·5	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	38·0	..	Calm	..	..	..	..	..	..	..	..	..
22	30·158	36·5	35·5	1·0	..	..	..	..	SW	..	NNW	0·60	Pos.	5	8	5	5	0. 40
Feb. 15. 0	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..
4	30·128	45·8	41·5	4·3	..	..	..	..	W by N	..	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	..	..	WNW	..	NW	0·25	..	..	..	..	..	..
8	..	..	..	..	..	..	..	..	WNW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	..	..	WNW	..	..	..	..	..	..	..	..	..

DRY THERMOMETER.

Feb. 12d. 0h. The reading was lower than that of the Wet Thermometer.

MAXIMUM FREE THERMOMETER.

Feb. 12d. 22h. The reading was lower than that of the Dry Thermometer at 4h.

ELECTRICITY.

Feb. 11d. 16h, 20h, and 22h. There were sparks at the distances of 0in·02, 0in·03, and 0in·04 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus: the fog continues so dense that no part of the Astronomical Observatory can be seen from the Magnetic Observatory.	H B
10	..	Overcast: cirro-stratus: the fog is not so dense as at the last observation.	
10	..	,, ,, the fog continues very dense.	H B
10	..	,, ,, the fog is less dense than at the last observation: at $3^h.\ 25^m$ the Sun gleamed through the haze for a few minutes.	T D
10	..	Overcast: cirro-stratus: a thin haze prevails.	
10	..	,, ,, a star or two occasionally visible through the haze.	
10	..	,, cirro-stratus and scud.	T D
10	..	,, ,, the sky has been principally covered during the last half-hour.	H B
10	Transit	,, ,, a short time after the last observation several breaks in the clouds took place, but at 13^h every part was again overcast.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, the scud is very black.	
10	..	,, ,, the latter is moving from the W. S. W.	H B
10	..	,, ,,	L
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, the appearance of the clouds has been the same during the morning.	L
$9\frac{3}{4}$	..	Cirro-stratus and scud: a few breaks S. and E. of the zenith: there is a low scud moving from the W.N.W.	H B
9	In Equator	Dense cirro-stratus around the horizon, more particularly in the N. W.: a thin cirro-stratus is prevalent in other parts of the sky, with a slight fog: there have been several extensive breaks within the last half-hour.	
10	..	Overcast: cirro-stratus: foggy.	
10	..	,, ,, the fog has cleared away considerably since the last observation.	H B
10	..	,, ,, a slight fog.	L
10	Transit.	,, cirro-stratus and fleecy clouds.	
10	..	,, ,, occasional small breaks about the place of the Moon.	
2	..	Cloudy towards the S. horizon: a few fleecy clouds about the place of the Moon.	
1	..	A bank of cirro-stratus along the E. horizon: hazy; cloudless elsewhere.	L
8	..	Fleecy clouds much broken in the zenith: cirro-stratus in the horizon.	T D
6	..	Fleecy clouds and thin cirro-stratus have prevailed since the last observation, with breaks of variable extent in several directions: the Sun has faintly gleamed through the clouds at intervals.	
10	..	Cirro-stratus and scud cover the sky, which has been with slight exceptions quite cloudy since the last observation.	T D
10	..	Overcast: dense cirro-stratus and scud.	L
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	L
8	..	At $11^h.\ 10^m$ the clouds became broken in several directions, and a few stars were visible for the first time during the night; the prevailing clouds at present are dark, heavy-looking cirro-stratus in the N. E., and light detached clouds of the fleecy character scattered in every other direction; the Moon is at present enveloped in a dark mass of cirro-stratus.	T D
..	..		
..	Transit		
..	..		
..	..		
1	..	A bank of cirro-stratus towards the N. horizon; cloudless elsewhere: a slight fog.	
..	..		
..	..		
10	..	Cirro-stratus and fleecy clouds cover the sky.	
..	..		
..	..		
..	..		

HENLEY'S ELECTROMETER.
Feb. $11^d.\ 22^h$. The reading was 10°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 15. 12	..	..	..	..	..	..	45·9		..	..			W by N	..	..	..	..	..	..	..	..	..
14	30·090	41·0	39·1	1·9	..	..	37·3		1·35	W by N	..	..	..	..	..	..	0	0	0	..	..	
16	30·070	40·8	38·7	2·1	36·0	4·8	50·2		0·00	W by N	..	..	..	..	..	..	0	0	0	..	..	
18	30·076	40·3	38·9	1·4	..	..	35·8			W by N	..	..	..	..	..	..	0	0	0	..	..	
20	30·084	40·3	39·2	1·1	..	..	40·0		3·490	W	..	..	..	..	..	..	0	0	0	..	..	
22	30·092	42·0	40·6	1·4	37·5	4·5	38·2		..	W	..	..	WNW	0·50	Pos.	5	5	0	..	2. 0		
Feb. 16. 0	30·093	46·4	44·0	2·4	..	..	..		..	NNW	..	..	..	..	Pos.	6	8	3	..	1. 20		
2	30·104	45·0	43·7	1·3	..	..	47·0		..	Calm	..	..	..	..	Pos.	8	10	5	..	1. 20		
4	30·092	46·7	45·4	1·3	43·6	3·1	42·0		..	Calm	..	..	..	..	Pos.	10	12	7	7	1. 55		
6	30·097	46·2	44·7	1·5	..	..			1·35	Calm	..	..	..	..	..	..	0	0	0	..	..	
8	30·112	45·5	44·7	0·8	..	..	50·3			Calm	..	..	..	..	..	..	0	0	0	..	..	
10	30·099	45·0	44·4	0·6	43·9	1·1	38·7		0·00	Calm	..	..	..	..	..	..	Pos.	40	50	30	30	2. 0
12	30·109	44·5	43·7	0·8	..	..				NNW	..	..	..	..	..	..	Pos.	35	30	15	20	5. 30
14	30·096	43·4	42·8	0·6	..	..	41·2		3·500	Calm	..	..	..	..	..	..	Pos.	5	8	3	..	8. 0
16	30·088	42·4	41·9	0·5	41·0	1·4	39·0		..	Calm	..	..	..	..	..	..	Pos.	8	10	5	..	3. 0
18	30·068	42·0	41·7	0·3	..	..			..	Calm	..	..	..	..	..	..	Pos.	5	5	0	..	5. 45
20	30·071	42·3	41·4	0·9	..	..	..		..	Calm	..	..	..	..	..	..	Pos.	30	25	10	10	0. 30
22	30·062	42·7	41·7	1·0	40·5	2·2	..		..	WNW	..	..	WNW	1·25	..	0	0	0	..	..		
Feb. 17. 0	30·044	44·0	40·4	3·6	..	..	..		..	NW	..	..	..	..	..	..	0	0	0	..	..	
2	30·019	44·2	40·4	3·8	..	..	..		..	N by W	..	..	..	..	..	..	0	0	0	..	..	
4	29·966	45·2	41·2	4·0	36·5	8·7	45·6		..	WNW	..	..	..	..	Pos.	20	15	10	10	2. 30		
6	29·950	45·0	40·3	4·7	..	..	40·0		1·35	WNW	..	..	..	..	Pos.	35	30	15	20	5. 30		
8	29·946	44·4	40·6	3·8	..	..				NW	..	..	..	..	Pos.	23	20	10	10	3. 30		
10	29·931	43·8	40 7	3·1	38·0	5·8	46·3		0·00	WNW	..	..	..	..	Pos.	18	23	10	10	6. 0		
12	29·909	41·7	40·0	1·7	..	..	37·7			WNW	..	..	..	..	Pos.	18	25	13	15	4. 0		
14	29·898	40·7	39·2	1·5	..	..			3·500	Calm	..	..	..	..	Pos.	7	12	5	7	5. 0		
16	29·878	40·5	39·2	1·3	37·0	3·5	42·5		..	Calm	..	..	..	..	Pos.	6	10	4	6	1. 30		
18	29·872	39·7	39·2	0·5	..	..	39·8		..	Calm	..	..	..	..	Pos.	8	12	5	7	2. 0		
20	29·877	39·7	39·0	0·7	..	..	..		..	Calm	..	..	..	..	Pos.	10	18	8	10	1. 30		
22	29·889	41·9	39·7	2·2	38·0	3·9	..		..	NW	..	..	WNW	1·48	Pos.	8	10	5	..	6. 0		
Feb. 18. 0	29·886	45·4	42·1	3·3	..	..	..		..	Calm	..	..	..	..	Pos.	3	2	0	..	2. 0		
2	29·882	46·9	42·7	4·2	..	..	..		..	Calm	..	..	..	..	Pos.	8	10	3	..	1. 50		
4	29·881	45·5	41·9	3·6	39·0	6·5	48·5		..	Calm	..	..	..	..	Pos.	14	22	10	10	6. 0		
6	29·892	44·5	41·7	2·8	..	..	40·5		1·35	Calm	..	..	..	..	Pos.	10	15	8	10	3. 0		
8	29·903	43·7	41·4	2·3	..	..				Calm	..	..	..	..	Pos.	10	16	8	10	5. 0		
10	29·916	42·3	41·7	0·6	40·0	2·3	55·6		0·00	Calm	..	..	..	..	Pos.	20	25	15	15	1. 0		
12	29·911	42·2	41·6	0·6	..	..	38·7			Calm	..	..	..	..	Pos.	30	40	25	25	1. 3		
14	29·905	41·7	41·2	0·5	..	..			3·505	Calm	..	..	..	..	Pos.	40	45	25	25	0. 30		
16	29·890	41·0	40·6	0 4	40·0	1·0	43·2		..	Calm	..	..	..	..	Pos.	40	50	30	30	0. 27		
18	29·884	40·5	40·2	0·3	..	..	40·5		..	Calm	..	..	..	..	Pos.	40	50	30	30	0. 30		
20	29·887	40·5	40·2	0·3	..	..	..		..	Calm	..	..	..	..	..	0	0	0	..	..		
22	29·903	41·3	40·9	0·4	40·5	0·8	..		..	Calm	..	..	NNW	0·45	Pos.	5	5	3	..	0. 33		
Feb. 19. 0	29·922	43·2	42·7	0·5	..	..	..		..	Calm	..	..	..	..	Pos.	6	5	3	..	0. 23		
2	29·911	44·0	42·7	1·3	..	..	..		..	Calm	..	..	..	..	Pos.	5	5	0	3	0. 30		
4	29·912	44·5	42·7	1·8	40·0	4·5	..		..	Calm	..	..	..	..	Pos.	2	0	0	..	..		
6	29·913	43·2	41·4	1·8	..	..	..		..	Calm	..	..	..	..	Pos.	10	10	5	..	0. 40		

ELECTRICITY.

Feb. 16d. 10h. There was a spark at the distance of 0in·02.

Feb. 18d. 14h, 16h, and 18h. There were sparks at the distance of 0in·02.

MINIMUM FREE THERMOMETER.

Feb. 17d. 22h. The reading was higher than those of the Dry Thermometer at 18h and 20h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
10	..	The sky has been overcast during the whole night: at $12^h.\ 30^m$ the clouds near the Moon were slightly broken, but in the space of 10^m the sky had resumed its previous aspect.	T D
10	Transit	No change since the last observation.	
10	..	,,	
10	..	Overcast: cirro-stratus: the Moon was faintly visible at $18^h.\ 40^m$ through fleecy clouds.	T D
9	..	Cirro-stratus and a low scud, the latter moving from the N. W.	H B
10	..	The sky at present is covered with cirro-stratus and a large quantity of low scud, which is moving from the N. W.	
10	..	Overcast: cirro-stratus: a thin drizzling rain is falling: foggy.	H B
10	..	,, ,, a thin rain occasionally falling.	T D
10	..	,, ,, the sky has been covered with cloud since the last observation.	
10	..	,, dense cirro-stratus: at $6^h.\ 30^m$ a thick rain began falling, which continued till $7^h.\ 10^m$.	
10	..	The sky has been uniformly overcast since the last observation.	T D
10	..	Overcast: cirro-stratus: a damp fog.	H B
10	..	Overcast: the fog has cleared off.	
10	Transit	Overcast: cirro-stratus and scud. No change has taken place since the last observation.	
10	..	,, cirro-stratus.	
10	..	,, ,, foggy.	H B
10	..	,, cirro-stratus and scud: a thin fog.	L
10	..	Overcast: cirro-stratus and scud: a thin fog.	
10	..	,, cirro-stratus: gloomy towards the S.: a slight haze.	L
10	..	Cirro-stratus and dark scud: a few breaks of small extent are occasionally seen.	H B
10	..	Cirro-stratus and large quantities of scud.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, cirro-stratus: no change.	H B
9	..	Cirro-stratus covers the greater part of the sky: clear about the zenith: ten minutes since the sky was quite overcast.	L
10	..	The sky has been covered with cirro-stratus since the last observation.	
10	..	,, ,,	
10	Transit	Overcast: cirro-stratus.	
10	..	,, ,,	L
10	..	,, cirro-stratus and scud: a slight fog.	H B
10	..	Overcast: cirro-stratus and scud: a slight fog.	
10	..	Cirro-stratus and scud; the former is less dense near the place of the Sun than in other directions: the air is nearly calm: a thin fog still remains.	H B
10	..	Overcast: cirro-stratus and scud.	L
10	..	,, ,,	
10	..	,, cirro-stratus.	
10	..	,, ,, a few drops of rain fell soon after the last observation.	L
10	..	,, ,,	T D
10	..	,, ,, a few drops of rain fell occasionally.	
10	..	,, ,, very calm; distant sounds very audible.	
10	Transit 3rd Quarter	,, ,, very calm.	
10	..	,, ,, the sky has exhibited the same appearance throughout the night.	T D
10	..	,, cirro-stratus and scud: a damp fog.	H B
10	..	Overcast: cirro-stratus and scud: no change: very gloomy.	
10	..	,, ,,	H B
10	..	,, ,,	L
10	..	,, cirro-stratus: a few small breaks occurred shortly before the observation.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of: Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 19. 8	29·940	43·5	40·2	3·3	..	..	45·1	..	WSW	..	..	..	Pos.	30	40	25	25	0. 27
10	29·958	43·5	40·2	3·3	36·5	7·0	41·5	1·35	Calm	..	..	..	Pos.	25	30	18	18	0. 40
12	29·973	42·5	39·9	2·6	..	..	——		Calm	..	..	..	Pos.	40	40	20	15	2. 0
14	29·970	41·5	39·7	1·8	..	..	46·0	0·00	Calm	..	..	..	Pos.	30	35	10	15	5. 0
16	29·967	41·2	39·9	1·3	38·0	3·2	38·5		Calm	..	..	..	Pos.	40	40	20	20	3. 45
18	29·976	41·2	40·1	1·1	..	..	——	3·505	Calm	..	..	..	Pos.	40	40	25	30	2. 40
20	29·981	41·6	39·8	1·8	..	..	44·0		Calm	..	..	..	Pos.	30	35	15	20	3. 0
22	30·003	43·6	41·7	1·9	40·0	3·6	41·0	..	Calm	..	SW	0·49	Pos.	10	16	8	10	0. 50
Feb. 20. 0	30·013	47·2	44·5	2·7	..	..	..	..	SSW	..	..	..	Pos.	10	15	8	10	2. 0
2	29·999	46·2	43·4	2·8	..	..	..	..	S by W	..	..	..	Pos.	30	40	20	20	6. 0
4	29·973	46·3	42·7	3·6	39·0	7·3	..	..	S by W	..	..	..	Pos.	20	20	10	10	1. 46
6	29·997	43·5	41·6	1·9	..	..	49·3	..	SSW	..	..	..	Pos.	25	30	10	10	1. 50
8	30·009	43·2	41·2	2·0	..	..	43·3	1·35	Calm	..	..	..	Pos.	15	15	10	..	1. 35
10	30·008	43·0	41·2	1·8	39·0	4·0	——		Calm	..	..	..	Pos.	35	35	15	20	2. 0
12	30·009	43·2	42·0	1·2	..	..	52·5	0·00	Calm	..	..	..	Pos.	12	20	10	12	2. 0
14	29·995	43·0	42·5	0·5	..	..	41·7		Calm	..	..	..	Pos.	12	18	8	10	4. 0
16	29·994	43·7	43·2	0·5	42·0	1·7	——	3·505	SSW	..	..	..	Pos.	20	30	15	18	3. 0
18	29·995	44·0	43·5	0·5	..	..	44·5	..	Calm	..	..	..	Pos.	8	12	6	8	2. 0
20	30·006	46·0	44·7	1·3	..	..	42·0	..	Calm	..	..	..	Pos.	5	6	4	3	4. 0
22	30·022	48·4	47·4	1·0	46·2	2·2	..	..	SSW	..	SW	2·54	Pos.	12	15	10	10	5. 20
Feb. 21. 0	30·022	54·2	50·8	3·4	..	..	..	..	SSW	..	..	..	Pos.	10	12	7	7	5. 0
2	30·015	55·4	51·0	4·4	..	..	..	..	SSW	..	..	..	Pos.	8	10	7	7	7. 0
4	29·997	53·8	48·4	5·4	46·0	7·8	55·6	..	SSW	..	..	..	Pos.	3	5	2	..	1. 20
6	30·020	50·3	48·2	2·1	..	..	45·4	1·35	SSW	..	..	..	Pos.	5	7	4	5	0. 30
8	30·025	48·7	47·5	1·2	..	..	——		SSW	..	..	..	..	0	0	0	..	..
10	30·023	48·5	47·2	1·3	45·0	3·5	72·3	0·00	SW	..	..	..	..	0	0	0	..	..
12	30·010	47·0	46·4	0·6	..	..	42·0		Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	——	3·505	SSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	45·8		SSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	42·5	..	S	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..
22	29·881	50·5	48·5	2·0	..	..	..	..	S by W	..	SSW	4·67	Pos.	2	0	0	..	..
Feb. 22. 0	..	..	..	..	..	..	..	..	SSW	¾ to 2	..	..	..	..	..	..	..	..
2	29·791	54·3	50·4	3·9	..	..	..	..	SSW	1 to 3	..	..	Pos.	2	0	0	..	..
4	29·792	53·0	49·9	3·1	..	..	55·8	..	SSW	¾ to 2½	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	49·4	1·48	SSW	½ to 1½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——		SSW	½ to 2	..	..	..	..	..	..	..	..
10	29·773	52·2	51·7	0·5	..	..	59·5	0·19	SSW	0 to 2	..	..	..	0	0	0	..	..
12	..	..	..	..	..	..	48·5		SSW	1½ to 4	..	..	..	..	..	..	..	..
14	29·774	52·0	51·5	0·5	..	..	——	3·690	SSW	½ to 2	..	..	..	0	0	0	..	..
16	29·744	51·0	50·5	0·5	50·0	1·0	47·2	..	SSW	..	..	..	..	0	0	0	..	..
18	29·709	50·5	50·0	0·5	..	..	43·5	..	S	..	..	..	..	0	0	0	..	..
20	29·700	50·2	50·0	0·2	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·703	49·8	49·6	0·2	49·5	0·3	..	..	SSW	..	SSW	7·63	Pos.	5	0	0	..	..
Feb. 23. 0	29·714	52·5	52·4	0·1	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
2	29·710	54·0	53·2	0·8	..	..	..	..	SSW	..	..	..	Pos.	5	5	0	..	0. 40

MINIMUM FREE THERMOMETER.

Feb. 19d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

Feb. 20d. 22h. The reading was higher than those of the Dry Thermometer at 8h, 10h, 12h, and 14h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus.	T D
10	..	,, ,,	T D
10	..	,, ,, the air is perfectly calm.	H B
10	..	,, ,,	
10	..	,, cirro-stratus and scud.	
10	..	,, ,,	
10	Transit	,, ,,	H B
10	..	,, cirro-stratus.	L
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	
10	..	,, cirro-stratus and fleecy clouds.	L
10	..	Overcast: cirro-stratus and scud.	H B
10	Greatest declination S.	Cirro-stratus of various densities cover the whole sky.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	H B
10	..	,, ,,	L
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	
10	Transit	A narrow clear break towards the E. horizon, but to no numerical extent; cirro-stratus and scud elsewhere: the clouds are very thin about the zenith.	L
8	..	The sky in several directions is covered with a thin film of cirro-stratus and some light scud: a pale blue sky is visible in the zenith and in the N. E.: a few drops of rain fell a few minutes since.	T D
2	..	A few fleecy clouds in the W. and in the N. E.; the remainder of the sky is clear.	
1	..	A few fleecy clouds scattered over the sky.	T D
1	..	A few fleecy clouds towards the W. horizon.	L
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, ,,	L
5	..	Cirro-stratus around the horizon: the stars in every direction look dim and watery: the portion of sky free from cloud became so about five minutes previously to this observation.	T D
..	..		
..	..		
..	..		
..	..		
10	Transit	Overcast: cirro-stratus and scud.	H B
..	..		
10	..	The sky has been covered with cirro-stratus and scud since the last observation, and still remains so: frequent gusts of wind to $1\frac{1}{2}$ and 2: the wind commenced blowing, shortly after the previous observation, from $\frac{3}{4}$ to $1\frac{1}{2}$.	
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to 2.	
..	..		
..	..		
10	..	,, cirro-stratus: rain commenced falling soon after $4^h.\ 15^m$, and it still continues to fall.	H B
..	..		
10	..	,, dense cirro-stratus: no rain is falling: the wind is blowing in gusts to 2+.	T D
10	..	,, ,, rain has been occasionally falling since the last observation: the wind is blowing in	
10	..	,, ,, no change since the last observation. [gusts to $1\frac{1}{2}$.	
10	..	,, cirro-stratus: rain commenced falling at $18^h.\ 50^m$, and continues to the present time.	T D
10	Transit	,, ,, rain falling slightly.	H B
10	..	Overcast: cirro-stratus and scud: rain has been falling since the last observation, but it has now ceased.	
10	..	Cirro-stratus and large quantities of scud; there are a few breaks (to no numerical extent) in the S. E., and near the N.W. horizon.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 23. 4	29·694	54·6	53·2	1·4	51·5	3·1	..	..	SSW	..	..	..	Pos.	10	12	7	7	4. 0
6	29·703	52·7	52·6	0·1	..	..	..	..	SSW	..	SSW	1·80	Pos.	15	20	12	12	5. 0
8	29·696	51·0	50·7	0·3	..	..	..	..	SSW	..	..	..	Pos.	2	0	0	..	..
10	29·657	51·5	50·7	0·8	50·3	1·2	55·5 / 50·5	.. / 1·48	SSW	..	..	..	Pos.	10	12	7	7	3. 40
12	29·594	51·9	50·7	1·2	..	..	58·5 / 47·5	0·05	SSW	0 to 1½	..	..	Pos.	20	30	10	10	5. 30
14	29·588	52·6	50·6	2·0	..	..	48·8 / 44·8	3·735 / ..	SSW	0 to ½	..	..	Pos.	15	20	10	10	2. 0
16	29·536	51·1	49·2	1·9	47·0	4·1	..	..	S by W	..	..	..	Pos.	20	20	10	10	3. 30
18	29·522	51·2	49·0	2·2	..	..	..	..	SSW	0 to ½	..	..	Pos.	18	25	10	10	2. 0
20	29·514	52·0	50·6	1·4	..	..	..	..	SSW	½ to 1½	..	..	Pos.	8	5	3	..	1. 30
22	29·530	51·7	51·2	0·5	50·0	1·7	..	..	SSW	½ to 2	S	4·20	Neg.	20	20	12	15	1. 0
Feb. 24. 0	29·525	56·3	54·7	1·6	..	..	..	..	S by W	½ to 2	..	..	Pos.	10	15	8	10	7. 0
2	29·494	56·2	54·0	2·2	..	..	..	..	SSW	½ to 2½	..	..	Pos.	10	12	6	8	3. 0
4	29·458	56·5	53·7	2·8	52·0	4·5	..	..	SSW	½ to 1	..	..	Pos.	8	10	5	0	3. 30
6	29·424	53·0	51·2	1·8	..	..	58·3 / 50·7	.. / .. / 1·52	S by W	½ to 1	SSW	2·08	Pos.	15	15	8	10	2. 0
8	29·393	52·7	50·5	2·2	..	..			S by W	½ to 1½	..	..	Pos.	8	10	5	..	1. 35
10	29·346	52·5	49·8	2·7	48·5	4·0	70·4 / 47·0	0·08 / 3·815	SSW	1½ to 3	..	..	Pos.	8	8	3	..	2. 30
12	29·323	54·8	51·2	3·6	..	..	50·0 / 46·0		SSW	0 to ½	..	..	Pos.	6	8	5	6	I. 0
14	29·317	52·0	51·0	1·0	..	..			SSW	½ to 1½	..	..	..	0	0	0	..	..
16	29·320	51·2	49·9	1·3	49·0	2·2	..	..	SW	½ to 1	S	3·16	..	0	0	0	..	..
18	29·351	50·7	49·5	1·2	..	..	..	..	..	..	..	..	..	0	0	0	..	..
20	29·378	50·5	48·8	1·7	..	..	..	..	WSW	0 to 1	..	..	..	0	0	0	..	..
22	29·403	52·0	49·7	2·3	48·0	4·0	..	..	SW	1 to 2½	SSW	2·38	Pos.	5	5	0	..	0. 50
Feb. 25. 0	29·456	52·3	50·8	1·5	..	..	..	..	SW	½ to 2	..	..	Pos.	3	5	0	..	1. 20
2	29·485	55·5	52·0	3·5	..	..	57·0 / 42·3	.. / 1·52	WSW	½ to 2	..	..	Pos.	2	0	0	..	..
4	29·529	54·8	50·7	4·1	48·0	6·8	66·0 / 39·8	0·00 / 3·815	WSW	½ to 2½	..	..	Pos.	4	5	3	2	1. 0
6	29·576	50·5	47·9	2·6	..	..	50·5 / 47·0		WSW	..	..	..	Pos.	15	18	10	12	3. 0
8	29·648	49·0	47·7	1·3	..	..			SW	..	SW	3·95	Pos.	25	30	18	20	6. 0
10	29·695	45·3	44·2	1·1	43·0	2·3			SW	..	..	..	Pos.	8	12	7	8	2. 0
12	29·694	44·0	43·2	0·8	..	..			SSW	..	..	..	Pos.	8	10	7	7	3. 0
14	29·725	43·4	43·2	0·2	..	..	..	..	SSW	..	SSW	0·65	..	0	0	0	..	..

MINIMUM FREE THERMOMETER.

Feb. 24d. 22h. The reading was higher than that of the Dry Thermometer at 20h.

OSLER'S ANEMOMETER.

Feb. 23d. 13h. 10m and 22h. 40m. There were gusts recording pressures of 3 lbs. and 3½ lbs.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	Cirro-stratus, fleecy clouds, and low floating scud in the N.: there are several large clear breaks in the zenith, through which a fine blue sky is visible.	T D
10	..	The sky became completely overcast at $5^h.\ 30^m$ with dense cirro-stratus and masses of low scud of a dull leaden hue; about five minutes previously to this observation a thick drizzling rain began to fall.	
10	..	Overcast: cirro-stratus: at $7^h.\ 50^m$ a few stars were visible in the zenith and in several parts of the horizon, but they have now disappeared: the sky is very dark.	
7	..	Cirro-stratus and haze in the horizon: some portions of the zenith are free from cloud: some stars have been faintly visible, but they were soon obscured by scud: several flashes of lightning have been visible in the S. and N.W.	T D
3	..	Cirro-stratus and large quantities of scud are scattered over every part of the sky: about an hour since the sky became suddenly cloudless, and has continued nearly so since that time: flashes of lightning have been frequently seen since the last observation.	H B
10	..	At present every part of the sky is covered with cirro-stratus and scud: the clouds have been gradually increasing in extent since the last observation.	
4	..	Cirro-stratus and fragments of scud in every direction: the amount of cloud is exceedingly variable.	
5	..	The sky at present is about one-half covered with cirro-stratus and portions of scud: the wind is blowing in occasional gusts to 1 +.	
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$ and 2: a slight rain is occasionally falling.	H B
10	..	,, ,, a thick drizzling rain is falling: the wind is blowing in gusts to 1 +.	L
10	Transit	Overcast: thin cirro-stratus: rain has been occasionally falling; at present the rain is very thin and drizzling.	
10	Perigee	,, cirro-stratus and scud: the clouds are very thin towards the S.; occasional small breaks: there has been a slight rain falling since the last observation: the wind is blowing in gusts to $1\frac{1}{2}$.	L
9	..	Cirro-stratus of various densities and scud of a brownish colour cover the sky: a few breaks to the N.: the wind is blowing in gusts to $1\frac{1}{2}$.	H B
4	..	Cirro-stratus and scud distributed in every direction.	
$\frac{1}{2}$	..	Cirro-stratus in lines near the W. horizon, and scud near the S.W. horizon: shortly after the last observation the greater part of the sky was covered with cloud, and it afterwards changed to its present state: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	
3	..	About half an hour since a large quantity of cirro-stratus and scud was distributed in every part of the sky, but at present the greater part has cleared off; and, with the exception of a large portion of cloud near the S. and W. of the zenith, the clouds are principally in the horizon: the wind is blowing in frequent gusts to 2 and $2\frac{1}{2}$.	H B
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$.	L
10	..	,, ,, rain is falling: the wind is blowing in gusts to 2.	
10	..	,, ,, the wind is blowing in gusts to 1 and 1+: a thin rain has been falling generally since the last observation. [and 1 +.	
10	..	Overcast: cirro-stratus and scud: a few drops of rain are occasionally falling: the wind is blowing in gusts to 1	
10	..	,, ,,	L
10	..	With the exception of a few breaks of very small extent, the sky is completely covered with cirro-stratus and dark scud, in rapid motion: the wind is blowing in frequent gusts to $2\frac{1}{2}$.	H B
10	Transit	Overcast: cirro-stratus and dark scud: gusts of wind to $2\frac{1}{2}$, but less frequent than at the last observation.	
10	..	Cirro-stratus and scud: breaks continually occur: the wind is less violent than at the preceding observation, and the gusts are not so frequent: there are some large cumuli near the N. N. W. horizon.	H B
10	..	Cirro-stratus, fleecy clouds, and scud cover the sky, with the exception of a few small breaks of no numerical extent: the wind is blowing in gusts to $\frac{3}{4}$.	L
3	..	Cirro-stratus in large masses towards the N.: reticulated cirri in all directions: scud passing over from the W.	
0	New.	The clouds collected soon after the last observation, and the sky soon became overcast, and remained so until $7^h.\ 52^m$, when a break appeared in the N., and the sky suddenly became clear; it is now quite cloudless.	
8	..	The sky became overcast soon after the last observation: there are small breaks in every direction.	L
0	..	Cloudless: a faint yellow light in the N., bearing a strong resemblance to an aurora.	T D
7	..	Ten minutes previously to this observation the sky became suddenly obscured by a thin film of cloud of the cirro-stratus character: the only portion free from cloud is the S. W.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 25. 16	29·719	43·5	43·2	0·3	43·0	0·5	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·705	42·8	42·7	0·1	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·706	45·0	44·5	0·5	..	..	..	..	S by W	..	..	..	Pos.	15	20	12	12	3. 17
22	29·705	48·4	46·8	1·6	45·0	3·4	..	..	S by W	0 to 1	S	1·05	Pos.	40	40	30	25	..
Feb. 26. 0	29·702	53·5	49·7	3·8	..	..	..	..	S by E	0 to 2½	..	..	Pos.	10	7	4	..	..
2	29·670	56·6	51·7	4·9	..	..	..	..	S by E	..	..	..	Pos.	5	5	0	..	slowly
4	29·611	54·6	50·4	4·2	46·6	8·0	..	..	S by E	..	..	..	..	0	0	0	..	..
6	29·595	54·3	50·7	3·6	..	..	..	..	S by E	0 to ½	..	..	Pos.	15	20	12	12	13. 0
8	29·587	53·3	50·2	3·1	..	..	57·5 / 47·0	.. / 1·52	SSE	0 to ¼	..	..	Pos.	2	2	0	..	..
10	29·580	53·5	50·0	3·5	47·0	6·5	74·0 / 39·6	0·00	S by E	..	..	..	Pos.	30	40	20	20	1. 12
12	29·573	52·0	48·7	3·3	..	..	50·8 / 47·5	3·815	SSE	..	..	..	Pos.	10	5	5	..	1. 5
14	29·558	50·4	47·5	2·9	..	..	..	..	SSE	..	..	..	Pos.	40	30	20	20	3. 30
16	29·543	48·5	46·7	1·9	45·0	3·5	..	..	SSE	..	..	..	Pos.	10	8	5	..	2. 45
18	29·541	47·1	46·0	1·1	..	..	..	..	Calm	..	..	..	Pos.	20	20	5	10	5. 30
20	29·553	47·8	46·7	1·1	..	..	..	..	Calm	..	..	..	Pos.	10	10	3	..	2. 5
22	29·561	51·2	49·5	1·7	47·0	4·2	..	..	Calm	..	S	5·20	Pos.	12	16	8	10	6. 0
Feb. 27. 0	29·569	55·0	52·2	2·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·548	56·4	54·0	2·4	..	..	..	..	Calm	..	..	..	Pos.	15	20	13	15	8. 0
4	29·516	56·7	53·3	3·4	51·0	5·7	..	..	Calm	..	..	..	Pos.	40	..	30	30	4. 0
6	29·514	53·5	51·7	1·8	..	..	57·7	..	S by E	..	..	..	Pos.	5	5	0	..	0. 30
8	29·516	52·8	50·6	2·2	..	..	48·5	1·52	Calm	..	..	..	Pos.	40	..	30	50	4. 30
10	29·523	52·5	50·7	1·8	49·0	3·5	63·5 / 42·8	0·02	Calm	..	..	..	Pos.	40	..	40	50	..
12	29·530	53·4	50·9	2·5	..	..	51·0	3·840	Calm	..	..	..	Pos.	40	..	30	40	7. 0
14	29·530	51·0	49·4	1·6	..	..	48·5	..	Calm	..	..	..	Pos.	35	..	25	30	9. 0
16	29·532	50·0	48·6	1·4	47·5	2·5	..	..	Calm	..	..	..	Pos.	10	12	7	7	5. 0
18	29·545	48·0	47·2	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·568	49·9	48·3	1·6	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·556	53·5	51·0	2·5	48·5	5·0	..	..	Calm	..	S	3·70	Pos.	3	3	0	..	..
Feb. 28. 0	29·620	59·5	55·6	3·9	..	..	..	..	WSW	..	..	..	Pos.	35	20	20	20	1. 0
2	29·629	59·9	56·1	3·8	..	..	..	..	SSW	..	..	..	Pos.	30	0	10	10	2. 10

MINIMUM FREE THERMOMETER.
Feb. 27d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	At $14^h.25^m$ the clouds had entirely disappeared: a single streamer of the aurora was visible: two meteors were observed, the first of unusual brightness in the N. at $14^h.30^m$, the second at $14^h.38^m$: at about $15^h.10^m$ clouds came up in every direction: at present there are several clear breaks through which the stars are visible.	T D
3	..	Cirro-stratus around the horizon, and a few detached portions in other directions: the stars are very bright.	
8	..	Cirro-stratus around the horizon: scud is flying rapidly from the S. W.; light fleecy clouds and detached cirri in every other part of the sky.	T D
4	..	White cloud of no definite modification scattered around within 10° of the horizon; numerous small portions of scud are passing the other parts of the sky with great rapidity from the S.: there are some lines of cirri about the zenith, apparently motionless: a very fine morning.	G
4	..	The strength of the wind has increased considerably; the gusts are frequently to 2: the sky is covered near the horizon with white mottled cloud: scud moves quickly from the S.: the cirri, as before, are stationary.	
1	Transit	The wind has abated since 0^h, and the sky has become nearly free of cloud: at present there are only a few white clouds about: a fine blue sky.	G
4	..	Light cirri and fleecy clouds are scattered over the sky: a thin cirro-stratus obscures the N. horizon.	T D
8	In Equator.	Cirro-stratus, light fleecy clouds, and scud: the clouds began to gather at about $4^h.30^m$, and have gradually increased to the present time: gusts of wind to 2 have been blowing during the last ten minutes.	
6	..	Cirro-stratus around the horizon, and detached portions in the zenith: at 7^h a shower of rain fell: the wind is blowing in gusts to 2.	
7	..	Cirro-stratus and dark clouds, extending from the N. to the S. W. horizon, to an altitude of 45°: light cirri are scattered in several directions: the wind is blowing in gusts to 2 +: a few drops of rain have fallen at intervals, and generally the stars have shone dimly.	T D
8	..	The amount of cloud during the last half-hour has been extremely variable; at some times the amount was 5, and at other times scarcely a star was visible: at present a thin cirro-stratus covers nearly every part of the sky: the wind is blowing in gusts to $1\frac{1}{2}$.	H B
2	..	With the exception of a small part of the sky N. of the zenith, and a considerable portion near the horizon, the sky is cloudless.	
2	..	Cirro-stratus around the horizon in every direction.	
2	..	Cirro-stratus around the horizon, and also E. of the zenith.	
9	..	Cirro-stratus and scud: the clouds have been rapidly collecting during the last half-hour: a beautiful sun-rise.	H B
10	..	Cirro-stratus and fleecy clouds cover the sky, with the exception of a small portion, to no numerical extent, situated near the horizon in the N.W.	L
10	..	Overcast: cirro-stratus, fleecy clouds, and scud: a few drops of rain are falling,	
10	Transit.	,, ,, rain has been occasionally falling since the last observation.	L
10	..	,, cirro-stratus and scud.	H B
10	..	,, ,, a heavy shower of rain fell about ten minutes since.	
2	..	About $7^h.50^m$ the clouds N. of the zenith cleared away suddenly, and at present, with the exception of cirro-stratus around the horizon, the sky is cloudless.	H B
8	..	The appearance of the sky is momentarily changing; when nearly clear it clouds up suddenly, and then as suddenly the clouds nearly disappear: at present only a few of the larger stars are visible, and those appear ill defined.	G
10	..	Overcast: the night is very dark.	G
8	..	Cirro-stratus and scud: breaks in every direction.	L
0	..	Cloudless.	T D
0	..	,,	T D
7	..	Cirro-strati, cumuli, and scud in every direction, but principally S. of the zenith: the cirro-stratus began to collect shortly after 19^h, and first appeared near the S. horizon.	H B
2	..	A few white clouds are scattered about a fine blue sky: the morning is fine.	G
2	..	A few light cirri and fleecy clouds are scattered over the sky.	T D
7	..	Cumuli near the N. horizon; cirro-stratus, scud, and fleecy clouds distributed in other directions. There is an imperfect halo around the Sun.	H B

HENLEY'S ELECTROMETER.
Feb. $27^d.4^h$ and 8^h. The readings were 4° and 5° respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Feb. 28. 4	29·666	56·3	54·0	2·3	51·0	5·3	62·3			..			SW	..	..	..	Pos.	35	40	25	30	10. 0
6	29·725	53·8	51·9	1·9	..	..	44·5			1·52			SW	..	..	..	Pos.	30	30	15	20	..
8	29·765	50·0	49·4	0·6	..	..							SSW	..	..	..	Pos.	40	40	30	35	3. 0
10	29·807	48·5	48·2	0·3	48·0	0·5	78·5			0·00			WSW	..	..	..	Pos.	40	30	20	20	0. 58
12	29·851	48·0	48·2	−0·2	..	..	42·7						WSW	..	..	..	Pos.	25	30	20	20	0. 5
14	..	..	..	..	..	..				3·840			WSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	51·5						WSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	49·2			..			WSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			WSW	..	..	..	..	..	..	..	..	..
22	29·953	49·0	47·2	1·8	..	..	..			..			WSW	..	SSW	3·35	Pos.	30	30	20	20	3. 12
Mar. 1. 0	..	..	..	..	..	..	..			..			SW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..			..			SW	..	..	..	..	..	..	..	..	..
4	29·907	54·2	50·2	4·0	..	..	55·1			..			SSW	0 to 1	..	..	Pos.	15	20	12	12	1. 5
6	29·900	49·6	46·6	3·0	..	..	45·5			1·52			SSW	..	..	..	Pos.	12	15	10	10	0. 45
8	..	..	..	..	..	..							S by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	66·0			0·00			S	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	64·0						SSW	..	..	..	..	..	..	..	..	..
14	29·861	48·4	47·1	1·3	..	..				3·850			SSW	..	..	..	Pos.	7	12	6	7	3. 0
16	29·802	48·0	47·2	0·8	46·0	2·0	51·8						SSW	0 to 1½	..	..	Pos.	5	8	4	5	5. 0
18	29·796	48·0	47·6	0·4	..	..	49·5			..			SSW	..	..	..	..	0	0	0	..	..
20	29·844	49·0	48·2	0·8	..	..	..			..			SW	..	..	..	..	0	0	0	..	..
22	29·850	52·2	50·2	2·0	48·0	4·2	..			..			SW	..	SW	5·65	Pos.	20	20	12	12	1. 10
Mar. 2. 0	29·841	55·4	51·0	4·4	..	..	..			..			SSW	..	..	..	Pos.	10	12	7	7	1. 10
2	29·837	54·0	49·2	4·8	..	..	..			..			SSW	½ to 2	..	..	Pos.	10	12	7	7	1. 5
4	29·806	54·2	50·2	4·0	47·0	7·2	..			..			SW	0 to 2	..	..	Pos.	10	15	8	10	3. 0
6	29·791	51·5	48·4	3·1	..	..	56·9			..			SW	½ to 2½	..	..	Pos.	7	10	6	6	2. 0
8	29·820	47·0	43·5	3·5	..	..	43·3			1·52			SW	1 to 2½	..	..	Pos.	8	12	7	8	3. 0
10	29·844	45·0	43·7	1·3	43·0	2·0	64·0			0·00			SW	..	..	..	Pos.	5	7	4	5	2. 0
12	29·867	45·4	43·4	2·0	..	..	41·5						WSW	0 to ½	..	..	Pos.	10	12	7	7	3. 0
14	29·862	43·3	42·6	0·7	..	..				3·850			SSW	..	..	..	..	0	0	0	..	..
16	29·846	45·5	44·5	1·0	43·7	1·8	51·5						SSW	..	SSW	5·27	..	0	0	0	..	..
							49·5															
18	29·809	47·5	46·2	1·3	..	..	..			..			SW	½ to 1¼	..	..	..	0	0	0	..	..
20	29·784	49·0	47·7	1·3	..	..	..			..			SW	1 to 2½	..	..	..	0	0	0	..	..
22	29·778	52·0	49·7	2·3	48·0	4·0	..			..			SW	1½ to 4	SW	2·23	Pos.	..	2	0	..	..
Mar. 3. 0	29·775	53·4	50·5	2·9	..	..	..			..			SW	2 to 4¼	..	..	Pos.	1	1	0	..	..
2	29·747	53·8	50·2	3·6	..	..	..			..			SW	2½ to 6	..	..	Pos.	5	5	0	..	..
4	29·710	54·0	50·5	3·5	47·3	6·7	..			..			SW	1 to 4¾	..	..	..	0	0	0	..	..
6	29·681	53·0	49·9	3·1	..	..	..			..			SW	1 to 3	..	..	Pos.	2	2	0	..	..

DRY THERMOMETER.
Feb. 28d. 12h. The reading was lower than that of the Wet Thermometer.

OSLER'S ANEMOMETER.
March 2d. 5h. 10m. A gust recording a pressure of 5 lbs. took place.

RAIN.
Feb. 28d. 12h. The amount collected during the month of February in the rain-gauge No. 4 was 1in·47, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period was 0in·91.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	Overcast: cirro-stratus and fleecy clouds.	L
10	..	,, cirro-stratus and scud.	H B
0	..	Cloudless.	G
0	..	A slight haze around the horizon; with this exception the sky is cloudless.	T D
9	..	Thin cirro-stratus covers the sky, with the exception of the zenith.	L
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus: a very gloomy morning.	T D
..	..		
..	..	[various directions.	
6	Transit	Masses of finely formed cumuli are scattered over the sky: cirro-stratus in the S. and S. E.: a few breaks in	
10	..	Cirro-stratus and dark scud in every direction.	T D
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	,, ,, rain has been falling occasionally during the last hour.	
10	..	,, ,,	
10	..	,, ,,	L
8	..	Cirro-stratus and thin fleecy clouds in every direction: there are some breaks in the N. E.: the morning is calm and pleasant.	T D
4	..	Fine cumuli and fleecy clouds prevail: that portion of the sky which is free from cloud is of a fine deep blue.	
7	..	Cumuli, cirri, and some dark masses of scud: the clouds began to increase in quantity about $12^h.\ 55^m$.	T D
8	Transit	Thin cirro-stratus and scud in all directions: a few detached cumuli passing over from the S.W.; also some badly-formed cirri about the zenith: the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	The sky became nearly clear after the last observation, and continued so for about half an hour, when it became overcast, and has remained so since that time: the wind is blowing in gusts to 1.	
0	..	Rain began to fall soon after the last observation, and continued falling for about half an hour: the sky continued overcast till about twenty minutes since, when it became suddenly clear: the wind is blowing in gusts to $1\frac{1}{2}$.	
0	..	Cloudless: the wind is blowing in gusts to 1.	L
0	..	,, ,,	T D
0	..	,, ,,	
8	..	At $14^h.\ 35^m$ clouds began to gather in the W., and gradually spread themselves over the whole sky: at present a few stars are dimly visible in the zenith; and in the E. a few breaks appear, but of small extent.	
10	..	Overcast: cirro-stratus: the sky has continued overcast, with a few stars occasionally visible through the thin cirro-stratus: since the last observation the wind is blowing in gusts to 2+.	
10	..	Overcast: cirro-stratus: the sky has continued overcast since 18^h: the wind is blowing in gusts to 2+.	T D
10	..	,, cirro-stratus and scud; the latter is moving with great rapidity from the S.W.: the wind is blowing in frequent gusts to $2\frac{1}{2}$.	H B
10	..	Cirro-stratus and scud: a few breaks have been frequently seen in several directions: the gusts of wind are more frequent than at the last observation, and occasionally exceed $2\frac{1}{2}$.	
10	..	Cirro-stratus and scud: breaks of small extent constantly occur: the wind is blowing in gusts to $2\frac{1}{2}$, and these are of frequent occurrence.	H B
10	..	Cirro-stratus and scud: no breaks are visible at present: the Sun has at intervals gleamed faintly through the clouds since the last observation.	T D
9	Transit	Dark masses of scud are rapidly floating from the S.W.: cirro-stratus in the N. and N. E.: a few small breaks near the zenith: the Moon has been visible through the scud during the last half-hour: the wind is blowing in gusts to $2\frac{1}{2}$.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 3. 8	29·663	52·0	49·6	2·4	..	..	..	..	SW	0 to ¼	SW	5·35	..	0	0	0	..	..
10	29·587	51·5	49·4	2·1	47·4	4·1	54·9 / 51·9 / 58·0	.. / 1·52	SSW	½ to 2	..	..	..	0	0	0	..	..
12	29·521	51·0	48·8	2·2	..	..	49·5	0·01	SSW	¾ to 2½	..	..	..	0	0	0	..	..
14	29·464	50·5	47·4	3·1	..	..	/ 52·0		S by W	½ to 1	..	..	Pos.	2	2	0	..	..
16	29·358	50·7	46·8	3·9	43·0	7·7	50·0	3·870	S	¾ to 2¼	..	..	Pos.	8	5	0	..	9. 0
18	29·281	52·6	49·0	3·6	..	..		..	S	1 to 2½	..	..	Pos.	2	0	0	..	..
20	29·266	53·1	49·5	3·6	..	..		..	S by W	¾ to 2	..	..	Pos.	1	1	0	..	..
22	29·270	50·8	50·0	0·8	49·0	1·8	..	..	SSW	2 to 2½	SSW	4·05	..	0	0	0	..	..
Mar. 4. 0	29·326	49·0	48·0	1·0	..	..	..	..	SW	0 to 1½	..	..	..	0	0	0	..	..
2	29·319	50·5	48·9	1·6	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
4	29·331	51·3	49·2	2·1	47·5	3·8	..	..	SSW	..	..	..	Pos.	5	8	3	..	5. 30
6	29·357	48·5	46·9	1·6	..	..	..	..	SSW	..	..	..	Pos.	2	3	0	..	7. 0
8	29·378	46·0	44·9	1·1	..	..	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
10	29·393	45·2	44·2	1·0	43·0	2·2	52·1 / 43·0 / 52·5 / 42·0 / 51·0 / 49·8	1·52 / 0·14	SSW	..	..	..	..	0	0	0	..	..
12	29·396	44·8	43·9	0·9	..	..		4·055	SSW	..	..	..	..	0	0	0	..	..
14	29·399	45·3	44·2	1·1	..	..			SSW	..	..	..	..	0	0	0	..	..
16	29·390	45·0	44·2	0·8	43·0	2·0		..	SSW	..	..	..	..	0	0	0	..	..
18	29·392	45·0	44·0	1·0	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
20	29·381	45·2	44·9	0·3	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·381	47·5	47·2	0·3	47·0	0·5	..	..	SSW	..	SW	4·55	Neg.	40	..	30	50	0. 7
Mar. 5. 0	29·400	45·0	43·6	1·4	..	..	..	..	NNW	0 to ½	..	..	..	0	0	0	..	..
2	29·446	49·8	47·2	2·6	..	..	..	..	WSW	0 to ½	..	..	Pos.	20	30	12	12	1. 12
4	29·466	49·6	45·9	3·7	41·0	8·6	52·4 / 41·3 / 67·0 / 39·5 / 50·8 / 49·2	.. / 1·54 / 0·10 / 4·175	WSW	..	WSW	1·01	Pos.	..	2	0	..	..
6	29·485	47·7	44·7	3·0	..	..			SW	..	..	..	..	0	0	0	..	..
8	29·507	42·8	41·2	1·6	..	..			SW	..	..	..	Pos.	6	10	5	5	1. 0
10	29·497	41·2	40·7	0·5	40·0	1·2			S	..	..	..	Pos.	8	12	7	8	2. 30
12	29·484	42·5	42·1	0·4	..	..			S	..	..	..	Pos.	15	20	12	12	0. 53
14	29·463	43·7	43·2	0·5	..	..		..	S by W	..	..	..	Neg.	40	..	30	30	0. 3
16	29·436	43·0	42·7	0·3	42·5	0·5	..	..	SSW	..	..	..	..	0	0	0	..	..
18	29·432	41·4	40·7	0·7	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
20	29·443	41·8	40·4	1·4	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
22	29·476	43·0	41·5	1·5	40·0	3·0	..	..	SW	1 to 2	SW	3·55	Pos.	5	5	0	..	5. 0
Mar. 6. 0	29·537	44·6	41·7	2·9	..	..	..	..	WSW	1½ to 2½	..	..	Pos.	23	20	10	10	..

BAROMETER.

March 3d. 16h. The reading was 0in·106 lower than at 14h.

MINIMUM FREE THERMOMETER.

March 3d. 22h. The reading was higher than those of the Dry Thermometer at 10h, 12h, 14h, and 16h.

March 5d. 22h. The reading was higher than that of the Dry Thermometer at 10h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, through which the Moon and a few of the larger stars are visible: the wind is less violent than at the last observation, and is blowing in gusts to $1\frac{1}{2}$.	T D
10	..	Cirro-stratus: the Moon's place is dimly seen: a lunar halo was observed at about $8^h.45^m$: the wind has considerably risen during the last hour, and is blowing in gusts to 3.	
10	..	Cirro-stratus and scud: the Moon is occasionally seen: the wind is blowing in frequent gusts to 2.	
9	..	Several of the larger stars are dimly seen through the clouds: the wind is blowing in gusts to 2.	T D
9	..	Cirro-stratus, with the exception of a small portion of the sky near the zenith, where a few stars are visible: the wind is blowing in gusts to 2.	H B
$9\frac{1}{2}$	..	Cirro-stratus: since the last observation the wind has been frequently blowing in gusts to $2\frac{1}{2}$.	
10	..	,, the sky was nearly cloudless at $19^h.40^m$: the wind has considerably abated since the last observation.	H B
10	..	,, squalls of wind and rain: the wind is blowing in gusts to $2\frac{1}{2}$.	L
10	..	Cirro-stratus and scud: rain has been falling generally since the last observation: the wind is blowing in gusts to 2.	L
10	..	,, the rain ceased soon after the last observation: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	H B
10	..	Cirro-stratus: a large cloud, apparently of the cumulo-stratus character, is slowly rising from the N.: gusts of wind to 1.	
10	Transit	Cirro-stratus and scud: near the Sun's place the clouds are less dense.	
5	..	Light clouds in every direction: there is a halo around the Moon; its horizontal and vertical radii are both $23\frac{1}{2}°$.	
7	..	The halo was visible till 9^h, at which time the sky, about the place of the Moon, was most free from cloud: at $9^h.40^m$ the clouds amounted to 3: at present three-fourths of the sky are obscured; N. of the zenith there is scarcely a break.	H B
0	1st Qr.	Cloudless: at $11^h.40^m$ the southern portion of the sky was covered with fleecy clouds.	L
10	..	Cirro-stratus and scud: the sky became suddenly covered by cloud at about $13^h.15^m$; and at $13^h.28^m$ rain began to fall, which has since ceased.	
10	..	Cirro-stratus and scud: slight rain is falling occasionally.	
3	..	Rain has continued falling occasionally since the last observation: at $17^h.25^m$ the clouds dispersed, and at present three-tenths of the sky are covered.	
10	..	Cirro-stratus and scud: rain falling slightly; there was rather a heavy shower at $19^h.30^m$, and it ceased at $19^h.40^m$: rain has been falling generally since the last observation.	L
10	..	Cirro-stratus: at $9^h.30^m$ a heavy shower of rain began to fall, and continued until 10^h; at present no rain is falling.	T D
10	Greatest declination N.	Cirro-stratus and scud: very gloomy.	H B
9	..	No rain has fallen since the last observation: dark masses of scud have been constantly passing over from the W., with some scattered cumuli: at present the Sun is shining through a thin cloud of the cirro-stratus character; and clouds of the same modification extend themselves around the horizon: the only clear portions of the sky are the S.W. portions and the zenith.	T D
4	..	Cumuli around the horizon: fleecy clouds and cirro-stratus towards the S.	L
3	..	Cirro-stratus and a few cumuli towards the N.: some fleecy clouds about the zenith and towards the S. horizon.	
0	Transit	The sky became covered with thin cirro-stratus about ten minutes after the last observation, and continued so for about twenty minutes, after which it became generally clear.	
7	..	Fleecy clouds in all directions: occasionally a part of a halo has been visible around the Moon.	L
8	..	Cumuli, cirri, fleecy clouds, and scud in every direction: the Moon is surrounded by a thick haze: several stars are visible through the clouds, which are less dense in some places than in others.	T D
10	..	Cirro-stratus: rain falling, which commenced at $13^h.20^m$; a few minutes since a violent squall occurred; and the electrical instruments were affected.	
10	..	Cirro-stratus: the rain has ceased.	
6	..	Cirro-stratus around the horizon: clear in the E.: rain has been falling at intervals since the last observation.	
5	..	Cirro-stratus, extending from the S.W. to the N. E. horizon, to an altitude of about 40°; cirri and light clouds spread in detached portions over the other part of the sky: the wind is blowing in gusts to $1\frac{1}{2}$.	T D
10	..	Cirro-stratus and scud: frequent gusts of wind to $1\frac{1}{2}$ and 2.	H B
10	..	Cirro-stratus and scud moving rapidly from the W. S.W.: rain falling slightly.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 6. 2	29·582	49·0	42·7	6·3	..	..	..	..	W	1 to 2½	..	..	Pos.	25	20	10	10	6. 0
4	29·613	50·5	44·7	5·8	39·0	11·5	..	..	WSW	¾ to 1	..	..	Pos.	10	12	7	7	0. 50
6	29·623	47·0	42·7	4·3	..	..	51·1	..	WSW	..	..	..	Pos.	2	2	0	..	..
8	29·636	44·9	42·7	2·2	..	..	43·3 / 65·0	1·54	SW	0 to 1	..	..	..	0	0	0	..	..
10	29·633	43·7	41·7	2·0	39·0	4·7	42·0	0·05	SW	0 to ¾	..	..	..	0	0	0	..	..
12	29·629	43·2	41·5	1·7	..	..	50·2	4·240	SSW	..	..	..	Pos.	23	20	10	10	..
14	29·626	44·8	42·7	2·1	..	..	48·0	..	SW	½ to 1½	..	..	..	0	0	0	..	..
16	29·612	45·0	43·1	1·9	41·5	3·5	..	..	SW	..	..	..	..	0	0	0	..	..
18	29·605	44·2	43·3	0·9	..	..	..	..	SW	..	..	..	Pos.	2	2	0	..	..
20	29·611	43·7	42·7	1·0	..	..	..	..	SW	..	..	..	Pos.	5	3	0	..	1. 0
22	29·625	45·5	44·2	1·3	43·0	2·5	..	..	SW	..	SW	6·30	..	0	0	0	..	..
Mar. 7. 0	29·630	49·2	46·7	2·5	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
2	29·623	49·7	44·5	5·2	..	..	..	..	SSE	..	..	..	Pos.	20	30	18	20	3. 0
4	29·609	49·8	44·0	5·8	36·0	13·8	..	..	SSE	..	..	..	Pos.	40	30	15	10	6. 30
6	29·620	47·5	43·1	4·4	..	..	50·1 / 35·8 / 60·5	.. / 1·54 / 0·05	SSW	..	..	..	Pos.	40	30	20	20	5. 0
8	29·657	44·2	41·5	2·7	..	..	30·0 / 49·2	4·240	S by E	..	..	..	Pos.	40	40	20	20	6. 30
10	29·679	42·2	39·4	2·8	36·0	6·2	47·2	..	Calm	..	..	..	Pos.	40	40	25	25	10. 0
12	29·700	40·0	37·2	2·8	..	..	..	..	Calm	..	..	..	Pos.	40	..	40	60	3. 0
14	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
22	29·885	42·0	39·9	2·1	..	..	..	..	WSW	..	SSW	1·50	Pos.	8	10	7	8	2. 0
Mar. 8. 0	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	W by N	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	48·4	..	WNW	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	31·8	1·54	WNW	..	..	..	..	..	..	..	..	..
8	29·914	41·5	38·2	3·3	..	..	..	..	SW	..	..	..	Pos.	30	40	25	30	8. 0
10	..	..	..	..	..	..	55·7	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	27·5	..	Calm	..	..	..	..	..	..	..	..	..
14	29·908	36·2	35·4	0·8	..	..	..	4·240	Calm	..	..	..	Pos.	10	15	8	10	4. 0
16	29·910	34·0	32·2	1·8	30·0	4·0	49·5	..	Calm	..	..	..	Pos.	17	25	15	15	5. 0
18	29·949	33·0	31·4	1·6	..	..	47·2	..	Calm	..	..	..	Pos.	25	30	18	20	2. 0
20	29·998	31·8	31·7	0·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	35	40	3. 20
22	30·052	39·5	37·7	1·8	34·8	4·7	..	..	Calm	..	NNW	1·75	Pos.	40	40	30	30	3. 12
Mar. 9. 0	30·094	47·3	43·1	4·2	..	..	..	..	Calm	..	..	..	Pos.	40	..	35	40	4. 0
2	30·103	47·3	42·6	4·7	..	..	..	..	Calm	..	..	..	Pos.	40	..	30	30	5. 0

MINIMUM FREE THERMOMETER.
March 6d. 22h. The reading was higher than that of the Dry Thermometer at 12h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
1	..	The clouds became broken shortly after 1^h: a large cumulus near the N. E. horizon, and fleecy clouds S. of the zenith: the wind is blowing in frequent gusts to 2.	H B
5	..	Cirro-stratus spread over a large portion of the sky in the N. and N. E.; the S. is beautifully clear: some cirri and light fleecy clouds in the W. and about the zenith.	
3	..	Cirro-stratus around the horizon, at a low altitude: some light cirri in the W.; the remainder of the sky is very clear.	
7	Transit	The sky became covered at about $7^h.\ 30^m$ with a thin cloud of the cirro-stratus character, through which a few stars are visible in the zenith: a very fine lunar halo is visible.	
$4\frac{1}{2}$	..	Cirro-stratus in the horizon, extending from the E. to S.W.: the wind is blowing in gusts to 2.	
10	..	Cirro-stratus and scud: a few breaks around the zenith: at $11^h.\ 30^m$ cirro-stratus prevailed around the horizon only to the amount of 5, which has increased in density and amount to the present time: the Moon's place is visible.	
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	,, rain commenced falling at $16^h.\ 20^m$.	
10	..	,, the rain has continued falling since the last observation.	
10	..	,, a few small breaks around the zenith, but to no numerical extent.	H B
10	..	,, a few drops of rain fell about $21^h.\ 50^m$.	L
10	..	Cirro-stratus and fleecy clouds cover the sky: the clouds are very thin about the zenith, with occasional small breaks about the Sun's place.	
10	..	Cirro-stratus and fleecy clouds: a few small breaks about the zenith, but to no numerical extent.	L
8	..	Cirro-stratus in every direction, in some places less dense than in others; several cumuli are also visible near the N. and W. horizon.	H B
6	..	Cirro-stratus, scud, and vapour in various directions: cumuli in the N. and S. horizon: in the N. N. E. the sky is free from cloud, but in the N. N.W. it is very hazy: the clouds near the W. horizon are beautifully tinged by the setting Sun.	
$9\frac{1}{2}$	Transit	Cirro-stratus and dark scud; the latter is moving slowly from the N.: near the N. horizon the sky is cloudless. Since the last observation the Moon has been frequently visible, but at present she is obscured by dark scud.	
0	..	Cloudless, with the exception of a few light clouds near the S.W. horizon: very hazy: a slight fog.	H B
0	..	A slight fog.	L
..	..		
..	..		
..	..		
..	..		
4	..	Cumuli around the horizon, and detached cumuli and scud in various directions.	
..	..		
..	..		
..	..		
..	..		[ment.
10	Apogee	Cirro-stratus, fleecy clouds, and scud: the Moon is occasionally surrounded by a halo, but too faint for measure-	
..	Transit		
..	..		
2	..	A bank of fleecy clouds near the W.; the sky is clear elsewhere.	
0	..	Cloudless.	
0	..	A slight fog.	
0	..	Cloudless: a thick fog: the Astronomical Observatory is not visible from the Magnetic Observatory.	L
0	..	,, the fog has become less dense during the last hour.	T D
0	..	Cloudless: with the exception of a thin haze prevailing in the W. the fog has wholly disappeared.	
8	..	At $0^h.\ 30^m$ a dark cirro-stratus cloud came up from the W., and now covers the greater portion of the sky: in the N. E. there are some fine rocky cumuli with a singular streak of blue sky, extending from the N. N. E. to E.: the whole aspect of the sky is very gloomy.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 9. 4	30·115	47·8	43·0	4·8	39·0	8·8	..		..	..			Calm	..	..	..	Pos.	7	10	5	5	1. 30
6	30·134	46·5	41·4	5·1	..	..	48·4		..	..			Calm	..	..	..	Pos.	5	5	3	4	0. 30
8	30·170	42·4	39·5	2·9	..	..	36·3			1·54			Calm	..	..	..	Pos.	40	35	25	25	4. 0
10	30·177	41·7	39·4	2·3	38·0	3·7							Calm	..	..	..	Pos.	40	..	40	50	1. 0
12	30·204	42·6	40·2	2·4	..	..	73·5			0·00			Calm	..	..	..	Pos.	25	20	12	12	5. 0
14	30·211	40·5	39·1	1·4	..	..	31·8						Calm	..	..	..	Pos.	38	30	20	20	1. 0
16	30·219	39·2	38·0	1·2	36·0	3·2	49·0			4·245			Calm	..	..	..	Pos.	37	30	20	20	2. 0
18	30·237	37·4	36·7	0·7	..	..	46·5			..			Calm	..	..	..	..	0	0	0	0	..
20	30·258	36·5	36·2	0·3	..	..	..		..	..			Calm	..	..	..	Pos.	40	40	25	25	3. 0
22	30·281	40·2	39·5	0·7	38·0	2·2	..		..	..			Calm	..	W	0·15	Pos.	30	35	20	25	0. 40
Mar. 10. 0	30·297	45·2	43·7	1·5	..	..	..		..	..			Calm	..	..	..	Pos.	5	5	2	3	..
2	30·289	47·7	45·7	2·0	..	..	..		..	..			Calm	..	..	..	..	0	0	0	..	..
4	30·265	52·7	47·2	5·5	42·0	10·7	..		..	..			Calm	..	..	..	..	0	0	0	..	..
6	30·265	48·8	44·9	3·9	..	..	..		..	..			Calm	..	..	..	Pos.	28	20	12	12	4. 30
8	20·260	43·8	41·7	2·1	..	..	..		..	..			Calm	..	..	..	Pos.	40	..	30	30	1. 0
10	30·262	41·7	39·8	1·9	37·0	4·7	52·3			..			SSW	..	..	..	Pos.	40	..	30	27	1. 27
12	30·275	40·5	38·9	1·6	..	..	38·8			1·54			SW	..	..	..	Pos.	15	20	5	..	2. 0
							59·5			0 00												
							35·2															
14	30·274	39·3	38·2	1·1	..	..	47·0			4·245			Calm	..	..	..	Pos.	15	20	5	..	1. 0
							45·5															
16	30·254	38·7	38·5	0·2	38·0	0·7	..		..	..			Calm	..	..	..	Pos.	15	20	5	..	..
18	30·276	38·7	38·5	0·2	..	..	..		..	..			Calm	..	..	..	Pos.	15	20	5	..	..
20	30·295	39·8	39·5	0·3	..	..	..		..	..			Calm	..	..	..	Pos.	5	5	0	..	6. 0
22	30·318	45·2	44·2	1·0	43·0	2·2	..		..	..			Calm	..	SW	1·52	Pos.	7	7	5	5	3. 0
Mar. 11. 0	30·337	49·0	45·4	3·6	..	..	..		..	..			WSW	..	..	..	Pos.	8	10	6	7	2. 0
2	30·370	51·4	47·2	4·2	..	..	..		..	..			WSW	..	..	..	Pos.	15	15	10	10	3. 0
4	30·375	51·3	47·2	4·1	42·5	8·8	52·7			..			Calm	..	..	..	Pos.	2	2	0	..	..
6	30·400	47·7	45·3	2·4	..	..	37·3			1·54			Calm	..	..	..	Pos.	30	30	10	10	3. 0
8	30·437	41·8	40·2	1·6	..	..							Calm	..	..	..	Pos.	40	40	20	25	4. 0
10	30·447	41·2	40·0	1·2	38·5	2·7	68·5			0·00			Calm	..	..	..	Pos.	40	40	20	20	3. 0
12	30·463	40·2	39·0	1·2	..	..	31·6						Calm	..	..	..	Pos.	25	25	15	20	4. 0
14	30·476	37·2	37·2	0·0	..	..	47·0			4·245			Calm	..	..	..	Pos.	25	30	20	20	3. 0
16	30·472	39·0	38·7	0·3	38·0	1·0	46·0						Calm	..	..	..	Pos.	15	20	12	15	2. 0
18	30·503	40·5	40·2	0·3	..	..	..		..	..			Calm	..	..	..	Pos.	10	15	8	8	3. 0
20	30·503	42·3	41·9	0·4	..	..	..		..	..			Calm	..	..	..	Pos.	20	20	15	15	5. 0
22	30·530	44·5	44·5	0·0	44·7	−0·2	..		..	..			Calm	..	W	0·30	Pos.	30	25	17	17	3. 30
Mar. 12. 0	30·529	48·3	47·0	1·3	..	..	51·6			..			Calm	..	..	..	Pos.	12	10	7	7	5. 0
2	30·503	50·0	48·8	1·2	..	..	36·0			1·54			Calm	..	..	..	Pos.	20	15	10	10	5. 0
4	30·474	48·5	46·5	2·0	45·0	3·5	57·5						Calm	..	..	..	Pos.	12	15	8	10	4. 0
6	30·458	47·8	46·2	1·6	..	..	34·5			0·00			Calm	..	..	..	Pos.	30	35	20	25	3. 20
8	30·457	45·8	44·0	1·8	..	..							Calm	..	..	..	Pos.	15	20	12	15	2. 30
10	30·453	44·4	42·6	1·8	41·0	3·4	47·5			4·245			Calm	..	..	..	Pos.	20	20	13	17	4. 0
							46·0															

DEW POINT THERMOMETER.

March 11d. 22h. The reading was higher than that of the Dry Thermometer.

MAXIMUM FREE THERMOMETER.

March 10d. 22h. The reading was lower than that of the Dry Thermometer at 4h, but the latter number seems to be wrong, in comparison with the readings at 2h and at 6h, as well as by the order of the numbers in the column "Wet Thermometer below Dry Thermometer;" it was, however, considered that there is not sufficient evidence for alteration of the numbers, and they have been used as recorded above in subsequent calculations.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	At $2^h.\ 15^m$ the sky became completely covered with a dense cirro-stratus, particularly in the S.: a thick fog in every direction: cirro-stratus covers the sky, except in and around the zenith.	L
3	..	Cirro-stratus around the horizon: a few cirri about the zenith: the fog is less dense.	L
7	..	Cirro-stratus and thick fog prevail around the horizon; the zenith is clear.	T D
10	Transit	Cirro-stratus and fleecy clouds cover the sky: a very slight fog prevails towards the N.	L
10	..	Cirro-stratus.	T D
7	..	Cirro-stratus, scud, and fleecy clouds in every direction, through which stars are seen: the Moon is enveloped in a mass of cloud of the cumulus character.	
4	..	Cirri and light clouds in the W., and some fragments of the same class are scattered about the zenith.	
5	..	Cirro-stratus in the western horizon, extending to the S. E. and also in the N. E.: the remainder of the sky is clear.	
2	..	Cirro-stratus and haze around the horizon.	T D
0	..	Cloudless and hazy.	L
0	..	Cloudless and hazy.	
10	..	A very thin cirro-stratus covers the sky, through which the Sun is shining; blue sky is visible above it: a thin fog.	L
4	..	Hazy in the horizon; the sky is otherwise clear.	T D
0	..	Cloudless: hazy in the horizon.	
0	..	,,	
4	..	Lines of cirrus are spread about the sky in every direction, and this is the only cloud that prevails.	T D
4	Transit	There are lines of thin white cloud crossing the zenith, and on both sides of it, running N. and S.: a kind of white cloud is around the horizon, to the height of 10°; the remainder of the sky is principally clear, yet, nevertheless, a faint corona is around the Moon, and at times a very faint halo is visible, at the distance of 23° from the Moon: a very fine night.	G
5	..	The only change in the appearance of the sky since 12^h is the collecting of a larger quantity of cloud, of a more dense character, in the eastern hemisphere, the line of cloud across the zenith remaining the same as at the last observation.	
10	..	At $14^h.\ 23^m$ the clouds had reached the zenith, and shortly after that time the Moon was partially covered by them, but continued shining until $15^h.\ 15^m$; at this time the whole sky became covered with a dark cirro-stratus.	
8	..	The zenith and parts around it to the distance of 10° are clear; every other part of the sky is covered with cirro-stratus.	
10	..	Since $18^h.\ 40^m$ the sky has been wholly covered with a thin cloud.	G
10	..	Cirro-stratus and scud.	L
10	..	Cirro-stratus and scud.	L
9	..	Thin cirro-stratus in every direction, through which blue sky is visible: a few badly formed cirri about the zenith.	G H
10	..	Cirro-stratus, fleecy clouds, and scud.	L
7	..	The sky about the zenith is clear, the remainder of the sky being covered by fleecy clouds and scud.	G
3	..	A few clouds are about the N. and E.; also about the horizon: the remainder of the sky is clear: misty.	
0	..	Very nearly cloudless, the amount of cloud not being to any numerical extent: a corona around the Moon.	G
0	Transit	Cloudless: slight haze: there is an occasional glory around the Moon.	L
4	..	Cirro-stratus and fleecy clouds, more particularly towards the W.	
10	..	Cirro-stratus and scud: the clouds began to gather soon after the last observation.	
10	..	,,	
10	..	,,	L
10	..	,,	T D
10	..	Cirro-stratus and scud.	
10	..	Cirro-stratus.	T D
10	..	Cirro-stratus and scud.	L
10	..	Cirro-stratus and scud of various densities: the cloud is very thin about the zenith.	
10	..	Cirro-stratus and scud.	
5	..	At $9^h.\ 50^m$ the sky was quite covered with cirro-stratus, fleecy clouds, and scud: the clouds in the N. have suddenly dispersed, and the other portions of the sky are quite clear: the sky at present is perfectly clear, with the exception of a bank of fleecy clouds towards the S. E. horizon.	L

MINIMUM FREE THERMOMETER.

March $10^d.\ 22^h$. The reading was higher than those of the Dry Thermometer at 16^h and 18^h.

March $11^d.\ 22^h$. The reading was higher than that of the Dry Thermometer at 14^h.

ELECTRICITY.

March $9^d.\ 8^h$ and 20^h. There were sparks at the distance of $0^{in}.02$:

March $10^d.\ 8^h$ and 10^h. There were sparks at the distance of $0^{in}.02$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 12. 12	30·442	40·3	39·7	0·6	..	..	..	..	Calm	..	..	..	Pos.	40	..	30	30	1. 0
14	30·423	37·3	36·8	0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	30·378	37·0	36·7	0·3	36·0	1·0	..	..	SSW	..	..	..	..	0	0	0	..	..
18	30·367	36·6	36·2	0·4	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
20	30·352	39·0	38·8	0·2	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
22	30·353	45·0	43·9	1·1	43·0	2·0	..	..	WSW	..	SSW	1·58	..	0	0	0	..	..
Mar. 13. 0	30·359	47·2	45·0	2·2	..	..	..	..	SW	½ to 2	..	..	..	0	0	0	..	..
2	30·296	50·0	47·5	2·5	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
4	30·274	51·2	48·0	3·2	44·6	6·6		..	SW	0 to 1	..	..	..	0	0	0	..	..
6	30·268	50·4	47·4	3·0	..	..	52·3 / 45·3	..	SW	..	..	..	..	0	0	0	..	..
								1·54										
8	30·268	48·7	46·2	2·5	..	..			WSW	..	..	..	Pos.	15	12	7	7	4. 0
10	30·251	46·4	44·8	1·6	43·0	3·4	57·0 / 45·0	0·05	SW	..	..	..	Pos.	40	..	30	30	1. 0
12	30·237	45·4	44·6	0·8	..	..			SW	..	..	..	Pos.	15	..	10	..	5. 0
14	30·212	45·0	44·4	0·6	..	..		4·280	SW	..	..	..	Pos.	5	..	5	..	10. 0
16	30·158	45·5	44·8	0·7	44·0	1·5	47·5 / 46·0	..	SW	..	..	..	..	0	0	0	..	..
18	30·127	45·6	45·3	0·3	..	..		..	SW	..	..	..	Pos.	3	3	0	..	3. 0
20	30·079	46·0	45·7	0·3	..	..	..	..	SW	½ to 1	..	..	..	0	0	0	..	..
22	30·051	47·5	46·2	1·3	45·0	2·5	..	..	WSW	1½ to 2½	SW	5·60	..	0	0	0	..	..
Mar. 14. 0	30·013	51·0	49·0	2·0	..	..	..	..	SW	¾ to 4	..	..	..	0	0	0	..	..
2	29·942	54·0	50·2	3·8	..	..	..	..	WSW	3 to 5	..	..	..	0	0	0	..	..
4	29·903	54·3	49·8	4·5	45·0	9·3	..	..	WSW	2 to 6	..	..	..	0	0	0	..	..
6	29·906	52·2	49·0	3·2	..	..	56·1 / ~~47·0~~	..	WSW	3 to 5	..	..	..	0	0	0	..	..
								1·54										
8	29·910	50·6	48·0	2·6	..	..			WSW	1 to 2	..	..	Pos.	15	12	5	..	..
10	29·911	49·8	48·2	1·6	46·0	3·8	63·5 / 49·0	0·05	WSW	0 to ¾	..	..	Pos.	7	7	0	..	..
12	29·882	49·6	48·2	1·4	..	..			WSW	0 to ½	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	48·2 / 46·2	4·310	WSW	0 to 2	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		..	WSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..
22	29·898	46·5	46·7	–0·2	..	..	..	..	NNW	..	WSW	7·50	..	0	0	0	..	..
Mar. 15. 0	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	WSW	..	WNW	0·65	..	..	..	..	..	..
4	29·853	55·5	51·7	3·8	..	..	56·3	..	WSW	0 to ½	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	46·3		WSW	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		1·56	SW	½ to 1½	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	63·6	0·00	SW	0 to 1	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	46·2		SW	0 to 2	..	..	..	..	..	..	..	..
14	29·677	47·2	44·0	3·2	..	..		4·315	SW	1 to 3	..	..	..	0	0	0	..	..
16	29·599	47·0	43·7	3·3	40·0	7·0	48·5		SW	1½ to 3½	..	..	..	0	0	0	..	..
18	29·552	47·0	43·9	3·1	..	..	47·0	..	SW	1 to 4	..	..	..	0	0	0	..	..
20	29·498	47·2	43·9	3·3	..	..	..	..	SW	1½ to 3½	..	..	..	0	0	0	..	..
22	29·433	50·3	46·0	4·3	41·5	8·8	..	..	SW	3 to 6	WSW	7·00	Pos.	2	2	0	..	..
Mar. 16. 0	29·346	53·3	48·6	4·7	..	..	..	..	SW	1½ to 6	..	..	Pos.	3	5	0	..	..
2	29·279	52·5	48·2	4·3	..	..	..	..	SW	3 to 7	..	..	Neg.	2	2	0	..	..

MINIMUM FREE THERMOMETER.

March 13d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

OSLER'S ANEMOMETER.

March 15d. 14h. 50m. A gust recording a pressure of 4½ lbs. took place; and at 23h. 20m, a gust of nearly 10 lbs. pressure was recorded.

March 16d. 3h. 10m. A gust recording a pressure of 11 lbs. took place.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	Transit	Cloudless.	T D
0	In Equator	,,	
0	Full	,,	
0	..	,,	
0	..	,,	T D
10	..	Cirro-stratus and fleecy clouds, of various densities, cover the sky.	L
10	..	Cirro-stratus and scud.	
10	..	,, the wind is blowing in gusts to $\frac{1}{2}$.	L
10	..	,,	T D
10	..	,, at $4^h.30^m$ and at $5^h.20^m$ the clouds became broken in several directions, and there were gleams of sunshine.	
10	..	Cirro-stratus and scud.	
10	..	,, the Moon has been occasionally visible through the clouds since the preceding observation.	T D
10	..	Cirro-stratus and scud, very dense.	G H
10	Transit	,,	
10	..	,, the wind is blowing in gusts to $\frac{1}{2}$.	
10	..	Rain is falling heavily: the clouds are very dense.	
10	..	The rain has ceased: cirro-stratus and scud are rapidly moving from the S.W.	G H
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	Cirro-stratus and scud: the wind is blowing in gusts to 1.	
10	..	,, the wind is blowing in gusts to 2.	
10	..	Cirro-stratus, scud, and fleecy clouds.	L
10	..	Cirro-stratus and dark masses of flying scud: the wind has risen considerably during the last half-hour, and in gusts to 3 and 4.	T D
10	..	Cirro-stratus and masses of dark scud: the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	G
10	..	,, the wind is blowing in gusts to 2.	G
10	..	Cirro-stratus and scud: the Moon was occasionally visible through the clouds: some drops of rain have been falling: the wind is blowing in gusts to $\frac{3}{4}$.	L
..	Transit		
..	..		
..	..		
..	..		
..	..	Overcast: cirro-stratus: rain commenced falling at $20^h.30^m$, and continued until $21^h.10^m$, when it ceased for a few minutes; shortly afterwards it began to fall again, and continues falling.	T D
..	..		
..	..		
10	..	Overcast, cirro-stratus, and scud: no rain has fallen since 0^h.	T D
..	..		
..	..		
..	..		
..	..		
10	Transit	Cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$	L
10	..	,, the wind is blowing in occasional gusts to $1\frac{1}{2}$ and 2.	
10	..	,, the wind is blowing in occasional gusts to $\frac{1}{2}$ and 2.	
10	..	Cirro-stratus, scud, and fleecy clouds moving quickly from the W.: there are a few occasional small breaks about the zenith: the wind is blowing in gusts to 2.	L
9	..	Cirro-stratus and scud in every direction; the former is more dense near the S. horizon than in other places: the wind is blowing in frequent gusts to $2\frac{1}{2}$.	H B
9	..	Cirro-stratus and quickly-moving scud: the wind is blowing less frequently in gusts to 2.	
10	..	Cirro-stratus and dark scud: the wind is blowing in gusts to $2\frac{1}{2}$.	

ELECTRICITY.

March $13^d.10^h$. There was a spark at the distance of $0^{in}.02$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	°	in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 16. 4	29·214	50·5	46·9	3·6	44·0	6·5	..	..	..			SW	3 to 9½	..	..	..	0	0	0	..	..
6	29·213	43·6	43·0	0·6	..	..	..	..	..			WSW	1 to 3½	..	..	Neg.	25	30	20	20	0. 30
8	29·175	43·8	41·9	1·9	..	..	55·4					SW	1 to 2½	..	..	..	0	0	0	..	..
10	29·170	41·6	39·2	2·4	37·0	4·6	32·0					SW	½ to 1½	..	..	Pos.	10	10	6	8	3. 0
12	29·147	40·7	38·7	2·0	..	..			1·63			SW	1 to 2	..	..	Pos.	30	20	8	10	11. 30
							64·5			0·11											
							31·4														
14	29·154	38·5	36·2	2·3	..	..	49·0		4·455			WSW	½ to 2	..	..	Pos.	25	20	10	10	8. 0
							46·8														
16	29·182	36·6	35·0	1·6	33·0	3·6	..	..	..			WSW	0 to ½	..	..	Pos.	25	20	10	10	10. 0
18	29·227	34·5	33·3	1·2	..	..	..	..	..			WSW	..	..	..	Pos.	40	35	20	20	9. 30
20	29·272	35·3	34·5	0·8	..	..	..	..	..			SW	..	..	..	Pos.	35	30	20	20	9. 0
22	29·307	42·2	39·8	2·4	37·0	5·2	..	..	..			SW	..	WSW	8·30	Pos.	40	35	25	25	2. 0
Mar. 17. 0	29·312	43·9	39·5	4·4	..	..	..	..	..			Calm	..	..	..	Pos.	25	20	12	12	4. 0
2	29·300	45·3	40·2	5·1	..	..	..	..	..			Calm	..	..	..	Pos.	28	20	12	12	4. 0
4	29·295	44·5	38·7	5·8	28·0	16·5	..	..	..			Calm	..	..	..	Pos.	30	30	20	20	7. 0
6	29·311	43·0	38·5	4·5	..	..	..	..	..			Calm	..	..	..	Pos.	40	40	20	25	9. 30
8	29·336	38·2	34·4	3·8	..	..	..	..	..			Calm	..	..	..	Pos.	40	..	20	20	8. 30
							46·4														
							29·5														
10	29·335	36·5	32·6	3·9	26·5	10·0			1·63			Calm	..	..	..	Pos.	20	20	10	10	8. 0
							55·8			0·00											
12	29·350	34·3	31·0	3·3	..	..	22·0					Calm	..	..	..	Pos.	38	..	20	20	1. 0
									4·460												
14	29·361	32·0	30·2	1·8	..	..	48·5					Calm	..	..	..	Pos.	40	..	20	20	2. 0
							46·2														
16	29·361	31·3	29·2	2·1	23·5	7·8	..	..	..			Calm	..	..	..	Pos.	40	..	27	27	0. 35
18	29·378	30·0	28·7	1·3	..	..	..	..	..			Calm	..	..	..	Pos.	35	30	18	18	5. 0
20	29·397	31·6	30·0	1·6	..	..	..	..	..			Calm	..	..	..	Pos.	40	35	25	25	1. 0
22	29·427	35·6	32·8	2·8	30·0	5·6	..	..	..			Calm	..	N	0·25	Pos.	40	..	40	50	6. 0
Mar. 18. 0	29·427	40·5	35·5	5·0	..	..	..	..	..			Calm	..	..	..	Pos.	15	18	12	15	4. 0
2	29·429	42·5	36·7	5·8	..	..	..	..	..			Calm	..	..	..	Pos.	10	10	6	8	3. 0
4	29·416	41·9	35·7	6·2	27·5	14·4	43·9		..			Calm	..	..	..	Pos.	40	40	30	30	2. 0
6	29·418	40·3	35·9	4·4	..	..	28·0					Calm	..	..	..	Pos.	27	20	12	12	4. 0
8	29·422	38·0	34·2	3·8	..	..			1·63			Calm	..	..	..	Pos.	40	..	30	30	1. 0
10	29·434	36·2	33·4	2·8	29·5	6·7	56·0					Calm	..	..	..	Pos.	40	..	50	60	5. 0
12	29·442	33·8	31·7	2·1	..	..	23·4			0·00		Calm	..	..	..	Pos.	40	30	15	20	7. 0
14	29·428	31·5	31·0	0·5	..	..						Calm	..	..	..	Pos.	28	30	23	25	3. 0
16	29·430	30·5	29·2	1·3	27·0	3·5	48·0		4·460			Calm	..	..	..	Pos.	40	30	20	20	11. 0
18	29·433	28·5	27·9	0·6	..	..	46·0		..			Calm	..	..	..	Pos.	30	30	15	15	13. 0
20	29·459	30·9	32·2	−1·3	..	..	..	..	..			Calm	..	..	..	Pos.	40	..	30	30	1. 0
22	29·483	31·0	32·1	−1·1	23·0	8·0	..	..	..			Calm	..	N	0·57	Pos.	40	..	12	20	..
Mar. 19. 0	29·483	38·0	32·2	5·8	..	..	..	..	..			Calm	..	..	..	Pos.	25	30	18	20	15. 0
2	29·461	40·2	37·0	3·2	..	..	..	..	..			Calm	..	..	..	Pos.	30	25	12	15	8. 0

DRY THERMOMETER.

March 18d. 20h and 22h. The readings were lower than those of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

March 16h. 22h. This reading was recorded as 42°, which is evidently wrong, as the reading at 18h was 34° ·5; it is altered conjecturally to 32° ·0: this latter number has been used in subsequent calculations.

ELECTRICITY.

March 17d. 8h. There was a spark at the distance of 0in·01.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and dark scud: the wind is blowing occasionally to 4.	H B
10	..	Cirro-stratus: at $4^h.\ 50^m$ rain began to fall heavily, accompanied with hail; the latter only continued for about three minutes, but the rain continues: the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	L
10	..	Cirro-stratus and scud: the rain ceased at about $6^h.\ 20^m$: the wind is blowing in gusts to $2\frac{1}{2}$.	
10	..	,, the wind is blowing in gusts from $1\frac{1}{2}$ to 2.	L
8	..	Heavy squalls of rain have been falling since the last observation, and during the last half-hour the gusts of wind have rarely exceeded $1\frac{1}{2}$: the sky, which had become overcast at 10^h, was slightly different at $11^h.\ 40^m$, when the clouds N. of the zenith were broken, and several stars became visible: there is an auroral light from the N. E. to N. N. W.	H B
0	..	The breaks in the clouds gradually extended since the last observation: at present every part of the sky is cloudless: the auroral light has disappeared.	
9	Transit	The sky remained cloudless until $15^h.\ 40^m$, until which time cirro-stratus and scud rapidly collected, and at present covers the sky: the auroral light again became visible at $15^h.\ 10^m$, but at present is invisible.	
0	..	Cloudless.	
4	..	Light cirri in every direction: cirro-stratus around the horizon: a fog.	H B
10	..	Cirro-stratus and fleecy clouds cover the sky.	T D
8	..	Thin cirro-stratus around the horizon: fleecy clouds in the zenith; some clear breaks in the W.	
10	..	Cirro-stratus, with some light scud in several directions.	T D
9	..	Cirro-stratus, cumulo-stratus, and dark scud; the latter is coming up slowly from the W.	H B
4	..	Cirro-stratus, cumulo-stratus, and dark scud; the latter near the horizon, and the two former scattered in every direction.	
5	..	Cirro-stratus and dark scud all along the W. horizon; in other places a thin cirro-stratus prevails: a large portion of the sky is clear E. of the zenith: the clouds appear to move from the N. N.W: the sky has been nearly covered since the last observation.	
5	..	Cirro-stratus in large quantities S. of the zenith, and also near the horizon: the sky has been generally covered since the last observation.	H B
6	..	Cirro-stratus in the W., extending to 45° in height; the same modification of cloud around the horizon: the stars are indistinct in the zenith.	T D
7	..	Cirro-stratus around the horizon; detached portions are distributed over the whole sky: the Moon is enveloped in a mass of cirro-stratus and haze.	L
3	Transit	Lines of cirri extend around the horizon: cirro-stratus of a more dense character near the Moon; the remainder of the sky is clear.	
4	..	Cirro-stratus and haze in the horizon, particularly in the W.	L
7	..	Cirro-stratus, fleecy clouds, and some portion of light scud: blue sky is visible in the zenith through the clouds: the upper arc of a solar halo is visible; its radius, from the mean of two measures, is $23\frac{1}{2}°$.	T D
10	..	Thin cirro-stratus: the halo is still visible.	L
10	..	Thin cirro-stratus: the halo is now invisible, and was seen last at $23^h.\ 50^m$.	
10	..	Thin cirro-stratus and scud.	L
10	..	Thin cirro-stratus.	T D
10	..	,,	
10	..	,, a thin fog prevails in the low grounds of the Park.	T D
10	..	Overcast: very dark.	G
9	..	Clear in the zenith, and for a short distance around it; cloudy elsewhere.	G
10	..	Cirro-stratus.	L
10	..	,, the Moon is faintly visible through the clouds.	H B
4	Transit	A bank of dark cirro-stratus along the S. E. horizon.	H B
8	..	Cirri, fleecy clouds, and scud, much broken in the zenith: a bank of cirro-stratus around the horizon.	T D
10	..	A thick mist, almost amounting to a fog: occasionally faint gleams of sunshine.	G
10	..	Cirro-stratus and scud.	H B
10	..	Cirro-stratus of various densities, but thicker N. of the zenith than in other directions: the Sun casts a faint shadow.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 19. 4	29·443	38·3	35·5	2·8	34·0	4·3	41·6	..	Calm	..	..	..	Pos.	10	15	8	10	2. 0
6	29·427	37·5	34·0	3·5	..	..	29·7	1·63	Calm	..	..	..	Pos.	30	20	12	12	7. 0
8	29·433	35·4	31·9	3·5	..	..			Calm	..	..	..	Pos.	40	35	15	20	10. 0
10	29·447	32·3	31·1	1·2	28·0	4·3	58·3	0·10	Calm	..	..	..	Pos.	40	40	15	20	10. 0
12	29·457	31·7	30·5	1·2	..	..	21·0		Calm	..	..	..	Pos.	20	20	15	15	5. 0
14	29·447	31·5	31·2	0·3	..	..		4·590	Calm	..	..	..	..	0	0	0	..	..
16	29·428	31·0	31·4	−0·4	31·0	0·0	47·0		Calm	..	..	..	..	0	0	0	..	..
18	29·423	30·7	31·0	−0·3	..	..	45·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·437	31·7	31·6	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·452	33·5	32·0	1·5	29·0	4·5	..	..	Calm	..	NW	0·18	..	0	0	0	..	..
Mar. 20. 0	29·477	35·7	34·5	1·2	..	..	..	..	Calm	..	..	..	Pos.	40	30	20	25	13. 0
2	29·490	39·8	37·1	2·7	..	..	..	..	Calm	..	..	..	Pos.	40	60	30	50	14. 0
4	29·503	39·8	37·0	2·8	34·0	5·8	..	..	Calm	..	..	..	Pos.	20	25	15	20	3. 0
6	29·542	38·7	36·5	2·2	..	..	41·4	..	Calm	..	..	..	Pos.	25	30	20	25	6. 0
8	29·574	36·0	33·4	2·6	..	..	26·5	1·63	Calm	..	..	..	Pos.	15	20	12	15	5. 0
10	29·586	34·5	33·4	1·1	32·0	2·5			Calm	..	..	..	Pos.	15	20	12	15	4. 0
12	29·592	33·0	32·0	1·0	..	..	57·4	0·00	Calm	..	..	..	Pos.	40	60	30	40	9. 0
14	29·590	30·7	29·7	1·0	..	..	18·3		Calm	..	..	..	Pos.	40	60	30	50	7. 0
16	29·578	29·1	27·7	1·4	23·0	6·1		4·590	Calm	..	..	..	Pos.	40	35	20	30	14. 0
18	29·564	27·6	27·2	0·4	25·0	2·6	46·2	..	Calm	..	..	..	Pos.	40	40	15	20	9. 0
20	29·554	28·8	28·7	0·1	..	..	44·2	..	Calm	..	..	..	Pos.	30	30	10	10	6. 0
22	29·527	38·0	32·2	5·8	24·5	13·5	..	..	Calm	..	NNE	0·14	Pos.	40	40	20	20	4. 0
Mar. 21. 0	29·488	42·8	39·1	3·7	..	..	..	..	S by W	0 to ½	..	..	Pos.	15	12	7	7	5. 0
2	29·436	45·4	41·6	3·8	..	..	..	..	SSW	½ to 2½	SSW	2·51	Pos.	15	12	7	7	5. 0
4	29·350	43·0	38·7	4·3	32·0	11·0	49·1	..	S by W	1 to 3½	..	..	Pos.	20	15	10	10	..
6	29·288	40·4	38·3	2·1	..	..	38·5	1·64	S by W to SSE	1½ to 5	..	..	Pos.	2	2	0	..	..
8	29·201	40·5	40·0	0·5	..	..			S by E	1 to 2¼	S	2·06	..	0	0	0	..	..
10	29·149	44·5	43·7	0·8	43·5	1·0	61·7	0·06	SSW	¾ to 2½	..	..	Pos.	2	2	0	..	..
12	29·125	43·4	42·5	0·9	..	..	34·2		SSW	½ to 1	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..		4·690	SSW	½ steady	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	45·8		SSW	¾ steady	SSW	1·02	..	..	..	..	..	..
18	..	..	..	..	..	..	43·8	..	SW	½ steady	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SSW	½ steady	..	..	..	..	..	..	..	..
22	29·101	47·5	43·5	4·0	..	..	..	..	SW	¾ to 1	SW	2·23	Pos.	2	2	0	6	..
Mar. 22. 0	29·100	47·0	43·0	4·0	..	..	..	..	SW	½ to 1	..	..	Pos.	25	30	15	20	3. 0
2	29·090	49·3	45·0	4·3	..	..	..	..	SW	½ to 1½	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	52·9		SSW	1 to 2	..	..	..	..	..	..	..	..
6	29·075	46·2	42·6	3·6	..	..	36·3	1·64	SSW	½ to 2½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			SW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	67·5	0·05	SW	..	SW	2·65	..	..	..	..	..	..
12	..	..	..	..	..	..	33·0		S	..	..	..	..	..	..	..	..	..
14	29·062	37·8	36·6	1·2	..	..		4·735	S by W	..	..	..	..	0	0	0	..	..
16	29·052	38·8	37·7	1·1	36·7	2·1	46·0		S by W	..	..	..	..	0	0	0	..	..
18	29·057	36·8	36·2	0·6	..	..	44·0	..	S	..	..	..	..	0	0	0	..	..
20	29·060	41·0	40·2	0·8	..	..	..	..	S	..	..	..	Pos.	20	15	10	10	5. 0
22	29·075	44·6	42·8	1·8	41·0	3·6	..	..	S by W	..	SSW	2·35	Pos.	20	20	15	15	6. 0

DRY THERMOMETER.
March 19d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

HENLEY'S ELECTROMETER.
March 22d 2h. The reading was from 10° to 15°.

OSLER'S ANEMOMETER.
March 21d. From 5h to 7h. 20m frequent gusts to 4 lbs. and 5 lbs. pressure were recorded.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud.	L
10	..	,,	T D
8	..	Cirro-stratus and light clouds cover the greater part of the sky: breaks in every direction.	H B
2	..	Cirro-stratus around the N. horizon.	G
8	Greatest declination S.	Clear in the zenith, and for a short distance around it; cloudy elsewhere.	L
10	..	Cirro-stratus.	
10	..	,, snow is falling fast.	
10	Transit	,, the snow has ceased falling.	
10	..	,,	L
10	..	,, the snow on the ground is thawing.	H B
9	..	Cirro-stratus and fleecy clouds: breaks of small extent in every direction: the Sun is shining.	
9	3rd Qr.	Cirro-stratus and scud: the Sun is faintly shining.	H B
9	..	Cirro-stratus and scud, with a break a little to the N. of the zenith: a few badly-formed cumuli towards the N. horizon.	L
10	..	Cirro-stratus and scud.	L
10	..	,,	
10	..	,, very dark.	H B
4	..	The clouds have been gradually clearing off for the last twenty minutes, and there remains a large quantity of cirro-stratus around the horizon, especially near the S., which is covered to a considerable altitude.	
0	..	The sky has been gradually clearing since the last observation, and is at present cloudless.	
2	..	Cirro-stratus around the horizon: light clouds S. of the zenith.	
3	..	,, a hoar frost.	
1	Transit	Cirro-stratus around the horizon; cloudless elsewhere: a thin fog.	H B
4	..	Cirro-stratus in the N., extending to the S.W.: light fleecy clouds extending to the zenith; the other portions of the sky are free from cloud: a fine morning.	T D
9	..	Cirro-stratus, fleecy clouds, and scud, with a few clear breaks of small extent.	
8	..	Massive cumuli, fleecy clouds, and portions of flying scud: portions of sky are visible in the zenith and S. E. horizon.	T D
10	..	Cirro-stratus, cumulo-stratus, and scud: occasional drops of rain are falling.	H B
10	..	,, ,, the gusts of wind to 2.	
10	..	Cirro-stratus: rain is falling; and the gusts of wind are frequently to $2\frac{1}{2}$.	
10	..	Cirro-stratus and scud: the rain has ceased: wind is blowing in gusts to $1\frac{1}{2}$.	H B
10	..	The portion of the sky situated near the zenith has been clear at different times, but the whole sky is now covered with cirro-stratus.	T D
..	..		
..	..		
..	..		
..	Transit		
3	..	Cumuli and light scud, the latter moving with great rapidity from the W. S.W.: a fine morning.	H B
4	..	Cumuli in large masses, extending along the horizon from W. to N. E.: cirro-stratus and scud in large quantities S. of the zenith, and occasionally obscuring the Sun: a portion extending to 30° around the zenith is free from cloud.	
9	..	Cumuli around the W. horizon: a large cumulo-stratus around the zenith: cirro-stratus and scud in various directions: occasional drops of rain.	
..	..		
8	..	The greater part of the sky is now covered with cirro-stratus and fragments of light scud; a few cumuli are also visible: rain fell in a squall at 4^h: a fine double rainbow was visible from $4^h.\ 15^m$ to $4^h.\ 25^m$.	
..	..		
..	..		
5	..	Cirro-stratus around the horizon, and lines of cloud of the same modification are in the zenith.	
10	..	Cirro-stratus: rain is falling.	
3	..	A bank of dark cirro-stratus cloud extending from the N. E. to the E. horizon; every other portion of the sky is clear.	H B
2	..	Light portions of cirri and fleecy clouds are dispersed over the sky, which is of a remarkably deep blue.	T D
9	Transit	Cirro-stratus and fleecy clouds: a small portion of scud: there are small breaks in every direction.	

ELECTRICITY.

March $21^d.\ 8^h$. There was a spark at the distance of $0^{in}.05$.

March $22^d.\ 2^h$. There were sparks at the distance of $0^{in}.07$ at intervals of 30^s; and at the distance of $0^{in}.05$ there were 3 sparks in 5^s.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 23. 0	29·093	49·8	45·4	4·4	..	..	..			..			SW	½ to 2	..	..	Pos.	10	10	6	8	3. 0
2	29·095	52·5	46·5	6·0	..	..	..			..			SW	1 to 3	..	..	Pos.	20	30	8	10	1. 0
4	29·137	50·3	44·6	5·7	38·5	11·8	54·0			..			SW	1 to 4½	..	..	..	0	0	0	..	..
6	29·148	47·2	43·6	3·6	..	..	39·2			1·64			SSW	½ to 1½	SW	2·77	Pos.	20	15	10	10	4. 0
8	29·190	42·9	41·2	1·7	..	..	66·0			0·01			SSW	¼ steady	..	..	Pos.	30	30	15	12	15. 0
10	29·205	42·1	40·5	1·6	39·0	3·1	36·8						SSW	..	..	..	Pos.	33	30	15	20	16. 0
12	29·224	40·2	39·2	1·0	..	..				4·745			SSW	..	..	..	Pos.	10	10	6	8	7. 0
14	29·229	39·7	38·9	0·8	..	..	46·5			..			SSW	..	..	..	..	0	0	0	..	..
16	29·228	39·0	38·5	0·5	37·0	2·0	45·5			..			SSW	..	..	..	..	0	0	0	..	..
18	29·224	40·8	39·5	1·3	..	..	..			..			SSW	..	..	..	..	0	0	0	..	..
20	29·226	41·4	40·4	1·0	..	..	..			..			S	..	..	..	..	0	0	0	..	..
22	29·236	43·6	42·4	1·2	40·5	3·1	..			..			SSW	..	SSW	3·18	Pos.	28	35	20	20	12. 0
Mar. 24. 0	29·233	48·0	45·0	3·0	..	..	..			..			SSW	0 to ½	..	..	Pos.	30	30	20	20	..
2	29·209	50·5	47·0	3·5	..	..	..			..			SSW	0 to ½	..	..	Pos.	25	30	10	10	5. 0
4	29·196	49·0	44·7	4·3	41·0	8·0	52·1			..			SW	0 to ¾	..	..	Pos.	12	15	8	10	1. 40
6	29·205	44·7	41·7	3·0	..	..	38·0			1·64			SW	¼ steady	..	..	Pos.	20	20	15	15	5. 0
8	29·208	40·0	38·4	1·6	..	..	68·5			0·00			SW	..	..	..	Pos.	15	18	12	15	2. 0
10	29·223	39·2	37·8	1·4	36·0	3·2	33·6						SW	..	..	..	Pos.	25	25	20	20	6. 0
12	29·230	38·1	37·0	1·1	..	..				4·745			SSW	..	..	..	Pos.	40	50	20	20	..
14	29·230	38·1	37·2	0·9	..	..	46·0			..			S	..	..	..	Pos.	10	8	3	..	10. 0
16	29·232	40·2	39·2	1·0	38·0	2·2	44·5			..			S by W	..	..	..	Pos.	30	40	15	20	..
18	29·247	39·7	39·2	0·5	..	..	..			..			S by W	..	..	..	Pos.	2	2	0	..	..
20	29·277	39·8	39·2	0·6	..	..	..			..			SW	..	..	..	Pos.	2	2	0	..	..
22	29·287	46·8	45·4	1·4	44·0	2·8	..			..			SW	0 to 1	SSW	5·00	..	0	0	0	..	..
Mar. 25. 0	29·272	50·7	46·2	4·5	..	..	..			..			SW	½ to 1	..	..	Pos.	28	20	12	12	12. 0
2	29·261	43·6	42·2	1·4	..	..	..			..			SSW	½ to 1	..	..	Pos.	40	30	20	20	5. 0
4	29·227	45·0	43·7	1·3	42·0	3·0	52·9			..			SW	..	..	..	Pos.	30	25	10	10	..
6	29·226	42·5	41·7	0·8	..	..	39·5			..			WSW	..	..	..	Neg.	40	35	12	15	..
8	29·250	40·4	39·7	0·7	..	..				1·70			SW	..	..	..	Pos.	35	30	15	20	7. 0
10	29·288	40·6	39·2	1·4	38·0	2·6	65·2			0·09			SW	½ to 1½	..	..	Neg.	40	..	..	..	..
12	29·286	39·7	38·6	1·1	..	..	36·2						SSW	½ steady	..	..	Pos.	..	25	12	12	8. 0
14	29·298	40·3	39·2	1·1	..	..				4·835			SW	½ steady	..	..	..	0	0	0	..	..
16	29·284	40·5	39·2	1·3	38·0	2·5	46·5			..			SW	½ to 1	..	..	..	0	0	0	..	..
18	29·303	39·5	38·5	1·0	..	..	45·0			..			SW	1 to 3	..	..	..	0	0	0	..	..
20	29·330	41·4	40·2	1·2	..	..	..			..			WSW	¾ to 1½	..	..	..	0	0	0	..	..
22	29·368	45·8	42·9	2·9	40·0	5·8	..			..			WSW	½ to 1½	SW	5·85	..	0	0	0	..	..
Mar. 26. 0	29·417	46·0	42·7	3·3	..	..	..			..			WNW	½ to 2½	..	..	Pos.	10	12	5	..	more than 30m
2	29·440	50·0	45·2	4·8	..	..	..			..			W	½ to ¾	..	..	Pos.	10	10	0	..	..
4	29·451	49·7	44·7	5·0	39·0	10·7	..			..			WNW	½ to 3	..	..	..	0	0	0	..	..

MINIMUM FREE THERMOMETER.

March 23d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

March 24d. 22h. The reading was recorded as 48°; it was altered conjecturally to 38°; which was nearly the reading of the Dry Thermometer at 12h and at 14h. The number as altered was used in subsequent calculations.

ELECTRICITY.

March 25d. 10h. There were sparks at the distance of 0in·06.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	The sky S. of the zenith is covered with clouds of the cirro-stratus character, and in the northern part it is covered with detached cumuli and light scud: the wind is blowing in gusts to $\frac{1}{2}$.	L
3	..	Fine massive cumuli around the horizon, and light linear cirri in various directions: the scud is in rapid motion.	H B
10	..	Cirro-stratus and scud: the clouds look very dark and lowering.	T D
5	..	Finely formed cumuli in the N., in masses of considerable extent: cirro-stratus around the horizon at a low elevation: light cirri and fleecy clouds are scattered over the sky.	T D
3	..	Cloudless in the zenith and around it: near the horizon is a thin slate-coloured cloud.	G
3	..	Dark scud along the S.W. and S. horizon: the sky S. of the zenith is occasionally covered with cirro-stratus.	H B
1	..	A bank of cirro-stratus towards the S. horizon; cloudless elsewhere: the wind is blowing in gusts to $\frac{1}{2}$.	L
0	..	Cloudless.	
0	..	,,	
10	..	Clouds came up soon after the last observation, and at present the sky is quite covered with cirro-stratus.	
10	..	Cirro-stratus and scud.	L
$9\frac{3}{4}$	Transit	,, a few clear breaks near the N.W. horizon.	H B
10	..	Cirro-stratus, cumulo-stratus, and scud: the clouds are very dark near the N. horizon.	
7	..	Cumulo-stratus near the N. and N.W. horizon: cumuli near the S. E. horizon: cirro-stratus, fleecy clouds, and scud in various directions: cloudless near the zenith.	H B
7	..	Cirro-stratus and large masses of white scud and detached cumuli in all directions: a few cirri about the zenith.	L
7	..	A few cumuli in the N. E. horizon: cirro-stratus S. of the zenith: cirri forming into cirro-stratus: light fleecy clouds near the N.: in the S. the sky is mostly covered with cloud.	
1	Perigee	A bank of cirro-stratus near the N. horizon: a few light clouds about the zenith.	
0	..	Cloudless.	L
2	..	Cirro-stratus and fragments of scud near the N. and W. horizon; rising in the former to a considerable altitude.	H B
1	..	Cirro-stratus in various directions.	
8	..	Cirro-stratus and dark scud.	
9	..	,,	
5	..	Cirro-stratus around the horizon: a few light cirri and a large portion of scud and undefined cloud prevails.	H B
6	..	Cirro-stratus: cumuli extending along the N. horizon, and light scud in detached portions in every other direction.	T D
8	Transit	Heavy masses of dark scud passing from the S. W.: cumuli, cirri, and fleecy clouds in every other direction, with clear breaks of small extent.	T D
10	..	Cirro-stratus: rain is falling heavily.	T D
10	..	Cirro-stratus and dark scud.	H B
10	..	,, slight rain is falling.	
1	..	Cloudless, with the exception of a few lines of cirro-stratus near the N. and N. W. horizon: frequent showers of rain have been falling since the last observation.	
10	..	Cirro-stratus: frequent showers of rain have fallen since the last observation.	H B
2	..	A bank of cirro-stratus in the W.; the remainder of the sky is clear.	T D
5	..	Cirro-stratus around the horizon to a considerable altitude; detached masses in the zenith: the stars look dim.	
3	..	Cirro-stratus around the horizon of a less altitude than at the previous observation; the remainder of the sky is clear.	
5	In Equator	Cirro-stratus around the horizon, particularly in the N. E.	
0	..	Cloudless: a thin haze prevails.	T D
6	..	Light scud and fleecy clouds in every direction.	L
$9\frac{1}{2}$	Transit	The sky is nearly covered with a dull white cloud of no definite modification.	G
8	..	Imperfectly-formed cumuli near the horizon: dark masses of scud are rising from the W.: clouds of no definite modification occupy the greater portion of the sky: occasional gleams of sunshine.	G
10	..	Massive and finely-formed cumuli, cumulo-strati, and scud, through which the sun faintly gleams: showers of hail and rain have occurred and continued until five minutes previously to the observation: the wind is blowing in gusts to $1\frac{1}{2}$.	T D

HENLEY'S ELECTROMETER.

March 25^d. 10^h. The reading was 8°.

OSLER'S ANEMOMETER.

March 26^d. 5^h. 30^m. A gust of 5 lbs. pressure was recorded.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 26. 6	29·503	44·4	41·9	2·5	..	..	..	..	NW	½ to 2½	WNW	1·43	...	0	0	0	..	..
8	29·544	42·2	40·7	1·5	..	..	52·9 / 36·5	1·70	W by S	¾ steady	..	..	..	0	0	0	..	..
10	29·573	40·5	39·6	0·9	38·5	2·0	——		WSW	..	..	..	..	0	0	0	..	..
12	29·593	39·0	37·5	1·5	..	..	67·5 / 34·2	0·02	WSW	..	..	..	Pos.	6	8	5	5	2. 0
14	29·617	39·0	37·8	1·2	..	..	——		WSW	..	..	..	Pos.	2	2	0	..	..
16	29·625	37·8	36·9	0·9	35·0	2·8	46·2	4·860	WSW	..	..	..	..	0	0	0	..	..
18	29·647	36·7	36·2	0·5	..	..	44·8	..	WSW	..	..	..	Pos.	10	10	7	8	12. 0
20	29·670	39·6	38·9	0·7	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
22	29·695	47·0	44·5	2·5	41·5	5·5	..	..	WSW	..	W	3·05	Pos.	40	40	15	20	9. 0
Mar. 27. 0	29·686	50·4	45·3	5·1	..	..	..	..	WSW	¼ steady	..	..	..	..	..	..	..	..
2	29·663	50·3	46·1	4·2	..	..	..	..	WSW	0 to ½	..	..	Neg.	40	60	30	..	0. 30
4	29·643	49·3	44·2	5·1	40·0	9·3	..	..	SW	..	..	..	Neg.	40	45	..	35	0. 40
6	29·632	48·3	44·9	3·4	..	..	55·1 / 34·3	1·70	SW	..	..	..	Pos.	20	20	12	15	1. 0
8	29·627	43·2	40·7	2·5	..	..	——		SW	..	..	..	Pos.	10	10	6	8	4. 0
10	29·631	40·2	38·5	1·7	34·0	6·2	69·7	0·00	SW	..	..	..	Pos.	35	40	25	25	9. 0
12	29·616	38·2	37·2	1·0	..	..	29·3		Calm	..	..	..	Pos.	40	..	..	30	13. 0
14	29·583	37·0	36·2	0·8	..	..	——	4·865	Calm	..	..	..	Pos.	40	30	20	25	16. 0
16	29·530	35·5	34·9	0·6	35·0	0·5	46·8		Calm	..	..	..	Pos.	40	38	15	20	11. 0
18	29·497	34·5	34·0	0·5	..	..	45·0	..	Calm	..	..	..	Pos.	40	30	12	15	5. 0
20	29·481	38·1	37·6	0·5	..	..	..	..	Calm	..	..	..	Pos.	40	50	25	40	8. 0
22	29·475	42·0	41·2	0·8	39·8	2·2	..	..	Calm	..	SW	3·22	Pos.	25	20	12	12	10. 0
Mar. 28. 0	29·443	48·6	44·6	4·0	..	..	..	..	N by E	..	..	..	Pos.	40	..	50	70	..
2	29·395	49·2	44·5	4·7	..	..	..	..	N by E	..	..	..	Pos.	35	..	35	40	15. 0
4	29·371	48·5	44·0	4·5	40·0	8·5	..	..	Calm	..	..	..	Pos.	40	..	30	50	..
6	29·358	43·6	42·7	0·9	..	..	50·6	..	Calm	..	..	..	Neg.	40	..	..	90	..
8	29·372	40·9	40·4	0·5	..	..	37·0		Calm	..	..	..	Neg.	..	..	..	..	..
10	29·406	42·0	39·2	2·8	37·0	5·0	——	1·72	NW	..	..	..	Pos.	20	..	8	10	8. 0
12	29·435	40·0	38·2	1·8	..	..	62·8 / 31·5	0·04	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	——	4·900	N by W	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	46·5 / 45·0	..	N	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	N by W	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
22	29·720	42·3	39·8	2·5	..	..	..	..	N by W	..	NNW	1·40	Pos.	20	..	12	12	8. 0
Mar. 29. 0	..	..	..	..	..	..	..	..	N by W	0 to ½	..	..	..	..	..	..	..	..
2	29·807	46·8	42·1	4·7	..	..	50·3	..	N by W	..	..	..	Pos.	20	20	12	10	8. 0
4	29·838	48·5	42·2	6·3	..	..	34·5	1·72	NNW	..	..	..	Pos.	27	..	15	12	4. 0
6	..	..	..	..	..	..	——		N	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	65·5	0·00	NNE	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	26·0		Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	——	4·905	Calm	..	..	..	..	..	..	..	..	..
14	30·000	39·0	37·4	1·6	..	..	46·8	..	Calm	..	..	..	Pos.	35	..	20	20	3. 0
16	29·994	38·0	36·7	1·3	34·5	3·5	45·0	..	Calm	..	..	..	Pos.	20	..	12	12	5. 0

ELECTRICITY.

March 27d. 0h. The apparatus was under repair.
March 27d. 12h. There was a spark at the distance of 0in·01.
March 28d. 0h, 6h, and 8h. There were sparks at the distances of 0in·01, 0in·03, and 0in·16 respectively.
March 28d. 8h. There were sparks at the distance of 0in·16 occurring at intervals of 10s.
March 29d. 14h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	At about $5^h.35^m$ the sky became covered with dark cirro-stratus and masses of low scud: the wind veered to the N. and N. N. W., and is blowing in gusts to 2 + : at $5^h.45^m$ rain and hail commenced falling, and continued until 6^h.	T D
5	..	Massive cirro-cumuli in the W.: cirro-stratus in the horizon: some light cirri in the zenith.	
4	..	Cirro-stratus in the horizon, at a low elevation; the remainder of the sky clear: at $8^h.40^m$ a heavy shower of rain fell, of short duration; the sky remained covered.	T D
0	..	Cloudless.	L
3	..	Cirro-stratus and small masses of scud, principally E. of the zenith.	
3	..	Cirro-stratus towards the S., with light scud.	
0	New	Cloudless.	
0	..	A few bright clouds towards the S. horizon, but to no numerical extent.	L
1	..	Fragments of light scud are occasionally passing over the sky from the W., and around the horizon are some fleecy clouds, with a few cumuli in the N. W.	H B
7	Transit	Cirro-stratus and fleecy clouds in several directions: the clouds in the S. W. are extremely dark.	
9	..	The sky is covered with a dense cumulo-stratus, with fine rocky cumuli around the horizon.	H B
8	..	Heavy-looking cumulo-strati towards the S. horizon: cumuli and fleecy cloud towards the N.: loose scud in every direction, and a few badly-formed cirri about the zenith.	L
7	..	Cumuli and cumulo-strati in the W. and S.: cirro-strati, fleecy clouds, and large masses of scud in all directions.	
0	..	A bank of cirro-stratus towards the W. horizon, but to no numerical amount.	
0	..	Cloudless.	L
1	..	,, very hazy: cirro-stratus prevails to a considerable extent along the N. horizon: the haze is rapidly	H B
1	..	Cirro-stratus and haze around the horizon; deposition of moisture. [increasing.	
3	..	Cirro-stratus in the N. W. of zenith: hazy: the stars appear exceedingly dim.	
4	..	Cirro-stratus to a considerable extent along the N. W. horizon, and also in large quantities S. of the zenith.	
9	..	Cirro-stratus, fleecy clouds, and scud: several fine specimens of the cirrus and cirro-cumulus cloud were visible: a thick white fog in the Park.	H B
10	..	Cirro-stratus and closely-packed fleecy clouds all over the sky.	T D
10	..	Cirro-stratus and scud.	L
10	Transit	,,	L
10	..	Cirro-stratus and dark scud: the sun is faintly visible through the clouds.	H B
10	..	Cirro-stratus and scud: rain commenced falling at $4^h.40^m$, and continued until $5^h.10^m$.	
10	..	Cirro-stratus and dark scud: rain is falling.	
10	..	Shortly after the rain mentioned in the last observation had ceased several stars became visible for a short time: at present every part of the sky is covered with cirro-stratus and scud: the wind is scarcely sensible.	H B
10	..	Cirro-stratus and scud: a few stars have occasionally gleamed through the clouds during the last half hour: at $11^h.10^m$ several stars were visible in the zenith: a thin haze prevails.	T D
..	..		
..	..		
..	..		
..	..		
8	..	Cirro-strati and scud in every direction.	
..	..		
3	Transit	Cumuli in the horizon; cloudless elsewhere.	
6	..	Cumuli, cumulo-strati, and light clouds in every direction.	
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud.	
10	..	,, a few stars are occasionally visible in the zenith.	T D

HENLEY'S ELECTROMETER.

March $28^d.6^h$ and 8^h. The readings were 6° and 20° respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Mar. 29. 18	29·997	34·7	33·6	1·1	..	..	..			..			Calm	..	..	..	Pos.	20	..	12	12	8. 0
20	30·011	38·5	36·7	1·8	..	..	..			..			Calm	..	..	..	Pos.	30	..	15	15	2. 0
22	30·001	46·5	43·2	3·3	39·0	7·5	..			..			SSE	..	NNW	1·53	Pos.	15	..	12	15	18. 0
Mar. 30. 0	29·988	51·0	44·9	6·1	..	..	..			..			SE	..	..	..	Pos.	20	..	10	15	15. 0
2	29·953	51·0	44·6	6·4	..	..	..			..			E	0 to ¾	..	..	Pos.	12	..	8	10	7. 0
4	29·923	48·3	43·5	4·8	37·8	10·5	..			..			E	..	..	..	Pos.	25	..	12	12	4. 0
6	29·882	45·4	40·4	5·0	..	..	53·1			..			E by N	0 to ½	..	..	Pos.	2	..	0	..	..
8	29·861	40·8	37·7	3·1	..	..	35·6			1·72			E by S	..	E	1·25	Pos.	35	..	20	20	3. 0
10	29·842	39·7	36·2	3·5	31·0	8·7	73·2			0·00			Calm	..	..	..	Pos.	35	..	20	20	4. 0
12	29·799	37·6	35·2	2·4	..	..	29·5			4·910			Calm	..	..	..	Pos.	40	..	20	25	2. 0
14	29·737	38·0	36·2	1·8	..	..	47·0			..			Calm	..	..	..	Pos.	15	..	7	10	4. 0
16	29·695	36·5	35·2	1·3	34·0	2·5	45·2			..			Calm	..	..	..	Pos.	2	2	0	..	..
18	29·637	35·4	34·4	1·0	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
20	29·619	38·5	37·2	1·3	..	..	..			..			E	..	..	..	..	0	0	0	..	..
22	29·580	45·0	41·8	3·2	38·5	6·5	..			..			E by S	..	ESE	1·70	Pos.	35	..	30	40	15. 0
Mar. 31. 0	29·564	50·5	46·2	4·3	..	..	..			..			E	..	..	..	Pos.	35	..	30	30	7. 0
2	29·527	54·8	48·6	6·2	..	..	..			..			SSE	..	..	..	Pos.	28	..	10	10	8. 0
4	29·494	56 3	50·2	6·1	44·0	12·3	..			..			S by W	..	..	..	Pos.	25	..	15	20	6. 0
6	29·488	53·0	48·6	4·4	..	..	58·0			..			SSW	..	..	..	Pos.	12	..	8	10	8. 0
8	29·492	48·3	46·2	2·1	..	..	43·5			1·72			SSW	..	..	..	Pos.	20	..	12	15	7. 0
10	29·502	47·6	46·7	0·9	45·0	2·6	81·5			0·00			SSW	..	..	..	Pos.	25	..	18	20	6. 0
12	29·508	45·3	44·2	1·1	..	..	38·5			..			SSW	..	..	..	Pos.	12	..	5	8	8. 0
14	29·513	43·8	42·7	1·1	..	..	47·8			4·910			SSW	0 to ½	..	..	Pos.	23	..	10	10	11. 0
16	29·504	44·1	42·5	1·6	41·0	3·1	45·8			..			SSW	..	..	..	Pos.	18	..	5	5	12. 0
18	29·486	46·3	44·9	1·4	..	..	..			..			SSW	..	..	..	Pos.	2	2	0	..	..
20	29·482	48·9	47·2	1·7	..	..	..			..			SSW	..	..	..	Pos.	20	..	8	10	..
22	29·472	52·4	49·2	3·2	46·5	5·9	..			..			SSW	¾ to 2½	SSW	4·82	Pos.	25	..	12	12	4. 0
Apr. 1. 0	29·455	55·0	51·4	3·6	..	..	..			..			SSW	2 to 4½	..	..	Pos.	30	..	12	15	..
2	29·425	56·0	53·5	2·5	..	..	..			..			SSW	1½ to 3½	..	..	Pos.	20	..	12	12	7. 0
4	29·378	55·5	53·1	2·4	50·5	5·0	..			..			SSW	2 to 4½	..	..	Pos.	2	2	0	..	..
6	29·363	52·8	51·4	1·4	..	..	..			..			SSW	¾ to 3½	..	..	Pos.	2	2	0	..	..
8	29·350	48·8	48·2	0·6	..	..	57·8			1·76			SSW	¾ to 1	..	..	Pos.	2	2	0	..	..
10	29·342	49·5	48·7	0·8	48·0	1·5	47·1			0·06			SW	¾ steady	..	..	Pos.	2	2	0	..	..
12	29·333	47·0	46·4	0·6	..	..	71·5			4·990			SW	..	SW	5·50	..	0	0	0	..	..
14	29·324	48·5	47·7	0·8	..	..	44·8			..			SSW	..	..	..	..	0	0	0	..	..
16	29·287	48·5	48·1	0·4	48·0	0·5	49·0			..			SSW	..	..	..	..	0	0	0	..	..
18	29·247	49·3	48·6	0·7	..	..	46·5			..			SSW	..	..	..	..	0	0	0	..	..
20	29·204	50·4	49·7	0·7	..	..	..			..			S by W	1	..	..	Neg.	40	..	..	..	..
22	29·175	55·0	52·2	2·8	50·0	5·0	..			..			SSW	1½ to 3	SSW	1·78	..	0	0	0	..	..
Apr. 2. 0	29·133	54·3	50·9	3·4	..	..	..			..			SSW	1½ to 4½	..	..	..	0	0	0	..	..

MINIMUM FREE THERMOMETER.

March 30d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

April 1d. 22h. The reading was higher than that of the Dry Thermometer at 12h.

RAIN.

March 31d. 12h. The amount collected during the month of March in the rain-gauge No. 4 was 0in·88. The reading of the Rev. G. Fisher's rain-gauge was not taken for this month, but the amount will be given for the two months on the 30th of April.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Cirro-stratus in the horizon; around the zenith it is clear.	T D
0	..	Cloudless: a thin haze prevails in the N. E. horizon.	T D
2	..	A few detached cumuli towards the S. W. horizon.	L
3	..	Detached cumuli: fleecy clouds and scud are scattered in all directions.	
10	..	Cirro-stratus: fleecy clouds and scud cover the sky.	L
9	Transit	,, fleecy clouds and scud cover the sky, with the exception of a few small breaks in and around the zenith.	T D
3	..	Cumuli and some portions of cirri in the N. W.; the remainder of the sky is clear.	
8	..	A streak of clear sky in the N. at about 40° from the horizon; the remainder of the sky is covered with a thin cirro-stratus, through which the Moon is visible.	
6	..	Cirro-stratus in the horizon to a considerable altitude: the sky is clear in the zenith, and the stars shining very brightly.	
3	..	Cirro-stratus in the horizon at a low elevation; every other portion of the sky is clear.	T D
7	..	Cirro-stratus all around, but the sky is clear about the zenith.	L
5	..	Cirro-stratus around the horizon: light scud in various directions.	
10	..	Thin cirro-stratus.	
10	..	,,	L
4	..	Cirro-stratus and fleecy clouds around the horizon, and in large quantities S. of zenith: cirro-cumuli in S. W.	H B
9	..	Cirro-stratus, fleecy clouds, and scud: around the N. and E. horizon the sky is clear.	
1	..	Cloudless, with the exception of a few fleecy clouds, in the N. N. E. and S. E. horizon: a thin haze prevails near the N. and N.W. horizon.	H B
0	Transit	A few mottled cirri in the zenith, but to no numerical extent.	L
8	..	Cirro-stratus, fleecy clouds, and scud: small breaks in every direction.	
5	..	A bank of cirro-stratus towards the N. and W. horizon, and a few cirri about the zenith: cirro-stratus and fleecy clouds prevail in the Southern portions of the sky.	
2	..	Cirro-stratus and fleecy clouds towards the N. and W. horizon, but clear in all other directions.	L
1	..	Cloudless, with the exception of cirro-stratus and scud near the Moon's place and along the N.W. horizon.	H B
1	..	Cirro-stratus near the horizon; cloudless elsewhere: at $12^h.43^m$ a faint meteor passed about 5° below Polaris, taking a westerly direction.	
0	..	Cloudless.	
10	..	Cirro-stratus: a few breaks are occasionally seen, but of small extent.	
10	..	Cirro-stratus and scud: the Sun is occasionally seen through the clouds.	H B
7	..	Cirro-stratus and light clouds are scattered in every direction.	T D
10	..	Cirro-stratus and masses of scud cover the sky: rain has been falling for about five minutes.	
10	..	Cirro-stratus and scud of a thin character: occasional gleams of sunshine: the rain has ceased.	T D
10	..	Cirro-stratus and scud.	H B
10	Transit	,, rain is falling, and the wind is blowing in gusts to $1\frac{1}{2}$.	
5	..	,, there are several breaks near the zenith, and some light fleecy clouds appear E. of the zenith.	
10	Greatest declination N.	Cirro-stratus and scud: the sky has been alternately clear and cloudy since the last observation, with occasional drops of rain falling.	H B
4	..	Cirro-stratus in the W., with some portions of light scud above it; every other part of the sky is clear.	T D
10	..	Cirro-stratus: the sky became suddenly covered with clouds at $13^h.30^m$.	
10	..	Cirro-stratus, through which a few stars are faintly visible in the zenith.	
10	..	Cirro-stratus.	
10	..	Cirro-stratus slightly broken in the zenith: a violent storm of rain and hail occurred, and the electrical instruments were much affected: thunder was faintly heard to the W.: the wind is blowing in gusts to 2.	
10	..	Cirro-stratus and scud, and a few detached cumuli: the wind is blowing in gusts to 1.	T D
3	..	Detached cumuli and scud passing rapidly from the S. S.W.: some rain has fallen: the wind is blowing in gusts to $1\frac{1}{2}$.	L

ELECTRICITY.

March $30^d.10^h$ and 12^h. There were sparks at the distance of $0^{in}.02$ and $0^{in}.03$ respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 2. 2	29·096	52·7	51·2	1·5	..	..	..			..			SSW	1½ to 5	..	..	Pos.	2	2	0	..	..
4	29·035	54·9	51·7	3·2	49·0	5·9	..			..			SSW	1½ to 4	..	..	Pos.	2	2	0	..	..
6	29·002	51·5	49·2	2·3	..	..	57·5			..			SSW	1½ to 3½	SSW	3·90	..	0	0	0	..	..
8	28·987	50·0	48·5	1·5	..	..	41·8			1·80			SW	1½ to 3	..	..	Neg.	30	30	12	15	0. 20
10	29·056	48·9	46·7	2·2	45·0	3·9	———				0·05		WSW	1½ to 4	..	..	..	0	0	0	..	..
12	29·116	47·0	45·9	1·1	..	..	69·6						WSW	3 to 7	..	..	..	0	0	0	..	..
14	29·169	44·0	42·0	2·0	..	..	39·0						WSW	3½ to 7	..	..	..	0	0	0	..	..
16	29·222	42·3	39·5	2·8	36·0	6·3	———				5·085		WSW	1½ to 4	WSW	3·44	..	0	0	0	..	..
18	29·219	42·0	39·2	2·8	..	..	51·0						SW	1½ to 4	..	..	..	0	0	0	..	..
20	29·214	45·2	43·2	2·0	..	..	47·8			..			SW	2 to 3	SW	1·90	..	0	0	0	..	..
22	29·205	48·0	43·9	4·1	38·5	9·5	..			..			WSW	1½ to 4	WSW	1·18	..	0	0	0	..	..
Apr. 3. 0	29·201	51·6	45·5	6·1	..	..	..			..			WSW	1½ to 4½	..	..	..	0	0	0	..	..
2	29·191	53·3	45·8	7·5	..	..	..			..			WSW	1½ to 3½	..	..	Neg.	20	20	3	8	..
4	29·192	50·5	42·2	8·3	35·0	15·5	53·5			..			WSW	2 to 5	..	..	Pos.	20	25	15	15	13. 0
6	29·229	44·3	41·9	2·4	..	..	40·5			1·80			WSW	1 to 3½	..	..	..	0	0	0	..	..
8	29·283	45·8	42·2	3·6	..	..	———						W by S	1 to 3½	..	..	..	0	0	0	..	..
10	29·340	45·0	42·5	2·5	39·0	6·0	69·0				0·02		W	1 to 2½	..	..	..	0	0	0	..	..
12	29·397	44·0	42·7	1·3	..	..	38·3						Calm	..	..	..	Pos.	40	30	20	20	16. 0
14	29·429	43·1	41·7	1·4	..	..	———				5·130		Calm	..	..	..	Pos.	10	8	3	..	1. 0
16	29·444	40·7	39·7	1·0	38·0	2·7	50·8						Calm	..	..	..	..	0	0	0	..	..
18	29·473	40·4	38·7	1·7	..	..	48·0			..			Calm	..	..	..	Pos.	8	10	3	..	..
20	29·472	40·3	38·5	1·8	..	..	..			..			Calm	..	..	..	Pos.	2	2	0	..	..
22	29·459	42·3	40·7	1·6	38·0	4·3	..			..			Calm	..	WSW	4·50	..	0	0	0	..	..
Apr. 4. 0	29·415	48·0	46·2	1·8	..	..	..			..			S	..	..	..	..	0	0	0	..	..
2	29·346	44·8	43·4	1·4	..	..	..			..			SSE	..	..	..	..	0	0	0	..	..
4	29·160	43·4	42·7	0·7	41·5	1·9	52·6			..			SSE	0 to ½	SSE	1·10	Neg.	40	40	20	20	0. 40
6	29·058	52·0	50·9	1·1	..	..	40·7			2·16			SW	3 to 4½	..	..	..	0	0	0	..	..
8	29·074	51·3	49·2	2·1	..	..	———						WSW	3 to 4½	..	..	..	0	0	0	..	..
10	29·095	50·2	47·7	2·5	46·0	4·2	65·0				0·52		WSW	3 to 4½	..	..	Pos.	5	5	..	..	..
12	29·130	48·0	46·4	1·6	..	..	38·5						W by S	2 to 3	..	..	Pos.	2	2	0	..	..
14	..	..	..	..	..	..	———				5·750		NW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	50·5						Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	48·0			..			Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			Calm	..	..	..	..	..	..	..	..	..
22	29·066	50·0	49·4	0·6	..	..	..			..			Calm	..	WSW	5·72	Pos.	10	10	5	7	3. 0
Apr. 5. 0	29·070	55·0	53·2	1·8	..	..	..			..			WSW	..	..	..	Pos.	20	20	12	15	7. 0
2	..	..	..	..	..	..	..			..			WSW	1 to 3	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	56·5			..			WSW	½ to 1	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	44·6			2·31			SW	½ to 1	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	———						S by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	63·0						SSW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	41·0				0·36		Calm	..	..	..	..	..	..	..	..	..
14	29·010	45·0	44·4	0·6	..	..	———						Calm	..	..	..	..	0	0	0	..	..
16	29·001	45·5	45·1	0·4	45·0	0·5	50·5				5·930		Calm	..	..	..	..	0	0	0	..	..
18	28·976	46·0	45·6	0·4	..	..	48·5			..			Calm	..	..	..	..	0	0	0	..	..
20	28·964	48·0	47·4	0·6	..	..	..						Calm	..	SW	3·12	..	0	0	0	..	..
22	28·948	43·5	43·2	0·3	42·0	1·5	..			..			W by S	0 to 2½	WSW	0·50	..	0	0	0	..	..

BAROMETER.

April 4d. 6h. The reading was 0in·288 lower than at 2h.

MINIMUM FREE THERMOMETER.

April 3d. 22h. The reading was higher than those of the Dry Thermometer at 18h and 20h.

April 5d. 22h. The reading was higher than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, fleecy clouds, detached cumuli and scud: several showers of rain have fallen since the last observation: the wind is blowing in gusts to $1\frac{1}{2}$.	L
7	..	Cirro-stratus, fleecy clouds, detached cumuli and scud, and showers of rain and hail.	T D
10	Transit	Cirro-stratus, cumulo-stratus and scud, and showers of rain at intervals.	
10	..	Cirro-stratus and scud: a few drops are occasionally falling: the wind is blowing in strong gusts to 2 +.	
9	..	Cirro-stratus and masses of dark scud in every direction: the wind is blowing in gusts to $2\frac{1}{2}$.	T D
9	..	Cirro-stratus and scud: small breaks are visible in every direction: the wind is blowing in gusts to $1\frac{1}{2}$.	L
6	..	Cirro-stratus and loose scud in all directions: the wind is blowing in gusts to 2.	
4	..	,, the wind is blowing in gusts to $1\frac{1}{2}$.	
0	..	Cloudless: the wind is blowing in gusts to 2.	
0	..	A few light clouds, but to no numerical extent: the wind is blowing in gusts to 2.	L
7	..	Cirro-stratus, fleecy clouds, and scud: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	H B
4	..	Cirro-stratus, fleecy clouds, and scud: the wind is blowing in gusts to 2 +.	
5	..	,, ,,	H B
8	..	,, the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	L
10	Transit 1st Quarter	Cirro-stratus and scud: a light rain occasionally falling: the wind is blowing in gusts to 2+.	
10	..	,, the wind is blowing in gusts to 2 +.	
10	..	,, the wind is blowing in gusts to 1.	L
10	..	Cirro-stratus and scud cover every portion of the sky.	H B
10	..	Cirro-stratus and scud: rain is falling.	
10	..	,, the rain has ceased.	
10	..	,,	
10	..	,,	H B
10	..	,, a few drops of rain are falling.	T D
10	..	Cirro-stratus and scud.	
10	..	,, rain is falling.	T D
10	..	Cirro-stratus: rain falling heavily.	H B
10	..	Cirro-stratus and scud: the rain has ceased: the wind is blowing in gusts to 2.	
10	Transit	,, occasional gusts of wind to 2.	
10	..	,, frequent gusts of wind to $2\frac{1}{2}$.	H B
10	..	,, ,,	L
..	..		
..	..		
..	..		
..	..		
10	..	,, rain has been falling heavily during the morning, but has now ceased, and breaks appear in every direction: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	
..	..		
$9\frac{1}{2}$	Apogee	Cirro-stratus and scud: a few breaks in various directions: dark clouds towards the N.: rain beginning to fall: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	L
..	..		
..	..		
..	Transit		
..	..		
..	..		
8	..	Cirro-stratus aud scud in every direction, except in the N. E. horizon.	T D
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	Cirro-stratus: rain falling heavily.	
10	..	,, a thin rain falling: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	T D

OSLER'S ANEMOMETER.

April 2d. 12h. 35m, and at 13h. Gusts of 9 lbs. pressure were recorded.
April 3d. 5h, and at 7h. 15m. Gusts of 11 lbs. and 5 lbs. pressure respectively were recorded.
April 4d. 6h. 10m. A pressure of 5 lbs. was recorded.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 6. 0	28·966	46·2	45·0	1·2	..	..	..	..	WSW	..	WSW	0·18	..	0	0	0	..	..
2	28·931	47·6	45·4	2·2	..	..	..	..	SSW	0 to 2	..	..	..	0	0	0	..	..
4	28·879	48·5	44·5	4·0	40·0	8·5	..	..	S by W	0 to ½	..	..	..	0	0	0	..	..
6	28·839	44·0	41·2	2·8	..	..	52·3	..	S by E	0 to ½	..	..	..	0	0	0	..	..
8	28·843	41·6	40·6	1·0	..	..	39·3	2·38	Calm	..	..	..	Neg.	25	20	12	12	0. 12
10	28·857	40·5	39·7	0·8	39·0	1·5			Calm	..	SW	1·08	Neg.	40	30	20	20	2. 0
12	28·871	40·2	39·4	0·8	..	..	65·0	0·09	NNW	..	..	..	Pos.	25	25	15	20	7. 0
14	28·894	40·6	40·0	0·6	..	..	32·0		NNW	..	..	..	Pos.	10	10	6	8	4. 0
16	28·914	40·6	39·7	0·9	39·0	1·6		6·050	NNW	..	..	..	..	0	0	0	..	..
18	28·931	39·5	38·7	0·8	..	..	50·5		NNW	..	..	..	..	0	0	0	..	..
20	28·944	40·6	39·4	1·2	..	..	49·0	..	N by W	0 to ½	..	..	..	0	0	0	..	..
22	28·951	42·3	41·4	0·9	39·5	2·8	..	..	NNW	0 to 1	NNW	1·80	Neg.	40	..	..	90	..
Apr. 7. 0	28·956	43·1	42·2	0·9	..	..	..	..	NNW	½ to 2	..	..	Neg.	40	0	..	50	..
2	28·968	42·8	42·5	0·3	..	..	..	..	NNW	½ to 1	..	..	Pos.	5	5	3	..	..
4	28·981	46·2	45·0	1·2	43·0	3·2	51·8	..	NNW	..	..	..	..	0	0	0	..	..
6	28·996	47·7	45·9	1·8	..	..	41·5	2·43	NNW	..	..	..	Pos.	15	15	8	10	4. 0
8	29·029	44·5	43·2	1·3	..	..			N by W	..	..	..	Pos.	2	2	0	..	..
10	29·042	43·5	42·2	1·3	40·0	3·5	66·5	0·12	Calm	..	..	..	Pos.	20	20	15	17	7. 0
12	29·048	42·7	42·4	0·3	..	..	38·0		Calm	..	..	..	Neg.	40	..	150	..	0. 16
14	29·049	42·9	42·7	0·2	..	..		6·170	Calm	..	..	..	Pos.	5	5	0	..	..
16	29·050	42·0	41·5	0·5	41·5	0·5	50·0		Calm	..	..	..	Neg.	40	..	..	100	0. 16
18	29·060	41·3	40·8	0·5	..	..	48·2	..	Calm	..	..	..	Pos.	5	10	3	..	5. 0
20	29·080	42·0	41·4	0·6	..	..	..	..	Calm	..	..	..	Pos.	40	40	30	30	8. 0
22	29·090	47·0	44·7	2·3	42·0	5·0	..	..	Calm	..	NNW	1·55	Pos.	40	40	30	30	Instantly
Apr. 8. 0	29·110	49·7	45·6	4·1	..	..	..	..	Calm	..	..	..	Pos.	40	35	20	30	Instantly
2	29·122	49·3	45·5	3·8	..	..	..	..	N by E	..	..	..	Pos.	40	..	30	40	10. 0
4	29·132	51·2	46·7	4·5	40·0	11·2	..	..	NNE	..	..	..	..	0	0	0	..	..
6	29·170	49·0	44·9	4·1	..	..	..	..	N	0 to ½	..	..	..	0	0	0	..	..
8	29·231	44·1	42·1	2·0	..	..	52·5	..	N by E	..	..	..	Neg.	40	..	30	30	2. 0
							37·5	2·43										
10	29·280	42·7	40·9	1·8	38·8	3·9	73·0	0·00	N by E	..	..	..	Pos.	40	..	..	50	..
							31·1											
12	29·328	42·5	41·0	1·5	..	..		6·170	N by E	..	..	..	Pos.	27	20	12	12	5. 0
14	29·370	40·8	38·6	2·2	..	..	50·0	..	N	..	..	..	Pos.	30	20	12	12	3. 0
16	29·413	39·8	38·2	1·6	36·5	3·3	47·5	..	N by W	..	..	..	Pos.	30	20	12	12	7. 0
18	29·474	37·6	36·2	1·4	..	..	..	..	NNW	..	..	..	Pos.	27	20	12	15	6. 0
20	29·510	40·5	39·6	0·9	..	..	..	..	NW	..	..	..	Pos.	20	15	7	10	4. 0
22	29·557	44·8	40·9	3·9	36·0	8·8	..	..	NW	..	N	1·32	Pos.	40	..	30	35	8. 0
Apr. 9. 0	29·595	48·5	44·7	3·8	..	..	..	..	W by N	..	NNW	0·03	Pos.	40	..	25	30	2. 30
2	29·595	51·7	45·8	5·9	..	..	56·6	..	WSW	..	WNW	0·18	Pos.	40	..	..	75	..
4	29·613	54·5	47·4	7·1	40·5	14·0	36·3	2·43	WSW	½ to ¾	..	..	Pos.	24	15	7	10	6. 0
6	29·616	52·4	45·6	6·8	..	..			W by S	0 to 1	..	..	Pos.	10	8	0	..	8. 0
8	29·650	47·4	44·0	3·4	..	..	71·7	0·00	WSW	..	..	..	Pos.	2	2	0	..	..
							32·6											
10	29·677	44·5	41·4	3·1	38·5	6·0		6·170	WSW	..	..	..	Pos.	2	2	0	..	..
12	29·694	40·7	38·7	2·0	..	..	49·0		WSW	..	..	..	Pos.	15	..	10	10	1. 0
14	..	..	..	,,	..	..	47·2	..	WSW	..	..	..	..	..	..	..	..	..
16	..	..	..	,,	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..

MINIMUM FREE THERMOMETER.

April 7d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

ELECTRICITY.

April 6d. 22h. There was a spark at the distance of 0in·03.

April 7d. 16h. There was a spark at the distance of 0in·03.

April 8d. 0h and 10h. There were sparks at the distances of 0in·03 and 0in·01 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus: the rain has ceased falling: the wind is blowing in gusts to $\frac{1}{2}$.	L
9	..	Cirro-stratus, detached cumuli, fleecy clouds, and scud: small breaks in all direction: the wind is blowing in gusts to $\frac{1}{2}$.	L
10	..	Cirro-stratus, detached cumuli, and fleecy clouds in every direction.	T D
8	..	Cirro-stratus, cumulo-stratus, fleecy clouds, and scud: heavy showers of rain.	
10	..	Cirro-stratus: rain falling heavily.	
8	Transit	Cirro-stratus, fleecy clouds, and scud: the rain has ceased.	T D
10	..	,,	L
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	,, a cold rain falling.	H B
10	..	Cirro-stratus and scud: the rain has ceased.	
10	..	,, rain falling.	H B
9	..	Cirro-stratus, fleecy clouds, and scud: small breaks towards the N. horizon.	L
10	..	Cirro-stratus and scud cover the sky.	
10	..	,,	
10	Transit	Cirro-stratus and scud.	L
10	..	Cirro-stratus: rain falling heavily.	H B
10	..	,, a very light rain falling.	
10	..	Cirro-stratus and scud: a very light rain falling.	
10	..	Cirro-stratus and scud.	
9	..	,, clear near the N. N. E. horizon for a considerable extent.	H B
10	..	Cumuli, cumulo-strati, and scud in every direction: the sky at $8^h.\ 30^m$ became cloudless, and remained so until $9^h.\ 0^m$.	T D
7	..	Cirro-stratus, scud, and light fleecy clouds, with several large breaks, through which a fine blue sky is visible.	T D
10	..	Cirro-stratus, scud, and light fleecy clouds.	L
$9\frac{3}{4}$	..	Cirro-stratus, scud, and cumulo-stratus: breaks of small extent S. of the zenith.	H B
10	..	Cirro-stratus and scud.	
3	..	Cirro-stratus and fragments of scud near the N. and W. horizon, and also S. of the zenith: shortly after the last observation extensive breaks occurred in every portion of the sky, and have gradually increased to the present time.	
8	Transit	Cirro-stratus and light fleecy clouds: a few breaks of small extent in varions directions: a fine double-coloured corona was visible around the Moon at $9^h.\ 50^m$.	H B
10	..	Cirro-stratus and scud.	T D
10	..	,,	
10	..	,,	
5	..	Cirro-stratus in the horizon, and a few detached portions in other parts of the sky.	
3	In Equator	Cirro-stratus near the horizon in the N. E.: foggy.	T D
6	..	Cirro-stratus, scud, and fleecy clouds in all directions: hazy towards the N.	L
9	..	Cirro-stratus, scud, and fleecy clouds: a few detached cumuli, and small breaks in all directions: hazy.	L
3	..	Cirro-stratus, fleecy clouds, and cumuli in various directions: hazy near the horizon.	H B
5	..	Cirro-stratus and fleecy clouds: a thin haze prevails in the horizon.	T D
7	..	Cirro-stratus, scud, and fleecy clouds in every direction: a few drops of rain falling.	
6	..	Cirro-stratus and fleecy clouds chiefly in the S.; detached portions of cumuli and cirri are scattered over the remainder of the sky: hazy in the horizon.	
3	..	Fragments of light cirri cover the sky in every direction, particularly in the N.	T D
0	Transit	Cloudless.	L

HENLEY'S ELECTROMETER.

April $6^d.\ 22^h$. The reading was 6°; at $6^d.\ 22^h.\ 3^m$ the reading was 8°, and that of Volta 2 was 200^{div}.
April $7^d.\ 0^h$. The reading was 3°; at $7^d.\ 16^h$ the reading was 5°.
April $8^d.\ 10^h$. The reading was 3°.
April $9^d.\ 2^h$. The reading was 3°.

GALVANOMETER.

April $7^d.\ 12^h$. There was a current of 2° towards A.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 9. 18	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
22	29·721	51·6	47·4	4·2	..	..	..	..	WSW	..	WSW	2·90	Pos.	20	20	10	10	..
Apr. 10. 0	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	59·4	..	SSW	..	..	..	..	..	..	..	..	..
6	29·773	51·0	46·8	4·2	..	..	44·6	2·43	SSW	..	..	..	Pos.	40	60	20	25	..
8	..	..	..	..	..	..			S	..	WSW	0·37	..	..	..	..	..	..
10	..	..	..	..	..	..	79·6	0·00	SE	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	39·5		SE	..	..	..	..	..	..	..	..	..
14	29·576	44·4	42·0	2·4	..	..		6·170	SE	..	..	..	Pos.	20	20	15	17	5. 0
16	29·533	45·2	42·9	2·3	38·0	7·2	51·0		SE	..	..	..	Pos.	15	16	10	12	4. 0
18	29·496	44·5	43·4	1·1	..	..	47·8	..	SSE	..	..	..	Pos.	8	7	5	5	6. 0
20	29·445	48·0	46·4	1·6	..	..	..	..	E by S	..	..	..	Pos.	10	10	7	8	4. 0
22	29·414	52·7	49·4	3·3	47·0	5·7	..	..	ESE	..	SE	0·92	Pos.	20	25	10	10	6. 30
Apr. 11. 0	29·374	55·2	50·2	5·0	..	..	..	..	SE	..	..	..	Pos.	30	40	15	20	..
2	29·335	54·1	49·9	4·2	..	..	..	..	SSE	..	..	..	Pos.	10	15	3	..	..
4	29·296	49·7	49·4	0·3	49·0	0·7	61·5	..	SE	0 to ½	..	..	..	0	0	0	..	..
6	29·234	51·3	49·4	1·9	..	..	44·1	2·43	SE	..	..	..	..	0	0	0	..	..
8	29·230	51·0	48·5	2·5	..	..			SE	..	..	..	..	0	0	0	..	..
10	29·223	50·2	48·2	2·0	46·0	4·2	76·8	0·11	SE	..	..	..	Pos.	20	20	14	16	7. 0
12	29·217	48·2	46·8	1·4	..	..	39·5		SE	..	..	..	Pos.	35	40	15	20	6. 0
14	..	..	..	..	..	..		6·285	SE	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	50·0		SE	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	48·0	..	SE	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SSE	..	..	..	..	..	..	..	..	..
22	29·288	60·5	55·7	4·8	..	..	..	..	SSE	..	SSE	2·30	Pos.	2	2	0	..	..
Apr. 12. 0	..	..	..	..	..	..	..	..	SSW	½ to 1½	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	SSW	1 to 3½	..	..	..	..	..	..	..	..
4	29·361	61·2	55·5	5·7	..	..	63·0	..	SSW	1 to 2	..	..	Pos.	2	2	0	..	..
6	..	..	..	..	..	..	48·1	..	SSW	½ to 1½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		2·61	SSW	..	SSW	2·80	..	..	..	..	..	..
10	..	..	..	..	..	..	78·4		SSE	½ to 1	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	43·7	0·23	SE	..	..	..	..	..	..	..	..	..
14	29·387	50·6	49·7	0·9	..	..			SSW	..	..	..	Neg.	25	20	8	10	1. 5
16	29·368	49·7	48·7	1·0	..	..	52·0	6·525	S by E	½ steady	..	..	Pos.	2	2	0	..	..
							49·0	..										
18	29·389	48·2	47·3	0·9	..	..		..	S by W	..	S	0·92	Pos.	8	10	3	..	5. 0
20	29·416	51·8	49·2	2·6	..	..	..	..	SSW	½ to 2	..	..	Pos.	12	15	8	..	9. 0
22	29·454	54·3	51·4	2·9	49·0	5·3	..	..	SSW	1½ to 3½	SSW	2·10	..	0	0	0	..	..
Apr. 13. 0	29·478	56·5	53·5	3·0	..	..	62·0	..	SSW	1 to 3½	..	..	Pos.	2	2	0	..	..
2	29·502	57·3	54·2	3·1	..	..	45·5	2·61	SW	½ to 3	..	..	Pos.	2	2	0	..	..
4	29·532	58·8	54·2	4·6	51·0	7·8	75·7	0·00	SW	1 to 3	..	..	Pos.	5	8	3	..	8. 0
							38·3											
6	29·567	56·4	51·8	4·6	..	..		6·540	SSW	½ to 1	..	..	Pos.	8	12	6	8	4. 0
8	29·622	51·7	49·6	2·1	..	..	52·5		S by W	..	..	..	Pos.	5	8	3	..	7. 0
10	29·662	48·6	47·5	1·1	46·3	2·3	50·2	..	S by E	..	..	..	Pos.	3	5	..	..	8. 0

MINIMUM FREE THERMOMETER.

April 10d. 22h. The reading was higher than those of the Dry Thermometer at 14h and 18h.

April 13d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

TEMPERATURE OF THE DEW POINT.

April 12d. 16h. The observation was omitted by inadvertence.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
..	..		
6	..	Cumuli, cirro-stratus, and fleecy clouds in every direction.	H B
..	..		
..	..		
..	..		
9	..	Cirro-stratus, fleecy clouds, and scud: at $9^h.30^m$ the Moon was surrounded by an imperfect halo.	H B
..	..		
..	..		
..	Transit		
10	..	Thin cirro-stratus: the Moon is visible through the clouds.	L
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	L
10	..	,, the Sun occasionally shines through the clouds.	H B
10	..	Cirro-stratus and scud.	
10	..	,, a few drops of rain falling.	H B
10	..	,, rain is falling slightly.	L
10	Full	,, the rain has ceased falling.	
10	..	,,	
10	..	,,	L
4	Transit	Cirri and light clouds in lines in every direction: there is an appearance of an imperfect halo around the Moon.	H B
..	..		
..	..		
..	..		
..	..		
8	..	Cirro-stratus around the horizon at a low elevation: lines of cirri and masses of cumuli, with light fleecy clouds, cover the sky.	T D
..	..		
..	..		
8	..	Cumuli, cumulo-strati, and fleecy clouds.	T D
..	..		
..	..		
..	..		
..	..		
10	Transit	Cirro-stratus and scud: rain has commenced falling.	H B
$9\frac{1}{2}$	..	Cirro-stratus, scud, and fleecy clouds: breaks in the S. W. horizon, and of smaller extent in the S. S. E. horizon: the rain has ceased falling.	
2	..	Cirro-stratus and scud in the W. N. W., and around the horizon.	
9	..	Cirro-stratus, scud, and fleecy clouds: the wind is blowing in gusts to $\frac{3}{4}$.	H B
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	Cirro-stratus and scud: slight showers of rain falling occasionally: the wind is blowing in gusts to 1.	
5	..	Cirro-stratus and large masses of white scud floating in all directions: cumuli towards the E. horizon: the wind is blowing in gusts to 1.	L
$9\frac{1}{2}$	..	Cumuli around the N. and N. W. horizon: cirro-strati and brownish-coloured scud cover the remainder of the sky: the wind is blowing in gusts to 1.	H B
9	..	Cirro-stratus and scud: small portions of clear sky S. of the zenith, and also in the N. N. E.	
2	..	Cirro-strati and fragments of scud near the W. and S. horizon.	
0	..	Cloudless.	

OSLER'S ANEMOMETER.

April $12^d.4^h.20^m$. A gust of 5 lbs. pressure was recorded.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	RAIN GAUGES. Stand of No. 1. (Osler's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 13. 12	29·660	46·5	45·7	0·8	..	..	..	..	S by E	..	..	..	Pos.	2	2	0	..	..
14	29·663	46·0	45·4	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	29·647	45·5	45·2	0·3	45·0	0·5	..	..	Calm	..	..	..	Pos.	5	6	4	..	5. 0
18	29·638	44·0	43·7	0·3	..	..	..	..	Calm	..	..	..	Pos.	10	12	8	10	7. 0
20	29·625	47·5	47·2	0·3	..	..	..	..	Calm	..	..	..	Pos.	25	25	15	20	6. 0
22	29·618	53·3	51·9	1·4	50·0	3·3	..	..	Calm	..	SSW	3·55	Pos.	25	20	12	10	5. 0
Apr. 14. 0	29·590	56·8	53·0	3·8	..	..	..	..	ENE	..	..	..	..	0	0	0	..	..
2	29·540	60·0	54·0	6·0	..	..	..	..	E by N	0 to ½	..	..	Pos.	2	2	0	..	..
4	29·479	54·7	52·8	1·9	51·0	3·7	60·7	..	ENE	½ to 1	..	..	Pos.	10	10	7	8	4. 0
6	29·448	52·8	52·0	0·8	..	..	47·7	..	E by S	..	..	..	..	0	0	0	..	..
8	29·456	51·8	50·9	0·9	..	..		2·65	E by N	..	..	..	..	0	0	0	..	..
10	29·445	48·3	48·2	0·1	48·0	0·3	70·6		E by N	..	ENE	1·27	..	0	0	0	..	..
12	29·444	48·0	47·7	0·3	..	..	43·8	0·06	Calm	..	..	..	..	0	0	0	..	..
14	29·434	48·5	48·2	0·3	..	..		6·615	Calm	..	..	..	..	0	0	0	..	..
16	29·438	49·5	48·7	0·8	48·0	1·5	53·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·440	48·3	47·7	0·6	..	..	51·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·468	49·9	48·9	1·0	..	..	..	..	SSE	..	..	..	..	0	0	0	..	..
22	29·501	50·2	48·7	1·5	47·8	2·4	..	..	SE	..	ESE	0·33	Pos.	30	50	15	15	..
Apr. 15. 0	29·534	50·1	49·3	0·8	..	..	..	..	E by N	..	..	..	Pos.	30	40	15	15	..
2	29·555	50·6	49·5	1·1	..	..	..	..	E	..	..	..	Pos.	30	40	10	12	8. 0
4	29·569	52·3	50·4	1·9	49·0	3·3	54·8	..	NE	..	..	..	Pos.	40	40	20	15	3. 0
6	29·598	52·0	49·7	2·3	..	..	49·5		NE	..	..	..	Pos.	35	30	15	12	6. 0
8	29·627	49·7	48·8	0·9	..	..		2·68	N by E	..	..	..	Pos.	40	40	20	15	5. 0
10	29·662	49·7	49·1	0·6	49·0	0·7	64·5		N	..	..	..	Pos.	35	30	15	12	5. 0
12	29·683	49·5	49·3	0·2	..	..	47·0	0·04	NE	..	..	..	Pos.	2	2	0	..	..
14	29·708	49·6	49·6	0·0	..	..			NE	..	..	..	Neg.	2	2	0	..	..
16	29·731	49·5	49·2	0·3	49·0	0·5	53·0	6·660	NE	..	..	..	Pos.	2	2	0	..	..
18	29·773	49·5	49·0	0·5	..	..	51·2	..	ENE	..	..	..	Pos.	5	5	3	..	6. 0
20	29·826	51·5	50·4	1·1	..	..	..	..	E by N	..	..	..	Pos.	5	8	3	..	5. 30
22	29·867	54·3	52·0	2·3	50·0	4·3	..	..	ENE	..	E	1·01	Pos.	15	14	10	12	7. 0
Apr. 16. 0	29·878	55·3	52·7	2·6	..	..	..	..	E	..	..	..	Pos.	2	2	0	..	..
2	29·888	58·7	55·0	3·7	..	..	..	..	E by S	..	..	..	Pos.	20	18	15	15	7. 0
4	29·883	57·7	53·9	3·8	..	..	60·8	..	E by S	..	..	..	Pos.	30	40	10	10	8. 0
6	29·896	55·4	51·9	3·5	..	..	44·1		E	..	..	..	Pos.	10	15	5	8	5. 0
8	29·912	49·9	48·2	1·7	..	..		2·68	ESE	..	..	..	Pos.	30	40	15	20	15. 0
10	29·920	46·5	46·7	−0·2	46·0	0·5	72·5		ESE	..	..	..	Pos.	40	50	15	20	5. 30
12	29·920	45·2	45·4	−0·2	..	..	43·7	0·00	Calm	..	..	..	Pos.	30	..	20	25	5. 0
14	29·914	45·6	45·7	−0·1	..	..			Calm	..	..	..	Pos.	40	..	25	30	7. 0
16	29·896	44·0	44·0	0·0	44·0	0·0	54·0	6·665	Calm	..	..	..	Pos.	38	..	25	30	8. 0
18	29·869	43·5	43·7	−0·2	..	..	52·2	..	Calm	..	..	..	Pos.	20	..	12	15	6. 0
20	29·861	47·2	47·2	0·0	..	..	..	..	Calm	..	..	..	Pos.	30	..	20	25	5. 0
22	29·833	52·8	51·6	1·2	50·0	2·8	..	..	Calm	..	ESE	0·94	Pos.	40	35	15	20	7. 0
Apr. 17. 0	29·805	58·0	54·9	3·1	..	..	..	..	SSW	..	..	..	Pos.	30	25	10	12	6. 0
2	29·779	59·9	56·2	3·7	..	..	..	..	SSW	..	..	..	Pos.	40	35	20	25	4. 0
4	29·754	56·0	54·0	2·0	53·0	3·0	..	..	WSW	..	SW	0·68	Pos.	40	40	25	30	6. 0
6	29·755	49·7	47·7	2·0	..	..	..	..	NW	0 to ½	WNW	0·52	Pos.	20	20	15	17	4. 0
8	29·767	47·0	44·7	2·3	..	..	..	..	NW	0 to ¾	..	..	Pos.	5	10	4	..	..

DRY THERMOMETER.
April 16d. 10h, 12h, 14h, and 18h. The readings were lower than those of the Dry Thermometer.

MINIMUM FREE THERMOMETER.
April 16d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

TEMPERATURE OF THE DEW POINT.
April 16d. 4h. The observation was omitted by inadvertence.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless.	L
10	Transit	Cirro-stratus: the Moon is visible through the clouds and is occasionally surrounded by a very faint halo.	
4	..	Thin cirro-stratus around the horizon: clear about the zenith.	
0	..	Cloudless.	
3	..	Cirro-stratus and fleecy clouds towards the S. horizon, and light clouds and cirri about the zenith: clear in the N.	L
10	..	Cirro-stratus: occasional gleams of sunshine.	T D
10	..	A thin cirro-stratus prevails.	
10	..	Cirro-stratus and scud.	T D
10	..	,, a light rain falling.	L
10	..	,, ,,	
10	..	,, rain falling heavily.	
2	..	Cirro-stratus towards the horizon in the E.	L
7	..	Cirro-stratus around the horizon, and detached portions are scattered over the remainder of the sky: the stars are dimly seen.	T D
10	..	Cirro-stratus and dark masses of scud.	
10	Transit	Cirro-stratus and dark scud: a few breaks near the Moon.	
10	..	Cirro-stratus and scud.	
10	..	,, a thin rain falling.	T D
10	..	Nimbi and scud: occasional drops of rain.	H B
10	..	Cirro-stratus and scud: a light rain falling.	
10	..	,, ,,	H B
10	..	,,	T D
10	..	,, a break of small extent in the zenith.	
10	..	,,	
10	..	,,	T D
10	..	,, a light rain falling.	H B
10	..	Cirro-stratus: a light rain falling.	
10	Transit Greatest dec. S.	Cirro-stratus and scud: the rain has ceased.	
10	..	,,	
10	..	,, a few breaks of small extent in several directions.	H B
4	..	Cirro-stratus in thick masses towards the S. horizon: light fleecy clouds S. of the zenith: fine rocky cumuli near the N. horizon; clear elsewhere.	L
10	..	Cirro-stratus, scud, and fleecy clouds.	
10	..	,,	L
1	..	Cumuli around the horizon: a few cirri, chiefly of the cymoid kind, in other directions.	H B
1	..	Cumuli and fleecy clouds around the horizon: cirri and light clouds near the Sun's place.	
1	..	Cirro-stratus and scud along the W. horizon: light clouds S. W. of the zenith.	
10	..	The sky has become completely covered with cloud since the last observation: a fog arose about 9^h, and still continues.	H B
10	..	Cirro-stratus: a thin fog prevails.	L
10	..	,, ,,	
10	..	,, ,,	
10	Transit	,, ,,	
10	..	,, ,,	L
8½	..	Cirro-stratus, scud, and cumuli: some small breaks in and around the zenith.	T D
8	..	Cirro-stratus and scud around the horizon: several clear breaks in and about the zenith.	
9	..	Cirro-stratus of a thin character: a small clear break in the N. E.	T D
10	..	Cirro-stratus, scud, and fleecy clouds.	L
10	..	,,	L
10	..	,,	G

ELECTRICITY.

April 15^d at 4^h, 8^h, and at 10^h, there were sparks at the distances of $0^{in}.03$, $0^{in}.02$, and $0^{in}.02$ respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 17. 10	29·767	47·0	45·2	1·8	44·0	3·0	60·4			..			NNW	..	..	..	..	0	0	0	..	..
12	29·763	46·9	45·2	1·7	..	..	44·8			2·68			NNW	..	NW	1·12	..	0	0	0	..	..
14	29·764	46·5	45·2	1·3	..	..							N	..	..	..	..	0	0	0	..	..
16	29·756	46·0	44·8	1·2	43·5	2·5	72·7			0·02			N by E	..	..	..	..	0	0	0	..	..
18	29·755	45·0	44·7	0·3	..	..	45·3						N by E	..	..	..	..	0	0	0	..	..
20	29·778	46·5	46·0	0·5	..	..				6·680			NNE	½ steady	..	..	..	0	0	0	..	..
22	29·788	47·2	46·7	0·5	47·0	0·2	54·0			..			NNE	½ steady	N	0·73	..	0	0	0	..	..
							52·2															
Apr. 18. 0	29·806	49·4	47·9	1·5	..	..	..			..			N by W	0 to ½	..	..	..	0	0	0	..	..
2	29·814	49·0	47·1	1·9	..	..	..			..			N by W	0 to ½	..	..	Pos.	2	2	0	..	..
4	29·833	50·2	47·5	2·7	45·0	5·2	51·0			..			N	½ to 1	..	..	..	0	0	0	..	..
6	29·847	48·7	46·6	2·1	..	..	43·5			2·68			N by W	..	..	..	..	0	0	0	..	..
8	29·866	47·2	45·2	2·0	..	..							N by W	..	..	..	..	0	0	0	..	..
10	29·875	45·6	44·2	1·4	43·0	2·6	58·0			0·00			N by W	..	..	..	..	0	0	0	..	..
12	29·894	45·6	44·3	1·3	..	..	39·5						N by E	..	..	..	Pos.	30	20	10	12	Instantly
14	..	..	..	..	..	..				6·680			N by E	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	54·0						NNW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	52·0			..			N	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			N by E	..	..	..	..	..	..	..	..	..
22	29·917	49·5	45·5	4·0	..	..	..			..			N by E	0 to ½	N	2·68	Pos.	2	2	0	..	..
Apr. 19. 0	..	..	..	..	..	..	..			..			NNE	1 to 1½	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..			..			NNE	½ to 1	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	52·5			..			N by E	½ to ¾	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	36·5			2·68			NNE	½ to 1½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..							NNE	0 to ½	..	..	..	..	..	..	..	..
10	30·013	43·7	40·2	3·5	..	..	73·0			0·00			NNE	½ steady	..	..	Pos.	2	2	0	..	..
12	..	..	..	..	..	..	29·7						N by E	..	..	..	..	..	..	..	..	..
14	29·994	37·8	36·9	0·9	..	..							N by E	..	..	..	Pos.	35	40	8	10	7. 0
16	29·982	37·8	36·9	0·9	36·0	1·8	53·2			6·680			N by E	..	..	..	Pos.	18	20	5	8	5. 30
18	29·981	38·0	37·0	1·0	..	..	50·5			..			N by E	..	..	..	Pos.	40	..	15	20	10. 0
20	29·998	41·7	40·9	0·8	..	..	..			..			N by E	½ to ¾	..	..	Pos.	30	30	15	12	11. 0
22	29·988	47·5	43·9	3·6	40·0	7·5	..			..			N by E	½ steady	N	3·62	Pos.	2	2	0	..	..
Apr. 20. 0	29·972	48·3	43·0	5·3	..	..	..			..			NNE	½ to 1	..	..	Pos.	2	2	0	..	..
2	29·973	48·5	46·9	1·6	..	..	..			..			NE	..	..	..	..	0	0	0	..	..
4	29·944	49·8	45·9	3·9	41·5	8·3	54·0			..			N by E	..	..	..	Pos.	30	..	20	25	..
6	29·946	47·8	43·6	4·2	..	..	33·3			..			NNE	..	..	..	Pos.	8	10	5	..	..
8	29·949	44·1	40·8	3·3	..	..				2·68			Calm	..	..	..	Pos.	35	30	15	20	8. 0
10	29·970	41·4	38·9	2·5	35·5	5·9	77·0						Calm	..	..	..	Pos.	35	40	15	20	7. 0
12	29·973	38·5	37·2	1·3	..	..	27·5			0·00			Calm	..	..	..	Pos.	30	35	20	25	9. 0
14	29·958	36·7	35·9	0·8	..	..							Calm	..	..	..	Pos.	25	25	18	20	6. 0
16	29·952	35·3	34·7	0·6	34·0	1·3	52·0			6·700			Calm	..	..	..	Pos.	20	20	14	16	11. 0
18	29·951	33·3	32·7	0·6	..	..	49·8			..			Calm	..	..	..	Pos.	40	40	25	30	4. 0
20	29·954	35·8	36·0	–0·2	..	..				..			Calm	..	..	..	Pos.	40	..	30	35	3. 0
22	29·948	43·3	42·2	1·1	41·0	2·3	..			..			Calm	..	NNE	1·15	Pos.	30	20	12	15	5. 0
Apr. 21. 0	29·932	49·0	43·7	5·3	..	..	..			..			NNE	..	..	..	Pos.	2	2	0	..	..
2	29·908	51·4	45·7	5·7	..	..	..			..			N	..	..	..	Pos.	0	0	0	..	..
4	29·873	49·7	42·8	6·9	35·0	14·7	..			..			Calm	..	..	..	Pos.	2	2	0	..	..

MAXIMUM FREE THERMOMETER.

April 19d. 22h. The reading recorded was 46° ·5, which is evidently wrong, as all the readings of the Dry Thermometer are less than this reading: the reading was altered conjecturally to 36° ·5, which number has been used in subsequent calculations.

DRY THERMOMETER.

April 20d. 20h. The reading was lower than that of the Wet Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, scud, and fleecy clouds.	T D
10	..	Cirro-stratus, very dense.	
10	..	,,	
10	..	,,	
10	Transit	Cirro-stratus: a thin rain falling.	
10	..	,, the rain has ceased.	T D
10	..	Cirro-stratus and scud.	H B
10	..	Cirro-stratus and scud: the clouds are very dark.	
10	..	,, occasional drops of rain.	H B
10	..	,,	T D
10	..	,,	
10	..	,,	
10	3rd Qr.	Cirro-stratus and scud of various densities: light clouds in the zenith, through which some stars are visible.	T D
10	..	Cirro-stratus: the clouds are less dense in the N. W. than in other directions.	H B
..	..		
..	..		
..	..		
..	Transit		
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$.	T D
..	..		
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$.	
10	..	Cirro-stratus and scud: the sky became beautifully clear, but continued so for a very short period.	
10	..	,, the clouds in the S. E. appear slightly broken.	
5	..	Cirro-stratus and fragments of brownish-coloured scud near the horizon: some fine specimens of cirrus and cirro-cumulus cloud in various directions.	T D
1	Transit	Light clouds (chiefly linear-cirri) near the N. and S. horizon.	H B
7	..	Cumuli around the horizon: light fleecy clouds in all directions.	L
8	..	Cirro-stratus, fleecy clouds, and detached cumuli: cumuli towards the N. horizon, and loose masses of scud floating in all directions.	
9	..	Cirro-stratus and cumuli in the N.; light clouds in all other directions: occasional showers of hail and rain.	L
9	..	Cirro-stratus, cumuli, and scud cover the sky, with the exception of a small portion in the E. S. E.	H B
10	..	Cirro-stratus and scud: a considerable portion of the sky was clear about $4^h.45^m$.	
10	..	Cirro-stratus, with the exception of a few small breaks in the zenith, covers the whole of the sky.	
0	..	Cloudless.	H B
0	Perigee	,,	L
0	..	,,	
0	..	,,	
10	..	Overcast: a fog has risen within the last half-hour.	
10	..	,, a dense fog: the Astronomical Observatory is invisible from the Magnetic Observatory.	L
10	Transit	Thin cirro-stratus: a thick fog still prevails.	T D
7	..	Cumuli in the horizon from the N. to S.W.: detached masses in the zenith, and cirro-stratus in the W., at a considerable altitude.	T D
10	..	Cirro-stratus, through which the Sun is faintly shining.	L
10	..	Cirro-stratus and scud: a few cumuli towards the N. horizon.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	RAIN GAUGES. Stand of No. 1. (Osler's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	of Rad. Therm.	Reading of No. 2.		from lbs. to lbs.		in.				div.	div.	m s
							°	in.				in.						
Apr. 21. 6	29·865	48·5	43·7	4·8	..	..	52·5	..	Calm	..	..	..	..	0	0	0	0	..
8	29·862	43·8	39·8	4·0	..	..	35·9	..	Calm	..	..	..	Pos.	20	20	15	17	7. 0
10	29·861	42·0	39·2	2·8	35·0	7·0		2·68	Calm	..	..	..	Pos.	25	25	18	20	6. 0
12	29·840	38·7	37·0	1·7	..	..	73·7		Calm	..	..	..	..	0	0	0	..	..
14	29·824	37·6	36·2	1·4	..	..	29·8	0·00	Calm	..	..	..	..	0	0	0	..	..
16	29·796	36·7	35·5	1·2	34·0	2·7			Calm	..	..	..	..	0	0	0	..	..
18	29·785	36·2	35·2	1·0	..	..	52·0	6·700	Calm	..	..	..	..	0	0	0	..	..
20	29·785	43·4	41·2	2·2	..	..	49·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·764	50·6	46·5	4·1	40·5	10·1		..	SSE	..	ESE	0·28	Pos.	15	12	5	8	..
Apr. 22. 0	29·753	52·0	45·9	6·1	..	..	..	..	ESE	..	..	..	Pos.	30	40	12	15	..
2	29·743	54·1	49·0	5·1	..	..	..	..	E	..	..	..	Pos.	40	45	15	20	16. 0
4	29·730	51·6	47·2	4·4	43·0	8·6		..	E by S	0 to ½	..	..	Pos.	30	25	12	15	5. 0
6	29·730	49·5	45·7	3·8	..	..	55·8	..	E by S	..	..	..	Pos.	40	35	15	20	2. 0
8	29·735	46·2	42·8	3·4	..	..	37·7	2·68	E	..	..	..	Pos.	40	35	20	25	3. 0
10	29·747	42·2	39·7	2·5	37·0	5·2	67·3	0·00	E by N	..	..	..	Pos.	40	..	70	70	..
12	29·737	40·3	39·1	1·2	..	..	34·0	6·700	ENE	..	..	..	Pos.	40	..	60	70	..
14	29·717	38·3	37·9	0·4	..	..	51·5	..	Calm	..	E	1·27	Pos.	30	..	20	25	7. 0
16	29·698	38·9	38·5	0·4	37·0	1·9	49·5	..	ENE	..	..	..	Pos.	40	..	25	20	9. 0
18	29·693	38·0	37·7	0·3	..	..	..	..	ENE	..	..	..	Pos.	35	40	20	25	..
20	29·700	43·4	42·8	0·6	..	..	..	..	ENE	..	..	..	Pos.	40	35	50	70	..
22	29·703	47·5	44·7	2·8	42·0	5·5	..	..	ENE	¼	ESE	0·35	Pos.	40	..	20	20	..
Apr. 23. 0	29·686	50·0	45·6	4·4	..	..	..	..	ENE	..	..	..	Pos.	35	..	20	20	10. 0
2	29·675	52·5	45·8	6·7	..	..	..	..	E by N	..	..	..	Pos.	40	..	20	30	..
4	29·657	53·5	48·3	5·2	41·5	12·0	55·3	..	ENE	..	..	..	Pos.	40	50	20	30	10. 0
6	29·658	48·5	45·2	3·3	..	..	42·5	3·08	NE	..	..	..	Pos.	30	..	20	25	4. 0
8	29·663	47·5	44·6	2·9	..	..			E by N	..	..	..	Pos.	40	35	40	50	5. 0
10	29·670	44·8	42·2	2·6	39·0	5·8	64·5	0·59	ENE	..	..	..	Pos.	40	..	60	70	..
12	29·654	43·8	42·1	1·7	..	..	41·8		NE	..	..	..	Pos.	30	40	15	20	12. 0
14	29·625	41·8	41·0	0·8	..	..		7·380	NNE	..	..	..	Pos.	30	35	8	10	..
16	29·609	42·3	42·2	0·1	42·0	0·3	51·0		NE	..	..	..	Neg.	40	..	..	..	..
18	29·613	42·8	42·7	0·1	..	..	49·0	..	NE	..	..	..	Neg.	40	..	..	..	..
20	29·627	45·5	45·3	0·2	..	..	..	..	NNE	..	..	..	Neg.	30	40	15	18	..
22	29·644	46·8	45·9	0·9	45·0	1·8	..	..	ENE	..	NE	0·90	Pos.	30	..	20	25	4. 0
Apr. 24. 0	29·657	50·6	49·5	1·1	..	..	..	..	Calm	..	..	..	Pos.	25	..	15	20	..
2	29·666	52·2	50·4	1·8	..	..	..	..	Calm	..	..	..	Pos.	25	..	15	20	9. 0
4	29·658	55·2	51·2	4·0	46·0	9·2	58·3	..	Calm	..	..	..	Pos.	28	35	15	20	15. 0
6	29·673	52·0	49·7	2·3	..	..	41·3	..	Calm	..	..	..	Pos.	35	..	15	20	5. 0
8	29·721	49·6	48·0	1·6	..	..		3·08	Calm	..	..	..	Pos.	25	30	12	15	12. 0
10	29·746	44·9	44·3	0·6	43·5	1·4	74·5		Calm	..	..	..	Pos.	20	25	10	12	10. 0
12	29·769	43·0	42·2	0·8	..	..	35·5	0·00	Calm	..	..	..	Pos.	40	50	25	35	1. 30
14	29·775	41·5	41·1	0·4	..	..			Calm	..	..	..	Pos.	40	50	30	40	2. 0
16	29·776	42·0	41·7	0·3	41·5	0·5	51·0	7·380	Calm	..	..	..	Pos.	30	20	10	12	7. 0
18	29·782	42·0	41·8	0·2	..	..	49·0	..	Calm	..	..	..	Pos.	40	30	17	25	5. 0
20	29·794	45·0	44·9	0·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	50	55	..
22	29·804	54·0	51·2	2·8	48·0	6·0	..	..	ESE	..	SSW	0·52	Pos.	30	..	20	30	..

MINIMUM FREE THERMOMETER.

April 23d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

ELECTRICITY.

April 22d. 6h and 8h. There were sparks at 0in·02 and 0in·03 respectively.

April 23d. 16h. There were sparks at the distance of 0in·05; and at 18h there were sparks at intervals of 3s at the distance of 0in·12.

HENLEY'S ELECTROMETER.

April 23d. 16h and 18h. The readings were 8° and 18° respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, scud, and fleecy clouds.	L
6	..	Cirro-stratus and scud: clear in and around the zenith.	
0	..	Cloudless.	L
4	..	Cirro-stratus and heavy vapour prevail in the horizon: the stars in the zenith look very dim.	T D
3	..	Cirro-stratus and heavy vapour.	
4	..	,,	
7	..	,, the sky is clear in the S. E.	
6	..	Cirro-stratus in the horizon, extending a considerable distance above it.	T D
5	Transit	Cirro-stratus in all directions; it is less dense in the S. E.: a few cumuli in the N.W.	H B
10	..	Cirro-strati, cumuli, and scud.	
9	In Equator	Cirro-stratus in every part of the sky: large masses of scud near the S. horizon: the Sun occasionally shines through the clouds.	H B
10	..	Cirro-stratus and scud.	T D
10	..	,,	
7	..	The zenith, and the parts around it, are clear; cirro-stratus in masses covers the remainder of the sky: detached cirri and fleecy clouds in the S.W.	T D
3	..	Cirro-stratus, to the distance of 15° above the horizon, all round; the remainder of the sky is cloudless, but the stars appear dim.	G
1	..	Cloudless, with the exception of a few clouds near the horizon.	G
0	..	Cloudless.	L
0	..	,,	H B
1	..	A few fragments of cirro-stratus near the horizon in every direction.	H B
6	..	Cirro-stratus in the horizon all around; detached portions also are scattered over the remainder of the sky.	T D
10	Transit	Cumulo-stratus and scud, the latter is moving from the E.: there is no upper cloud, as occasionally small patches of blue sky are visible.	G
9	..	Cumulo-stratus in large masses S. of the zenith: cirro-stratus and fragments of scud in various directions.	H B
9½	..	Cumulo-stratus N. of the zenith; cirro-stratus and scud in other directions: a few cumuli near the N.N.E. horizon.	
10	..	Cumulo-stratus, cirro-stratus, and scud.	H B
10	..	Cirro-stratus and scud.	L
10	..	Cirro-stratus.	T D
4	..	The sky is generally cloudy for 20° above the horizon; clear elsewhere.	G
10	..	Cirro-stratus and scud.	H B
4	..	Cirro-stratus in extensive quantities around the horizon.	
10	..	Cirro-stratus and scud: rain is falling heavily.	
10	..	,, ,,	
10	..	,, the rain ceased at $19^h.\ 40^m$.	H B
10	..	,,	L
10	Transit	Cirro-stratus and scud.	
10	..	Cirro-stratus, scud, and fleecy clouds: a few breaks in the clouds towards the E. horizon, but to no numerical extent.	L
8	..	Cirro-stratus, scud, fleecy clouds, and cumulo-strati.	H B
10	..	Cirro-stratus, cumulo-stratus, and scud.	
10	..	,,	
0	..	Cloudless: hazy near the S. horizon.	H B
0	..	,, a thin haze prevails in the horizon.	T D
3	..	Cirro-stratus in the N.; the remainder of the sky is cloudless: the haze still remains.	
9	..	Cirro-stratus of various densities covers the sky, with the exception of a small break in the zenith: rain has just commenced falling.	
10	..	Cirro-stratus and scud: the rain ceased at $16^h.\ 30^m$.	
9	..	Clouds of no definite modification: a fog has prevailed since 19^h.	T D
8	..	Cirro-stratus, fleecy clouds, and scud, in which there are a few breaks W. of the zenith.	L

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 25. 0	29·794	57·0	53·0	4·0	..	..	..	..	ESE	..	..	..	Neg.	15	..	10	12	..
2	29·773	56·7	54·2	2·5	..	..	..	..	Calm	..	..	..	Neg.	..	..	..	out of range	Instantly
4	29·753	54·5	50·4	4·1	46·0	8·5	..	..	..	..	..	..	..	0	0	0	..	..
6	29·743	54·7	51·9	2·8	..	..	..	..	..	..	..	..	Pos.	30	..	30	30	3. 0
							61·8											
							43·8	3·52										
							85·7	0·58										
8	29·689	51·0	48·7	2.3	..	..	44·3		..	..	..	..	Pos.	40	..	40	50	..
							51·8	7·945										
10	29·734	48·2	46·9	1·3	46·0	2·2	50·0	..	..	..	..	..	..	0	0	0	..	..
12	29·709	47·0	46·5	0·5	..	..	..	..	..	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	..	..	N	1·00	..	..	..	..	..	..
22	29·642	45·8	44·5	1·3	..	..	..	..	..	..	..	..	Pos.	8	10	5	8	3. 15
Apr. 26. 0	..	..	..	..	..	..	..	..	NNW	0 to ½	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	N by W	¾ to 1	..	..	..	..	..	..	..	..
4	29·654	45·9	43·4	2·5	..	..	49·3	..	N by W	½ steady	..	..	Pos.	2	2	0	..	..
6	..	..	..	..	..	..	33·7		N by W	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		3·53	N by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	62·3		N by W	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	30·3	0·02	NNW	..	..	..	..	..	..	..	..	..
14	29·718	36·0	34·5	1·5	..	..			NNW	..	..	..	Pos.	15	..	10	12	4. 0
16	29·715	35·0	33·6	1·4	31·0	4·0	51·5	7·970	NNW	..	..	..	Pos.	2	2	0	..	..
18	29·724	34·5	33·2	1·3	..	..	49·8	..	NNW	..	..	..	..	0	0	0	..	..
20	29·756	40·0	36·6	3·4	..	..	..	..	N by W	½ to ¾	NNW	3·31	Pos.	2	2	0	..	..
22	29·776	42·9	38·5	4·4	32·0	10·9	..	..	NNW	0 to ¼	..	..	Pos.	5	5	3	..	8. 0
Apr. 27. 0	29·789	45·7	40·2	5·5	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
2	29·799	46·4	39·8	6·6	..	..	..	..	N by W	..	..	..	Pos.	2	2	0	..	..
4	29·798	46·2	39·9	6·3	33·5	12·7	52·8	..	N by W to NW	..	..	..	Pos.	2	2	0	..	..
6	29·788	46·2	39·7	6·5	..	..	39·5		N by W	..	..	..	Pos.	25	25	18	20	7. 0
8	29·789	43·0	38·5	4·5	..	..		3·53	NNW	..	..	..	..	..	..	..	..	..
10	29·801	42·0	39·0	3·0	35·0	7·0	66·0	0·00	Calm	..	..	..	..	..	..	..	..	..
12	29·796	39·5	37·2	2·3	..	..	31·2		Calm	..	..	..	..	..	..	..	..	..
14	29·789	40·2	38·0	2·2	..	..		7·970	Calm	..	..	..	..	..	..	..	..	..
16	29·781	40·6	38·7	1·9	35·0	5·6	51·0		Calm	..	..	..	..	..	..	..	..	..
18	29·778	41·2	39·2	2·0	..	..	49·8	..	Calm	..	..	..	..	..	..	..	..	..
20	29·789	44·5	42·0	2·5	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·785	49·3	44·8	4·5	40·5	8·8	..	..	Calm	..	..	..	..	..	..	..	..	..
Apr. 28. 0	29·772	55·0	47·7	7·3	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
2	29·767	55·3	47·2	8·1	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
4	29·756	54·8	47·2	7·6	39·0	15·8	..	..	W by S	..	..	..	..	..	..	..	..	..
6	29·775	53·0	45·9	7·1	..	..	..	..	W by S	0 to 3½	..	..	..	..	..	..	..	..

ELECTRICITY.

April 25d. 2h. There was a spark at the distance of 0in·11.

April 27d. 8h. The electrical apparatus was taken down to be repaired.

HENLEY'S ELECTROMETER.

April 25d. 2h. The reading was from 18° to 25°.

GALVANOMETER.

April 25d. 2h. There was a current of 5° towards B.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
9	Transit	Cirro-stratus, heavy masses of cumulo-strati, detached cumuli, and scud: a few breaks about the zenith: the clouds are very black in the N.	L
10	..	Cirro-stratus, heavy masses of cumulo-strati, and scud: thunder is heard occasionally in the W.: rain is falling in large drops.	
10	..	Cirro-stratus, cumulo-stratus, fleecy clouds, and scud: rain was falling rather heavily from $2^h.\ 15^m$ to $2^h.\ 30^m$.	L
10	New	The sky is wholly covered by cirro-stratus of various densities: near the place of the Sun there are, in addition, some large masses of dark cloud moving very slowly from the S.W.; the Sun at present is behind one of these masses: the direction of the wind, near the surface of the earth, is E. N. E.: the motion of the clouds has been S.W. all day. Within a few minutes after 6^h the large clouds passed from the Sun's place; he was just visible at $6^h.\ 10^m$, and continued so for nearly half-an-hour; after $6^h.\ 50^m$ he was covered by a bank of cirro-stratus near the horizon.	G
10	..	At present the sky is covered with scud, cirri, ill-formed cumuli, and clouds of no modification: the cirri are moving from the S.; the scud and cumuli from the S.W.; and the air on the surface of the earth is still from the E. N. E., or a little nearer N. E.	
10	..	The sky is covered by cloud, yet at times several stars have been visible around the zenith for a short time; it would therefore appear, that the cloud about the zenith is thin: a fine calm night.	G
10	..	Cirro-stratus and scud.	L
10	..	Cirro-stratus and scud: rain has been falling during the morning, but ceased at about $21^h.\ 20^m$.	H B
..	Transit		
10	..	Cirro-stratus and scud: a shower of rain occurred between 0^h and 2^h.	H B
0	..	Cloudless.	L
0	..	,,	
0	..	,,	
0	..	,,	L
4	..	Cumuli and fragments of scud moving from the N.N.W, and occasionally obscuring the Sun: the wind is blowing [in gusts to $\frac{3}{4}$.	H B
7	..	Cirro-stratus in large quantities N. and S. of the zenith: a few cumuli along the N. and N. E. horizon.	
8	Transit	Cirro-strati, cumulo-strati, and scud cover the greater part of the sky: cumuli along the N. horizon.	H B
8	..	Cirro-strati, cumulo-strati, and scud in every direction: breaks to the E. of the zenith.	L
3	..	Cumulo-strati and haze towards the W.: light clouds and scud scattered about.	
8	..	Cirro-stratus, fleecy clouds, and scud: a few breaks about the zenith and towards the S.	
10	..	Cirro-stratus and scud: a slight haze.	L
8	..	Cirro-stratus: a few stars visible about the zenith.	G
10	..	,,	
10	..	,, a few drops of rain are falling.	
10	..	,,	
1	..	Nearly cloudless, there being only a few clouds near the horizon: the clouds became broken about half-an-hour since.	G
2	..	Cirro-stratus towards the N. and S. horizon; clear elsewhere: a slight haze.	L
4	..	Cirro-stratus: large masses of loose scud and detached cumuli in all directions: hazy.	
10	..	Cirro-stratus, fleecy clouds, and scud: a few breaks to the S. of the zenith, but to no numerical extent.	
10	Transit	Cirro-stratus and fleecy clouds.	L
10	..	Cirro-stratus and scud: the clouds dispersed since the last observation, but again collected a few minutes since.	G

OSLER'S ANEMOMETER.

April $25^d.\ 22^h$. The direction-pencil was found off the rack-work, and it had been off since $25^d.\ 4^h$.

WHEWELL'S ANEMOMETER.

April $27^d.\ 22^h$. The instrument was not read, and the amount registered on April 28^d at 22^h is the sum of the descents of the pencil between April $26^d.\ 22^h$ and April $28^d.\ 22^h$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Apr. 28. 8	29·823	44·6	43·8	0·8	..	..	56·7	33·6					N by E	0 to ½	..	..	..	..	..	..	..	..
10	29·893	40·2	38·4	1·8	37·0	3·2				3·53			NNE	..	..	..	..	..	..	..	..	..
12	29·934	37·7	36·7	1·0	..	..							N by E	..	..	..	..	..	..	..	..	..
14	29·957	36·8	35·8	1·0	..	..	83·7	25·6		0·20			N by E	..	..	..	..	..	..	..	..	..
16	29·986	34·5	33·4	1·1	31·0	3·5							N by E	..	..	..	..	..	..	..	..	..
18	30·017	34·0	33·2	0·8	..	..				8·010			N by E	..	..	..	..	..	..	..	..	..
20	30·080	41·0	39·2	1·8	..	..	51·5	50·0					N by E	..	..	..	..	..	..	..	..	..
22	30·107	47·6	42·4	5·2	34·0	13·6				..			NE	..	N	1·18	..	..	..	..	..	..
Apr. 29. 0	30·116	51·4	44·9	6·5	..	..	..		..	..			ENE	..	..	..	..	..	..	..	..	..
2	30·174	53·7	46·8	6·9	..	..	..		..	..			NE	..	..	..	..	..	..	..	..	..
4	30·109	53·7	47·2	6·5	39·0	14·7	58·0			..			NNE	..	..	..	..	..	..	..	..	..
6	30·113	49·7	44·9	4·8	..	..	40·6			3·53			SSW	..	..	..	..	..	..	..	..	..
8	30·112	47·2	42·2	5·0	..	..							SSW	..	..	..	..	..	..	..	..	..
10	30·132	45·4	42·7	2·7	40·3	5·1	82·0			0·00			WSW	..	..	..	..	..	..	..	..	..
12	30·128	45·2	42·7	2·5	..	..	31·6						WSW	..	..	..	..	..	..	..	..	..
14	30·119	41·4	39·6	1·8	..	..				8·010			WSW	..	..	..	..	..	..	..	..	..
16	30·131	38·8	37·3	1·5	35·0	3·8	52·0						WSW	..	..	..	..	..	..	..	..	..
18	30·147	38·4	36·9	1·5	..	..	50·0			..			WSW	..	..	..	..	..	..	..	..	..
20	30·179	44·6	42·5	2·1	..	..	..		..	..			WNW	..	..	..	..	..	..	..	..	..
22	30·190	50·5	47·7	2·8	46·5	4·0	..		..	..			NW	..	NE	2·02	..	..	..	..	..	..
Apr. 30. 0	30·207	53·0	49·0	4·0	..	..	..		..	..			Calm	..	..	..	..	..	..	..	..	..
2	30·201	54·3	48·7	5·6	..	..	..		..	..			W by N	..	..	..	..	..	..	..	..	..
4	30·171	59·0	51·2	7·8	39·5	19·5	61·0			..			WSW	..	..	..	..	..	..	..	..	..
6	30·151	56·3	49·7	6·6	..	..	44·6			3·53			W by S	..	..	..	..	..	..	..	..	..
8	30·154	53·0	47·9	5·1	..	..							W	..	..	..	..	..	..	..	..	..
10	30·179	50·8	47·2	3·6	43·5	7·3	75·0			0·00			Calm	..	..	..	..	..	..	..	..	..
12	30·205	47·8	42·9	4·9	..	..	41·8						W	..	..	..	..	..	..	..	..	..
14	30·198	46·1	42·4	3·7	..	..				8·010			Calm	..	..	..	..	..	..	..	..	..
16	30·175	45·2	42·4	2·8	39·5	5·7	53·0						Calm	..	..	..	..	..	..	..	..	..
18	30·176	45·7	42·9	2·8	..	..	51·0			..			Calm	..	..	..	..	..	..	..	..	..
20	30·187	50·8	47·0	3·8	..	..	..		..	..			Calm	..	..	..	..	..	..	..	..	..
22	30·193	55·8	50·5	5·3	45·0	10·8	..		..	..			Calm	..	WNW	1·88	..	..	..	..	..	..
May 1. 0	30·193	56·0	52·5	3·5	..	..	..		..	..			SW	..	..	..	..	..	..	..	..	..
2	30·190	55·0	52·5	2·5	..	..	..		..	..			S by W	..	..	..	..	..	..	..	..	..
4	30·163	55·5	53·4	2·1	50·0	5·5	60·1			..			WSW	..	..	..	..	..	..	..	..	..
6	30·158	54·7	53·0	1·7	..	..	51·9			3·53			WSW	..	SSW	2·44	..	..	..	..	..	..
8	30·160	52·3	51·9	0·4	..	..							Calm	..	..	..	..	..	..	..	..	..
10	30·160	52·2	51·4	0·8	51·0	1·2	70·3			0·00			Calm	..	..	..	..	..	..	..	..	..
12	30·142	51·8	51·2	0·6	..	..	49·7						Calm	..	..	..	..	..	..	..	..	..
14	30·120	52·8	52·4	0·4	..	..				8·010			Calm	..	..	..	..	..	..	..	..	..
16	30·106	52·8	52·5	0·3	52·0	0·8	53·8						Calm	..	..	..	..	..	..	..	..	..
18	30·095	52·2	52·0	0·2	..	..	51·0			..			Calm	..	..	..	..	..	..	..	..	..
20	30·094	52·2	51·9	0·3	..	..	..		..	..			Calm	..	..	..	..	..	..	..	..	..
22	30·100	52·9	51·9	1·0	50·8	2·1	..		..	..			WSW	..	SW	1·03	..	..	..	..	..	..
May 2. 0	30·091	55·0	53·7	1·3	..	..	..		..	..			WSW	..	..	..	..	..	..	..	..	..
2	30·060	61·4	57·7	3·7	..	..	..		..	..			WSW	..	..	..	..	..	..	..	..	..
4	30·040	64·0	59·5	4·5	55·0	9·0	..		..	..			SW	..	..	..	..	..	..	..	..	..

MINIMUM FREE THERMOMETER.

April 29d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

May 1d. 22h. The reading was higher than that of the Dry Thermometer at 12h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, scud, and nimbi: for a quarter of an hour after the last observation the wind was blowing in gusts to 1 and 1½; after that time it lulled, and rain commenced falling.	G
10	..	Cirro-stratus: a very dark night: occasional light rain has fallen since 8h.	G
0	..	Cloudless.	L
0	..	,,	
0	..	,,	
0	Greatest declination N.	,, the ground is slightly covered with hoar frost.	
0	..	,,	L
0	..	Cloudless, with the exception of a few detached clouds to no numerical extent.	G
4	..	Large cumuli around the horizon, with stratus above them: the zenith, and the parts around for some distance, are	G H
4	..	Large cumuli nearly equally distributed all over the sky. [clear.	G H
3	Transit	Large cumuli around the horizon: a few cumulo-strati towards the W., also haze.	L
8	..	Cirro-stratus, cumulo-stratus, and haze: breaks mostly E. of the zenith.	
0	..	Cirro-stratus towards the W. horizon to no numerical extent; clear elsewhere.	L
10	..	Cirro-stratus: the sky became covered shortly after 8h.	G
10	..	,, a star is occasionally seen.	H B
0	..	Cloudless: the clouds dispersed shortly after the last observation.	
0	..	,,	
1	..	Cirro-stratus near the E. and S. E. horizon; clear elsewhere.	
3	..	Cirro-stratus and vapour to a considerable altitude around the horizon: a few light clouds S. of the zenith.	H B
8	..	A thin mist or cloud of some density nearly covers the sky: dense stratus clouds around the horizon.	G
10	..	Cirro-stratus: a fog in the distance.	
10	..	The sky is covered principally by scud, which is stationary: the air is nearly calm, there being only occasional light airs from the W.	G
8	Transit	The greater portion of the sky is covered by a thin cirro-stratus; also a few fragments of scud N. of the zenith.	H B
10	..	Cirro-stratus and scud.	
9¾	..	Cirro-stratus: the clouds are slightly broken in the zenith, and 20° S. of it.	
10	..	Cirro-stratus and scud: a few drops of rain fell at 9h. 35m.	H B
10	..	Cirro-stratus and scud, but very thin: a few stars are frequently visible.	G
10	..	Cirro-stratus: a very dark night.	
10	..	,, ,,	
10	..	,, ,,	
10	..	A thin cirro-stratus covers the sky: the Sun's place but just visible.	G
10	..	,, ,,	L
	..		
10		Cirro-stratus and scud.	
10	..	,,	
10	..	,,	L
10	Transit	,,	G
10	..	,,	
10	..	,,	G
10	..	,, a few stars visible about the zenith.	L
10	..	,,	
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	,,	H B
10	..	Cirro-stratus and scud.	
7	..	Cirro-stratus, fleecy clouds, and scud near the horizon; clear elsewhere.	H B
8	..	Cirro-stratus, fleecy clouds, and scud in all directions: a few breaks about the zenith, and a few badly-formed cirri N. of the zenith.	L

RAIN.

April 30d. 12h. The amount collected during the month of April in the rain-gauge No. 4, was 3in.05, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction for the months of March and April at the Greenwich Hospital Schools, was 3in.56.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same deg. of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
May 2. 6	30·030	61·4	57·2	4·2	..	..	64·5			..			Calm	..	..	..	..	..	..	..	..	..
8	30·024	60·0	56·2	3·8	..	..	53·9			3·53			Calm	..	..	..	..	..	..	..	..	..
10	30·027	58·8	55·9	2·9	53·0	5·8							Calm	..	..	..	..	..	..	..	..	..
12	30·016	56·5	55·3	1·2	..	..	85·5			0·00			Calm	..	..	..	..	..	..	..	..	..
14	..	..	..	..	..	..	50·7						Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..				8·010			Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	54·5						Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	52·0						NNE	..	..	..	..	..	..	..	..	..
22	29·973	62·5	57·0	5·5	..	..	..			..			N by E	..	W	1·23	..	..	..	..	..	..
May 3. 0	29·960	63·0	58·2	4·8	..	..	..			..			ENE	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	68·5			..			E by N	..	..	..	..	..	..	..	..	..
4	29·906	65·5	58·4	7·1	..	..	51·6			3·53			ENE	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..							E	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	94·0			0·00			E by S	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	49·0						E by N	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..				8·010			E	..	..	..	..	..	..	..	..	..
14	29·831	51·6	49·7	1·9	..	..	56·0						E by N	..	..	..	..	..	..	..	..	..
16	29·800	51·6	49·4	2·2	48·0	3·6	53·2			..			E by S	..	..	..	..	..	..	..	..	..
18	29·782	51·2	50·3	0·9	..	..				..			E	..	..	..	..	..	..	..	..	..
20	29·767	54·5	52·2	2·3	..	..	..			..			E	..	..	..	..	..	..	..	..	..
22	29·744	58·7	55·2	3·5	52·0	6·7	..			..			E by N	..	E	2·70	..	..	..	..	..	..
May 4. 0	29·719	60·7	56·5	4·2	..	..	..			..			E by N	0 to 1	..	..	..	..	..	..	..	..
2	29·671	61·0	57·0	4·0	..	..	..			..			ENE	½ to 3½	..	..	..	..	..	..	..	..
4	29·639	58·6	54·8	3·8	53·0	5·6	62·5			..			E by N	..	..	..	..	..	..	..	..	..
6	29·609	57·5	54·7	2·8	..	..	47·7			..			E	..	..	..	..	..	..	..	..	..
8	29·603	55·5	53·3	2·2	..	..				3·53			Calm	..	..	..	..	..	..	..	..	..
10	29·597	54·5	51·7	2·8	49·5	5·0	83·0			0·00			Calm	..	..	..	..	..	..	..	..	..
12	29·594	49·6	48·3	1·3	..	..	44·6						Calm	..	..	..	..	..	..	..	..	..
14	29·579	47·5	46·8	0·7	..	..	57·0			8·010			Calm	..	..	..	..	..	..	..	..	..
16	29·579	48·2	47·6	0·6	47·0	1·2	54·2			..			Calm	..	..	..	..	..	..	..	..	..
18	29·586	47·5	47·2	0·3	..	..	..			..			Calm	..	..	..	..	..	..	..	..	..
20	29·592	54·3	52·2	2·1	..	..	..			..			Calm	..	..	..	..	..	..	..	..	..
22	29·574	60·0	55·8	4·2	52·5	7·5	..			..			Calm	..	E	2·50	..	..	..	..	..	..
May 5. 0	29·555	63·4	56·4	7·0	..	..	..			..			SSW	0 to ½	..	..	..	..	..	..	..	..
2	29·520	63·2	55·4	7·8	..	..	68·5			..			SSW	..	..	..	..	..	..	..	..	..
4	29·495	60·6	53·1	7·5	48·0	12·6	48·1			..			SSW	..	..	..	..	..	..	..	..	..
6	29·463	58·0	52·3	5·7	..	..				3·53			Calm	..	..	..	..	..	..	..	..	..
8	29·448	55·5	51·4	4·1	..	..	90·0			0·00			Calm	..	..	..	..	..	..	..	..	..
10	29·435	53·4	51·2	2·2	49·5	3·9	46·0						Calm	..	..	..	..	..	..	..	..	..
12	29·426	52·7	50·7	2·0	..	..				8·010			Calm	..	..	..	..	..	..	..	..	..
14	29·416	50·5	49·2	1·3	..	..	58·0						Calm	..	..	..	..	..	..	..	..	..
16	29·397	49·2	48·2	1·0	47·0	2·2	55·8			..			Calm	..	..	..	..	..	..	..	..	..
18	29·400	49·5	48·2	1·3	..	..	..			..			Calm	..	SSW	3·30	..	..	..	..	..	..
20	29·404	53·2	50·7	2·5	..	..	..			..			WSW	..	..	..	..	..	..	..	..	..
22	29·403	59·0	54·7	4·3	50·0	9·0	..			..			SW	..	SW	1·45	..	..	..	..	..	..

MINIMUM FREE THERMOMETER.

May 3d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

May 4d. 22h. The reading was higher than those of the Dry Thermometer at 14h and 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	Cirro-stratus, fleecy clouds, and scud: a slight haze towards the N.	L
10	..	,, a slight haze in the N.	
10	..	,, the Moon's place occasionally visible.	L
10	..	Cirro-stratus, scud, and vapour: a star occasionally visible.	H B
..	..	Cirro-stratus.	H B
..	..		
..	..		
..	Apogee		
8	..	Cirro-stratus, fleecy clouds, and scud: some small breaks N. of the zenith: hazy.	L
7	1st Qr.	Cirro-stratus, and hazy towards the N: a few cumuli in the S. horizon: fleecy clouds and large masses of white scud in all directions.	
..	..		
3	..	Cirro-stratus and fleecy clouds towards the N.: a few cirri about the zenith; clear elsewhere.	L
..	..		
..	Transit		
..	..		
..	..		
10	..	Cirro-stratus and scud.	H B
10	..	,,	
8	..	Cirro-stratus and scud N. of the zenith: there are a few cirro-cumuli near the zenith.	
10	..	Cirro-stratus and scud: breaks of small extent in every direction.	H B
8	..	Cirro-stratus, scud, and fleecy clouds: small breaks mostly W. of the zenith.	L
6	..	Thin cirro-stratus, fleecy clouds, and scud around the horizon: some loose scud: clear about the zenith.	
8	..	Thin cirro-stratus covers the greater part of the sky: clear about the zenith: a few small cumuli towards the S. horizon.	L
10	..	Cirro-stratus and scud.	H B
10	..	,,	
10	Transit	Cirro-stratus of less density than at the previous observation: the Sun was partly visible for a short time, occasionally surrounded by an imperfect halo.	
10	..	Cirro-stratus and dark scud cover the sky.	H B
9	..	A thin cirro-stratus nearly covers the sky, but of such slight density that nearly all the stars of the first magnitude are visible: an imperfect halo surrounds the Moon.	D
3	..	Thin clouds are scattered in various directions: the halo disappeared soon after the last observation.	
10	..	Cirro-stratus and scud.	
10	..	,,	
6	..	Light scud covers a great portion of the sky: a few breaks occasionally.	D
7	..	Cumuli, cirri, and fleecy clouds all over the sky, with large breaks: the clouds are more dense in the S.	T D
8	..	Cirro-stratus in the S. and S.W.: detached portions of massive cumuli in the horizon: a few portions of clear sky in the zenith.	
8	..	Cumuli, cirri, and fleecy clouds in every direction: some portions of sky of a deep blue in the S.	T D
8	..	Cumuli and cumulo-strati: clear portions of sky in the E.	D
10	..	Overcast: the appearance of the sky has become very gloomy.	
10	Transit	A high and dark cirro-stratus: some slight rain falling.	
10	..	Overcast: the Moon occasionally visible.	D
10	..	Cirro-stratus and masses of dark scud cover the sky: the Moon occasionally visible.	T D
10	..	,,	
8	..	Cirro-stratus and dark scud, in detached portions, in every direction, but of greater density in the N.W.	
7	..	Cirro-stratus and fleecy clouds: some detached portions of scud in the zenith.	
8	..	Cirro-stratus, cumulo-stratus, fleecy clouds, and scud: a few patches of blue sky in the zenith and in the N.N.E.	T D
10	..	Cirro-stratus, fleecy clouds, and scud: a few drops of rain falling: the wind is blowing in gusts to $\frac{1}{2}$.	L

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
May 6. 0	29·393	58·4	56·2	2·2	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	29·392	58·6	55·7	2·9	..	..	..	..	Calm	..	..	..	..	out of range	..	..	..	..
4	29·389	58·7	56·8	1·9	55·5	3·2	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
6	29·396	57·8	54·4	3·4	..	..	63·2 / 46·3	3·56	Calm	..	..	..	Pos.	2	2	0	..	..
8	29·421	53·4	50·9	2·5	..	..	79·7	0·05	Calm	..	..	..	..	0	0	0	..	..
10	29·445	51·8	50·2	1·6	49·0	2·8	44·2	8·105	Calm	..	..	..	..	0	0	0	..	..
12	29·471	49·6	48·4	1·2	..	..	58·8 / 56·0	..	Calm	..	..	..	..	0	0	0	..	..
14	29·475	47·0	46·2	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	29·490	48·0	46·9	1·1	45·0	3·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·509	47·7	46·4	1·3	..	..	..	..	W	..	W	1·90	..	0	0	0	..	..
20	29·534	51·6	50·4	1·2	..	..	..	..	W by N	..	..	..	..	0	0	0	..	..
22	29·565	54·9	52·6	2·3	50·5	4·4	..	..	W by S	..	WSW	0·57	Pos.	40	..	..	40	13. 0
May 7. 0	29·573	62·5	57·2	5·3	..	..	..	..	WSW	..	..	..	Pos.	40	..	..	50	..
2	29·588	61·9	55·4	6·5	..	..	..	..	SW	..	..	..	Pos.	40	..	..	50	..
4	29·586	62·2	54·0	8·2	47·5	14·7	67·3	..	WSW	..	..	..	Pos.	12	15	8	10	3. 0
6	29·596	59·8	51·8	8·0	..	..	47·1	3·56	SW	..	..	..	Pos.	30	35	20	25	8. 0
8	29·607	53·2	48·2	5·0	..	..	..	..	SSW	..	..	..	Pos.	20	20	16	18	9. 0
10	29·627	48·7	46·2	2·5	43·0	5·7	91·6	0·00	S by W	..	..	..	Pos.	20	..	12	15	7. 0
12	29·637	47·3	45·4	1·9	..	..	43·2	8·105	Calm	..	..	..	Pos.	35	..	30	40	..
14	29·641	48·5	46·7	1·8	..	..	..	..	Calm	..	..	..	Pos.	12	..	8	10	8. 0
16	29·652	47·2	45·7	1·5	44·0	3·2	59·0	..	Calm	..	..	..	Pos.	6	8	3	5	10. 0
18	29·683	49·0	47·7	1·3	..	..	56·5	..	Calm	..	..	..	Pos.	10	15	8	10	7. 0
20	29·708	52·6	49·7	2·9	..	..	..	..	Calm	..	..	..	Pos.	5	8	3	..	5. 0
22	29·733	56·8	52·2	4·6	48·5	8·3	..	..	Calm	..	SW	2·38	Pos.	30	20	10	12	3. 0
May 8. 0	29·752	62·7	57·6	5·1	..	..	..	..	W	..	..	..	Pos.	20	15	12	8	Instantly
2	29·764	62·2	54·7	7·5	..	..	..	..	N	..	..	..	Pos.	15	12	7	10	..
4	29·760	61·8	54·7	7·1	45·5	16·3	63·8	..	Calm	..	..	..	Pos.	40	50	18	20	10. 0
6	29·768	60·5	53·6	6·9	..	..	45·1	3·56	Calm	..	..	..	Pos.	30	30	15	20	11. 0
8	29·796	55·6	49·5	6·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	40	50	25. 0
10	29·817	51·6	48·2	3·4	44·3	7·3	86·5	0·00	Calm	..	..	..	Pos.	40	..	..	60	9. 0
12	29·837	51·9	48·9	3·0	..	..	39·0	8·105	Calm	..	..	..	Pos.	40	..	40	50	0. 20
14	29·832	50·5	48·6	1·9	..	..	..	..	Calm	..	..	..	Pos.	40	..	50	65	0. 17
16	29·839	45·8	45·2	0·6	44·8	1·0	59·5	..	N	..	..	..	Pos.	40	40	20	25	2. 0
18	29·861	46·0	45·5	0·5	..	..	56·8	..	SSE	..	..	..	Pos.	40	50	30	40	2. 0
20	29·870	54·5	52·7	1·8	..	..	..	..	Calm	..	W	0·15	Pos.	30	20	10	15	5. 0
22	29·867	63·3	55·4	7·9	50·0	13·3	..	..	SSE	..	S	0·20	Pos.	35	..	25	30	..
May 9. 0	29·851	64·5	56·5	8·0	..	..	71·0	..	S by E	..	..	..	Pos.	25	..	15	20	15. 0
2	29·819	68·3	59·3	9·0	..	..	51·3	3·56	S by W	..	..	..	Pos.	25	..	15	20	12. 0
4	29·795	67·5	58·0	9·5	51·0	16·5	..	..	S by W	..	..	..	..	0	0	0	..	..
6	29·781	63·5	56·2	7·3	..	..	93·5	0·00	SW	..	..	..	Pos.	35	30	15	20	1. 0
8	29·768	57·4	53·7	3·7	..	..	48·4	8·130	Calm	..	..	..	Pos.	35	30	15	20	3. 0
10	29·749	54·4	52·0	2·4	51·0	3·4	..	..	Calm	..	..	..	Pos.	30	20	12	15	..
12	29·733	53·6	51·7	1·9	..	..	60·0 / 57·2	..	Calm	..	..	..	..	0	0	0	..	..

OSLER'S ANEMOMETER.

May 8d. 17h. 30m. A sudden change in the direction of the wind from N. to S.S.E. was recorded.

ELECTRICITY.

May 6d. 0h. Previously to this time the electrical apparatus was repaired, and put in action.

May 6d. 2h. There were sparks at the distance of 0in.10.

May 8d. There were sparks at the distances of 0in.03 at 8h, 0in.04 at 10h, and 0in.02 at 12h, 14h, 16h, and 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, cumulo-stratus, fleecy clouds, and large masses of scud: a few breaks N. of the zenith: the rain has been occasionally falling since the last observation.	L
9	..	Dense cirro-stratus towards the S.: the sky is mostly covered with fleecy clouds and large masses of white scud: several showers of rain have fallen since the last observation.	
8	..	Dark cirro-stratus, in the S. horizon, extending to within 10° of the zenith; massive cumuli and cumulo-strati cover the remaining portion of the sky: rain has fallen since the last observation.	L
8	In Equator	Cirro-stratus, extending from the E. to the S.W., to an altitude of 80°: masses of finely-formed cumuli and lines of cirri, with portions of scud about the zenith.	T D
10	..	Cirro-stratus, cumulo-stratus, and dark masses of scud of great density prevail: some slight rain occasionally falling.	
5	Transit	Cirro-stratus and dark masses of scud floating across the Moon; through the breaks some of the larger stars are visible: nearly clear in the W.	T D
10	..	Cirro-stratus, fleecy clouds, and scud: a few occasional breaks about the zenith: the Moon is visible, and is occasionally surrounded by a faint halo.	L
2	..	Cirro-stratus towards the W. horizon; clear elsewhere: a slight haze.	
10	..	Cirro-stratus, fleecy clouds, and scud.	
10	..	,,	
10	..	Cirro-stratus and scud.	L
10	..	,, occasional small breaks appear: no upper cloud.	H B
$9\frac{1}{2}$	..	Cirro-stratus, cumulo-stratus, and masses of scud.	
9	..	Cirro-stratus, cumulo-stratus, cumuli, and scud: the clouds are broken in the S. E.	H B
8	..	Cirro-stratus, fleecy clouds, and scud: small breaks in every direction.	L
2	..	Cirro-stratus and a few cumuli towards the N. horizon: thin fleecy clouds S. of the zenith.	
2	..	Cirro-stratus in the N. and W. horizon: a few cirri N. of the zenith.	
1	Transit	Cirro-stratus in the N. horizon: a few light clouds in the zenith and towards the S.: vapour is prevalent.	L
$9\frac{1}{2}$	..	Cirro-stratus and scud, which came up suddenly from the S. S.W.	H B
10	..	Cirro-stratus and scud.	
$9\frac{3}{4}$	..	,,	
10	..	,,	
10	..	,, a slight fog.	H B
10	..	Cirro-stratus, through which the Sun faintly shines.	T D
9	..	Cirro-stratus, of a thin character, slightly broken in the zenith.	
7	..	Cirro-stratus and portions of cumuli: a few breaks in and around the zenith.	T D
8	..	Cirro-stratus, cumulo-strati, and fragments of scud; also a few cumuli in the horizon: a slight haze prevails.	H B
9	..	Cirro-stratus, cumulo-stratus, and scud: very hazy.	
3	..	Cirro-stratus in the N. and S. horizon, and linear cirri extending from the S. S. E. to the S. S.W.	
7	Transit	Cirro-stratus, fragments of scud, and undefined clouds: very hazy.	H B
9	..	Cirro-stratus in the horizon, and detached cumuli in every other direction: a few breaks in the zenith.	T D
9	..	Cirro-stratus and detached cumuli: a single break in the S., through which a few stars are visible.	
7	..	Cirro-stratus in the horizon to a considerable elevation, and a few light cumuli in the zenith.	
8	..	Cirro-stratus in the horizon, and fleecy clouds scattered over the remainder of the sky.	
8	..	Cirro-stratus, fleecy clouds, and closely packed cumuli: a few breaks here and there.	T D
6	..	Cirro-stratus and fleecy clouds: clear in and around the zenith.	L
8	..	Cirro-stratus, fleecy clouds, and scud in every direction: cumuli in the horizon.	
5	..	Cumuli in all directions, and large masses of scud floating about: several extensive breaks.	L
4	..	Massive cumuli in every direction.	T D
3	..	Thin cirro-stratus in the S. horizon, and a few lines of cirri in the zenith and N. E.	
4	..	Thin cirro-stratus from the S. to the W. at a low elevation: a few cirri are scattered over the sky.	
10	..	Thin cirro-stratus, through which the stars are faintly visible: a finely-formed lunar halo has been visible since the last observation.	
10	Transit	Cirro-stratus, cumulo-stratus, and scud.	

HENLEY'S ELECTROMETER.

May $6^d.\ 2^h$. The reading was 15°.

May $8^d.\ 8^h$. The reading was 2°.

GALVANOMETER.

May $6^d.\ 2^h$. There was a current of 3° towards B.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
May 9. 14	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	0	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	0	..	..
20	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	0	..	..
22	29·689	54·8	53·2	1·6	..	..	..	..	W by S	..	SSW	2·25	Neg.	40	40	30	30	3. 30
May 10. 0	..	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..
2	29·725	65·7	55·2	10·5	..	..	..	..	WSW	0 to ½	WSW	1·40	Pos.	2	2	0	..	..
4	..	..	..	..	..	..	68·3	..	SSW	1 to 3½	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	45·3	3·56	SSW	½ to 1	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	———		WSW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	91·5	0·01	SSW	..	SSW	0·53	..	..	..	..	..	..
12	..	..	..	..	..	..	40·5		Calm	..	..	..	..	..	..	..	..	..
14	29·902	44·5	43·5	1·0	..	..	———	8·150	Calm	..	..	..	Pos.	20	..	12	15	11. 0
16	29·929	44·5	43·0	1·5	41·0	3·5	60·5		Calm	..	..	..	Pos.	12	..	8	10	5. 0
18	29·962	45·0	44·0	1·0	..	..	57·5	..	Calm	..	..	..	Pos.	2	2	..	..	..
20	29·989	51·4	50·9	0·5	..	..	..	..	Calm	..	..	..	Pos.	20	..	12	16	14. 0
22	29·999	56·5	51·4	5·1	48·0	8·5	.	..	WSW	..	WSW	1·47	Pos.	8	10	5	8	5. 0
May 11. 0	29·987	64·3	55·8	8·5	..	..	..	..	WSW	..	..	..	Pos.	5	10	3	5	8. 0
2	29·972	65·2	56·0	9·2	..	..	..	..	SSW	..	..	..	Pos.	5	8	3	5	10. 0
4	29·966	63·2	53·9	9·3	45·0	18·2	67·5	..	SSW	..	..	..	Pos.	2	2	0	..	..
6	29·950	58·0	51·9	6·1	..	..	40·3	3·56	S by W	..	..	..	..	0	0	0	..	..
8	29·955	53·5	48·5	5·0	..	..	———		S by W	..	..	..	..	0	0	0	..	..
10	29·953	48·0	45·4	2·6	43·0	5·0	94·0	0·00	Calm	..	..	..	Pos.	15	..	10	12	7. 0
12	29·947	45·0	43·6	1·4	..	..	34·5		Calm	..	..	..	..	0	0	0	..	..
14	29·932	42·8	42·2	0·6	..	..	———	8·150	Calm	..	..	..	..	0	0	0	..	..
16	29·919	40·5	39·8	0·7	40·0	0·5	60·5		Calm	..	..	..	Pos.	2	2	0	..	..
18	29·910	41·3	40·7	0·6	..	..	57·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·888	51·5	50·4	1·1	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·874	62·0	53·9	8·1	44·0	18·0	..	..	SE	..	S	2·12	..	0	0	0	..	..
May 12. 0	29·837	63·3	55·0	8·3	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
2	29·806	63·2	56·2	7·0	..	..	..	..	E by S	..	..	..	Pos.	..	2	0	..	..
4	29·783	62·3	52·8	9·5	41·0	21·3	..	..	E by S	0 to ½	..	..	Pos.	..	2	0	..	..
6	29·757	58·6	52·6	6·0	..	..	70·5	..	E by S	0 to ½	..	..	Pos.	5	8	3	..	9. 0
8	29·748	54·4	50·0	4·4	..	..	49·3	3·56	E by N	..	..	..	Pos.	30	40	15	20	20. 0
10	29·735	51·2	48·5	2·7	46·5	4·7	———											
12	29·705	49·4	47·8	1·6	..	..	94·0	0·00	E by N	..	E	2·28	Pos.	20	25	10	10	15. 0
14	29·673	53·2	51·2	2·0	..	..	45·0											
16	29·646	49·8	49·2	0·6	49·0	0·8	———	8·150	ENE	..	..	..	Pos.	35	30	15	20	5. 0
18	29·635	51·4	50·9	0·5	..	..	60·5		ENE	..	..	..	..	0	0	0	..	..
20	29·634	54·0	52·7	1·3	..	..	57·8	..	Calm	..	..	..	..	0	0	0	..	..
22	29·619	58·0	54·2	3·8	50·0	8·0	..	..	Calm	..	..	..	..	0	0	0	..	..
									ENE	..	..	..	..	0	0	0	..	..
									ENE	..	ENE	0·66	Pos.	10	15	8	10	..
May 13. 0	29·611	59·3	53·2	6·1	..	..	..	..	ENE	½ to 2	..	..	Pos.	2	2	0	..	..
2	29·609	55·5	51·0	4·5	..	..	..	..	ENE	½ to 3	..	..	..	0	0	0	..	..
4	29·583	50·7	49·3	1·4	..	..	..	..	NE	0 to ½	ENE	1·14	..	0	0	0	..	..
6	29·571	51·5	50·2	1·3	..	..	..	..	ENE	½ to ¾	..	..	..	0	0	0	..	..

DRY THERMOMETER.
May 11d. 22h. The reading was 20°·7 higher than at 18h.

MINIMUM FREE THERMOMETER.
May 10d. 22h. The reading was higher than those of the Dry Thermometer at 14h, 16h, and 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	Cirro-stratus, cumulo-stratus, and scud, extending from the W. horizon to 10° of the zenith: occasional showers of rain.	T D
7	..	Cirro-stratus and some portions of light scud in the N. and N. E.	T D
..	Transit		
0	..	Cloudless: vapour prevalent.	L
0	..	,, ,,	
10	Full	Cirro-stratus: the clouds came up soon after the last observation.	
10	..	Cirro-stratus, through which blue sky is visible.	L
3	..	Cumuli and light scud in every direction.	H B
6	..	Irregularly formed cumuli in the horizon, and scud in various directions.	
6	..	Cumuli in every direction, and large masses of scud N. of the zenith.	H B
6	..	Detached cumuli, mostly towards the N.: large masses of loose scud floating about.	
1	..	Cirro-stratus towards the N. and W. horizon: fleecy clouds; clear elsewhere.	L
0	..	Cloudless.	
0	..	,,	L
0	..	,, very hazy.	H B
3	Transit	Light fleecy clouds in every direction.	
0	..	Cloudless: very hazy.	
1	..	Cirro-stratus and vapour near the horizon.	
0	..	Cloudless: a thin fog.	
0	..	,,	H B
6	..	Cumuli around the horizon: large masses of loose scud and fleecy clouds in every direction.	L
7	..	Cirro-stratus, fleecy clouds, and large masses of scud in the S. and in the N.; some cumuli and fleecy clouds in other directions.	L
4	..	Cirro-stratus and fleecy clouds in nearly every part of the sky: cumuli near the S. and S.W. horizon: a part of a solar halo is occasionally seen.	H B
2	..	Cirro-stratus and fleecy clouds near the horizon: cirri in various directions: cirro-cumuli in the S. S.W.	
5	..	Cirro-stratus in various parts of the sky: cirri in the N. E. Two parhelia have been visible, one to the E. and the other to the W. of the Sun.	
5	..	Cirro-stratus covers a great portion of the sky, of such density as to obscure the larger stars, particularly N. of the zenith.	H B
4	..	Cirro-stratus and some portions of dark scud in the E. and S. S. E. horizon: a few light cirri are exhibited in the [zenith.	T D
10	Transit	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	
10	..	,, occasional sunshine, and a few drops of rain falling.	T D
10	..	,,	L
10	Greatest declination S.	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{1}{2}$.	
10	..	,, the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	,, rain falling heavily.	T D
10	..	,, the rain continues falling, but not so heavily as at the last observation.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volts 1.	Straws of Volts 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
May 13. 8	29·583	51·5	50·4	1·1	..	..	..	..	ENE	½ to 1	NNE	0·53	Neg.	40	..	50	70	0. 40
10	29·601	51·2	49·9	1·3	49·0	2·2	60·4	..	ENE	½ to 1	..	..	Neg.	40	..	50	70	0. 20
							47·3											
12	29·626	50·0	48·4	1·6	..	..		3·79	ENE	1 to 2	..	..	Pos.	2	2	0	..	..
							71·4	0·37										
14	29·637	49·8	48·2	1·6	..	..	44·3		ENE	½ to 1	..	..	..	0	0	0	..	..
16	29·669	48·3	46·7	1·6	45·0	3·3		8·555	ENE	0 to 1	..	..	Pos.	10	10	7	8	9. 0
18	29·702	47·6	46·4	1·2	..	..	60·5		ENE	½ to 1	NE	1·87	Pos.	14	15	10	12	7. 0
20	29·740	51·3	48·5	2·8	..	..	57·2	..	ENE	1½ to 3	..	..	Pos.	7	8	5	5	10. 0
22	29·767	55·7	47·8	7·9	39·5	16·2	..	..	ENE	1½ to 4	ENE	1·12	Pos.	15	20	8	10	..
May 14. 0	29·784	57·5	49·2	8·3	..	..	..	..	NE	½ to 2½	..	..	Pos.	5	8	1	..	10. 0
2	29·812	57·5	47·7	9·8	..	..	..	..	ENE	0 to 2	..	..	Pos.	5	8	3	..	..
4	29·826	55·6	48·4	7·2	41·0	14·6	60·9	..	ENE	0 to 2½	..	..	Pos.	2	2	0	..	..
6	29·833	54·3	47·7	6·6	..	..	40·0	3·79	ENE	..	..	..	Pos.	12	..	8	10	5. 0
8	29·852	49·0	44·2	4·8	..	..			NE	..	..	..	Pos.	15	..	12	14	8. 0
10	29·875	45·0	42·2	2·8	40·0	5·0	78·0	0·00	Calm	..	..	..	Pos.	15	..	10	12	5. 0
							34·5											
12	29·873	42·4	40·6	1·8	..	..		8·555	Calm	..	..	..	Pos.	23	25	15	15	..
14	29·864	41·1	39·4	1·7	..	..	60·0	..	Calm	..	..	..	Pos.	2	5	2	..	..
16	29·846	41·2	40·2	1·0	38·5	2·7	57·0	..	Calm	..	..	..	Pos.	2	5	2	..	12. 0
18	29·848	41·5	40·8	0·7	..	..	..	..	Calm	..	..	..	Pos.	15	20	8	8	10. 0
20	29·841	51·7	48·9	2·8	..	..	..	..	N by E	..	..	..	Pos.	15	15	8	10	10. 0
22	29·835	54·5	48·4	6·1	42·5	12·0	..	..	ENE	..	NE	2·80	Pos.	25	20	10	12	5. 0
May 15. 0	29·823	56·5	47·7	8·8	..	..	..	..	E by N	..	..	..	Pos.	30	25	12	15	7. 0
2	29·787	59·4	50·2	9·2	..	..	..	..	E by N	..	..	..	..	..	..	..	..	..
4	29·748	57·5	50·2	7·3	38·5	19·0	62·9	..	E by N	..	..	..	Pos.	30	40	12	15	18. 0
6	29·729	53·7	47·6	6·1	..	..	38·3		E	..	..	..	Pos.	40	50	15	20	16. 0
8	29·724	48·8	43·8	5·0	..	..		3·79	E by S	..	..	..	Pos.	23	25	10	10	10. 0
10	29·716	44·5	41·7	2·8	38·0	6·5	85·0	0·00	Calm	..	..	..	Pos.	20	25	8	10	5. 30
12	29·682	41·9	40·2	1·7	..	..	32·0		Calm	..	..	..	Pos.	35	30	12	17	3. 30
14	29·642	40·3	39·2	1·1	..	..		8·555	Calm	..	..	..	Pos.	25	20	8	12	6. 0
16	29·624	38·5	37·7	0·8	37·0	1·5	59·5		Calm	..	..	..	Pos.	20	15	..	10	6. 30
18	29·594	41·9	41·2	0·7	..	..	57·0	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·577	46·4	45·8	0·6	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·551	54·3	51·5	2·8	48·0	6·3	..	..	Calm	..	ENE	1·38	Pos.	2	2	0	..	..
May 16. 0	29·480	59·3	55·2	4·1	..	..	..	..	NE	..	..	..	Pos.	2	2	0	..	..
2	29·434	60·7	53·0	7·7	..	..	..	..	ENE	..	..	..	Pos.	2	2	0	..	..
4	29·371	59·0	54·2	4·8	51·0	8·0	65·3	..	E by S	..	..	..	Pos.	2	2	0	..	..
6	29·354	54·5	50·5	4·0	..	..	46·7	3·99	SE	..	..	..	..	0	0	0	..	..
8	29·308	51·7	49·5	2·2	..	..			E by S	..	..	..	..	0	0	0	..	..
10	29·261	49·8	48·2	1·6	47·0	2·8	91·6	0·37	ENE	..	..	..	Pos.	2	2	0	..	..
12	29·167	48·2	47·9	0·3	..	..	49·5		ENE	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..		8·910	Calm	..	E	0·89	..	..	..	..	..	..
16	..	..	..	..	..	..	59·5	..	WSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	57·0	..	WSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·090	53·2	50·9	2·3	..	..	..	..	Calm	..	S	1·26	..	0	0	..	..	..

DRY THERMOMETER.
May 14d. 20h. The reading was 10° ·2 higher than at 18h.

OSLER'S ANEMOMETER.
May 14d. 2h. 30m. A gust of 4 lbs. pressure on the square foot was recorded.

ELECTRICITY.
May 13d. 8h and 10h. There were sparks at the distances of 0in·04 and 0in·03 respectively.
May 15d. 2h. The observation was omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS	Observer.
10	..	Cirro-stratus and scud: the rain has been falling incessantly since the preceding observation.	T D
10	..	,, ,, ,, the wind is blowing in gusts to $\frac{3}{4}$.	T D
9	..	Cirro-stratus and scud, with some fleecy clouds towards the S.: a few breaks about the zenith and towards the E.: the wind is blowing in gusts to $\frac{3}{4}$.	L
8	..	Cirro-stratus and scud: a few breaks about the zenith: the wind is blowing in gusts to $\frac{3}{4}$.	
0	Transit	Cloudless: the wind is blowing in gusts to $\frac{3}{4}$.	
2	..	Cirro-stratus and light clouds towards the N. and S. horizon; clear elsewhere.	
6	..	Cirro-stratus S. of the zenith: loose scud and detached cumuli in various directions.	L
1	..	A few cumuli are seen near the horizon, and fragments of light scud continue passing over the sky: the wind is blowing in gusts to $1\frac{1}{2}$.	H B
4	..	Cirro-stratus in the S., and portions of cumuli in various directions.	T D
$\frac{1}{2}$	..	Cirri in the E. S. E.: a few fragments of scud continue to pass over the sky; small cumuli in the W. N.W.: the wind is blowing in gusts to 2.	H B
4	..	Cumuli around the horizon: large masses of light scud in various directions.	L
3	..	Cumuli towards the N. and S. horizon: light clouds and scud in various directions.	
1	..	A bank of cirro-stratus extending along the N. and W. horizon: a few clouds S. of the zenith; clear elsewhere.	
6	..	Cirro-stratus towards the S. horizon: the sky N. of the zenith is covered with cloud: some light scud in various directions.	L
3	..	Cirro-stratus and scud moving slowly from the E. S. E.	H B
0	..	Cloudless.	
4	Transit	Cirro-strati in small portions constantly appear: scud near the horizon.	
0	..	Cloudless.	
0	..	,,	H B
6	..	Cirro-stratus in the S. E., extending around the horizon to the S. S.W.: large quantities of massive cumuli in the N.: clear about the zenith: a slight shower of rain.	T D
5	..	Cirro-stratus, cumulo-stratus, and some portions of scud cover a great portion of the sky.	
4	..	Detached masses of finely-formed cumuli are scattered over the whole sky.	T D
3	..	Fragments of scud in every direction: a few cumuli are also visible.	H B
$\frac{1}{2}$	..	The sky is cloudless, with the exception of a few small cumuli near the N. N.W., the E., and the W. N.W.	
0	Perigee	Cloudless. [horizon.	
0	..	,,	H B
0	..	,,	T D
2	..	Some portions of light cirri in the S.	
0	..	Cloudless.	
10	Transit	Cirro-stratus of a thin character covers the sky.	
10	..	Cirro-stratus and scud: a thick fog.	T D
10	..	,, cumuli and cumulo-strati around the horizon.	L
5	..	Cirro-stratus and large masses of scud: cumuli towards the N., and cumulo-strati towards the S. horizon.	
8	..	Cumuli around the horizon: breaks N. of the zenith; cirro-stratus, scud, and light clouds elsewhere.	L
8	..	Cumuli, cumulo-strati, and light clouds: thin cirro-stratus in the S.	T D
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	T D
10	..	,, rain falling.	L
..	..		
..	..		
..	Transit		
..	..		
10	..	Cirro-stratus and dark scud.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°		in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
May 17. 0	..	..	..	..	..	..	..	..	..			S by W	0 to ½	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..			S	½ to 1½	..	..	..	..	..	..	..	..
4	29·046	54·2	51·7	2·5	..	..	57·9	..				S by E	½ to 1	..	..	Neg.	40	..	70	40	4. 30
6	..	..	..	..	..	..	42·0	..	4·08			SSW	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	———	..				Calm	..	..	..	..	..	..	..	..	..
10	29·090	46·2	44·4	1·8	..	..	67·2	..				Calm	..	..	..	Pos.	12	15	7	10	8. 0
12	..	..	..	..	..	..	41·7	..	0·06			Calm	..	..	..	..	..	..	..	..	..
14	29·103	45·7	44·6	1·1	..	..	———	..				Calm	..	..	..	..	0	0	0	..	..
16	29·074	46·2	45·0	1·2	43·0	3·2	59·0	..	8·980			Calm	..	..	..	..	0	0	0	..	..
18	29·040	47·0	45·7	1·3	..	..	56·5	..				S by E	..	..	..	..	0	0	0	..	..
20	29·002	49·3	46·9	2·4	..	..	..	..				S by E	½ to 2½	..	..	..	0	0	0	..	..
22	28·945	48·4	47·9	0·5	47·0	1·4	..	..				SSE	0 to ½	S	3·29	Neg.	..	..	..	100	..
May 18. 0	28·902	52·2	51·4	0·8	..	..	..	..				SSW	½ to 4½	..	..	..	0	0	0	..	..
2	28·915	59·5	53·0	6·5	..	..	..	..				S by W	½ to 4	..	..	..	0	0	0	..	..
4	28·893	56·3	52·6	3·7	49·0	7·3	60·9	..				S	½ to 3	..	..	..	0	0	0	..	..
6	28·878	54·7	51·6	3·1	..	..	47·5	..	4·08			SSW	½ to 1½	..	..	..	0	0	0	..	..
8	28·914	50·8	48·7	2·1	..	..	———	..				SSW	½ constant	SSW	5·50	..	0	0	0	..	..
10	28·975	51·5	48·1	3·4	45·0	6·5	73·3	..				SW	½ to 2	..	..	Pos.	..	2	0	..	..
12	29·040	48·8	47·2	1·6	..	..	48·5	..	0·05			WSW	1 to 4	..	..	Neg.	40	50	30	50	1. 15
14	29·125	48·3	46·5	1·8	..	..	———	..				WSW	¾ to 3	..	..	Pos.	..	2	0	..	..
16	29·206	47·7	46·2	1·5	44·0	3·7	58·5	..	9·085			WSW	½ to 3	..	..	Pos.	..	2	0	..	..
18	29·278	49·8	48·2	1·6	..	..	56·0	..				SW	½ steady	..	..	Pos.	..	2	0	..	..
20	29·346	53·7	51·4	2·3	..	..	..	..				SW	..	..	..	Pos.	..	2	0	..	..
22	29·386	58·0	53·8	4·2	50·8	7·2	..	..				WSW	..	SW	2·20	Pos.	37	50	30	40	4. 0
May 19. 0	29·418	56·0	53·4	2·6	..	..	..	..				SW	½ to 5	..	..	..	..	..	..	..	..
2	29·452	56·3	53·7	2·6	..	..	..	..				SSW	½ to 2	..	..	..	..	..	..	..	..
4	29·462	55·8	53·6	2·2	51·0	4·8	63·3	..				SW	½ to 1½	..	..	Pos.	40	..	30	40	..
6	29·476	57·3	51·5	5·8	..	..	50·1	..	4·32			SW	1 to 3½	SW	1·60	Pos.	15	20	8	10	9. 0
8	29·486	52·5	48·1	4·4	..	..	———	..				SSW	½ steady	..	..	Pos.	12	15	8	8	10. 0
10	29·454	51·0	49·0	2·0	47·5	3·5	86·0	..				S by W	½ steady	..	..	Pos.	..	2	0	..	..
12	29·427	51·5	49·1	2·4	..	..	52·5	..	0·36			S by W	1 to 2½	..	..	Neg.	..	2	0	..	..
14	29·370	50·0	49·5	0·5	..	..	———	..				S by W	2 to 3½	..	..	Neg.	40	70	30	50	0. 45
16	29·351	51·3	49·7	1·6	48·5	2·8	58·2	..	9·485			SSW	¾ steady	..	..	Pos.	30	50	20	40	3. 0
18	29·349	50·4	49·4	1·0	..	..	56·0	..				SSW	½ steady	..	..	..	0	0	0	..	..
20	29·356	53·4	52·2	1·2	..	..	..	..				SSW	¾ to 1	..	..	..	0	0	0	..	..
22	29·352	58·0	54·5	3·5	50·0	8·0	..	..				SW	¾ steady	SSW	4·03	Neg.	40	50	20	25	4. 0
May 20. 0	29·354	57·5	53·9	3·6	..	..	..	..				SSW	½ to 1	..	..	..	0	0	0	..	..
2	29·356	54·0	52·0	2·0	..	..	..	..				SSW	½ to 2½	SSW	0·97	Neg.	..	..	..	..	..
4	29·363	58·3	56·8	1·5	54·0	4·3	63·3	..				SSW	½ to 2½	..	..	..	0	0	0	..	..
6	29·388	55·0	51·0	4·0	..	..	45·5	..	4·48			SSW	1 to 2	..	..	..	0	0	0	..	..
8	29·416	50·5	48·7	1·8	..	..	———	..				SW	..	..	..	Pos.	40	50	20	30	1. 0
10	29·451	47·9	46·8	1·1	46·0	1·9	73·8	..				SSW	..	..	..	..	0	0	0	..	..
12	29·461	46·3	45·6	0·7	..	..	..	..	0·20			S by W	..	..	..	..	0	0	0	..	..
14	29·471	46·5	45·7	0·8	..	..	———	..				Calm	..	SW	1·32	..	0	0	0	..	..
16	29·494	46·8	46·0	0·8	..	..	58·2	..	9·750			Calm	..	..	..	..	0	0	0	..	..
18	29·509	47·5	46·9	0·6	..	..	56·2	..				Calm	..	..	..	..	0	0	0	..	..
20	29·543	55·0	52·9	2·1	..	..	..	..				S by E	..	..	..	Pos.	..	2	0	..	..
22	29·582	57·0	53·7	3·3	49·0	8·0	..	..				S by E	..	S	0·70	Pos.	15	..	8	10	..
May 21. 0	29·618	59·5	54·0	5·5	..	..	..	..				SE	..	..	..	Pos.	8	10	7	10	5. 0

MINIMUM FREE THERMOMETER.
May 19d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

DEW POINT THERMOMETER.
May 20d. 16h. The observation was omitted.

MINIMUM RADIATION THERMOMETER.
May 20d. 22h. The column of liquid in this thermometer was found broken.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
..	..		
10	..	Cirro-stratus and dark scud: a slight rain is falling.	L
..	..		
..	..		
0	..	Cloudless: the clouds became broken at about 5^h.	
..	..		
10	3rd Qr.	Cirro-stratus.	
10	..	,,	
10	Transit	,, the wind is blowing in gusts to $\frac{1}{2}$.	
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	L
10	..	Cirro-stratus: rain falling heavily.	H B
10	..	Cirro-stratus and scud: rain falling slightly.	
8	..	Cirro-stratus and scud S. of the zenith: breaks N. of the zenith, with some cumuli near the N. horizon.	H B
10	..	Cirro-stratus and scud: a few small breaks S. of the zenith.	L
8	..	,, cumuli and cumulo-strati around the horizon: some breaks N. of the zenith.	
4	..	Cirro-stratus and large masses of scud in every direction: the wind is blowing in gusts to $1\frac{1}{2}$.	L
10	..	,, large drops of rain falling.	T D
10	..	,, rain falling heavily.	H B
2	..	Cirro-stratus around the horizon: stars are occasionally visible: the wind is blowing in gusts to 2.	
2	..	Cirro-stratus near the horizon: a few cirro-cumuli are visible in the S.W.	
10	..	Cirro-stratus and light scud: some breaks are frequently seen.	
9	Transit	Cirro-stratus and scud: clear around the N., N.W., and N. N. E. horizon.	H B
8	..	Cirro-stratus and masses of dark scud: occasional sunshine.	T D
10	..	Cirro-stratus and scud: rain falling heavily in large drops: gloomy.	
7	..	Cirro-stratus, cumuli, and scud in the S., and extending to the N. N. E.	T D
4	..	Cumuli and masses of white floating scud N.W. of the zenith: cloudless S. of the zenith.	H B
3	..	Cumuli around the S. horizon: fragments of fleecy scud in various directions: cirro-cumuli in the N. N. E.	
10	In Equator	Cirro-stratus: the clouds are more dense in the W. N.W. than in any other direction.	
10	..	Cirro-stratus and dark scud; the latter moving from the S.W.	H B
10	..	Cirro-stratus.	T D
10	..	Cirro-stratus and scud, very dark: rain falling: the wind is blowing in gusts to 2.	
10	..	Cirro-stratus and scud: the rain has ceased: the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	,,	
8	Transit	Cirro-strati, of various densities, in several directions: there are some portions of dark scud in the S. and S.W.	T D
9	..	Cirro-stratus and large masses of scud: a few breaks toward the S.: the wind is blowing in gusts to 1.	L
10	..	Cirro-stratus and scud: there have been several showers of rain, of short duration: the wind is blowing in gusts to 1+.	
10	..	,, rain falling heavily: the wind is blowing in gusts to 1.	
3	..	Cumuli around the horizon: loose scud in various directions: the wind is blowing in gusts to 1 and $1\frac{1}{2}$.	
8	..	Cirro-stratus and large masses of scud, with small breaks towards the S.: the wind is blowing in gusts to 1+.	L
5	..	Cirro-stratus around the horizon: a few detached portions of cirri near the zenith.	T D
0	..	Cloudless.	T D
0	..	,,	L
8	..	Clear in the zenith and a little to the N. of it: small breaks towards the E.; cloudy elsewhere.	
10	..	Cirro-stratus and scud.	
7	..	Cirro-stratus towards the S. horizon, and a few cirri and light clouds S. of the zenith. [N. of the zenith.	
9	..	Cirro-stratus, large masses of scud, and detached cumuli cover the greater portion of the sky: a few small breaks	L
10	Transit	Cirro-strati and masses of scud in every direction.	H B
7	..	Cirro-strati, detached cumuli, and masses of dark scud: breaks in every direction.	

HENLEY'S ELECTROMETER.

May 17^d. 22^h. The reading was from 5° to 8°.

May 20^d. 2^h. The reading was 30°.

ELECTRICITY.

May 17^d. 22^h. There were sparks at the distance of $0^{in}\cdot04$.

May 19^d. 14^h. There was a spark at the distance of $0^{in}\cdot02$.

May 20^d. 2^h and 8^h. There were sparks at the distances of $0^{in}\cdot13$ and $0^{in}\cdot02$ respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
May 21. 2	29·654	63·2	56·1	7·1	..	..	..	..	SE	..	..	..	Pos.	12	15	8	10	5. 0
4	29·655	60·0	54·7	5·3	50·0	10·0	66·5	..	E	..	..	..	Pos.	..	2	0	..	..
6	29·738	58·5	54·9	3·6	..	..	41·7	..	E	..	..	..	Pos.	..	2	0	..	..
8	29·770	54·3	53·0	1·3	..	..	24·8	4·48	SSE	..	..	..	..	0	0	0	..	..
10	29·816	50·0	49·0	1·0	46·0	4·0	89·2	0·00	Calm	..	..	..	Pos.	..	2	0	..	..
12	29·864	47·8	47·4	0·4	..	..	37·5	0·00	Calm	..	..	..	Pos.	12	10	5	8	2. 30
14	29·883	46·0	45·9	0·1	..	..	51·7	0·00	Calm	..	..	..	Pos.	..	2	0	..	..
16	29·907	43·0	43·2	–0·2	42·5	0·5	58·5	9·755	Calm	..	..	..	Pos.	12	10	8	5	0. 28
18	29·952	43·6	44·2	–0·6	..	..	56·5	..	Calm	..	..	..	Pos.	40	..	40	60	1. 32
20	29·997	49·6	49·7	–0·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	50	30	5. 0
22	30·022	61·8	55·5	6·3	51·0	10·8	..	..	Calm	..	SSE	1·08	Pos.	40	60	20	30	3. 0
May 22. 0	30·032	64·3	57·5	6·8	..	..	..	..	Calm	..	..	..	Pos.	35	50	18	27	2. 0
2	30·037	69·5	60·7	8·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	30·029	67·7	59·5	8·2	49·0	18·7	73·2	..	SW	..	..	..	Pos.	20	30	12	15	12. 0
6	30·038	66·1	58·2	7·9	..	..	51·2	..	SW	..	..	..	Pos.	5	5	3	..	5. 0
8	30·054	60·6	54·7	5·9	..	..	22·3	4·48	Calm	..	..	..	Pos.	5	8	3	5	2. 30
10	30·084	55·3	51·5	3·8	48·5	6·8	99·5	0·00	Calm	..	..	..	Pos.	40	..	30	50	..
12	30·098	53·7	50·9	2·8	..	..	46·0	0·00	Calm	..	..	..	..	0	0	0	..	..
14	30·076	52·4	50·2	2·2	..	..	53·5	0·00	Calm	..	..	..	..	0	0	0	..	..
16	30·063	51·0	49·2	1·8	48·0	3·0	59·8	9·755	Calm	..	..	..	..	0	0	0	..	..
18	30·069	51·3	49·6	1·7	..	..	57·2	..	Calm	..	..	..	..	0	0	0	..	..
20	30·096	57·5	55·2	2·3	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
22	30·108	61·0	55·5	5·5	51·0	10·0	..	..	WSW	..	SW	1·98	..	0	0	0	..	..
May 23. 0	30·104	62·8	58·5	4·3	..	..	..	..	W	..	..	..	..	0	0	0	..	..
2	30·105	60·8	56·7	4·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	30·081	62·5	58·4	4·1	55·0	7·5	66·7	..	Calm	..	..	..	..	0	0	0	..	..
6	30·079	63·0	59·4	3·6	..	..	52·8	4·48	Calm	..	..	..	..	0	0	0	..	..
8	30·077	57·8	57·0	0·8	..	..	14·0	4·48	Calm	..	..	..	..	0	0	0	..	..
10	30·107	57·6	56·2	1·4	54·0	3·6	88·8	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·118	55·0	54·2	0·8	..	..	..	0·00	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	..	9·755	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	60·5	9·755	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	58·0	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	30·119	64·6	61·5	3·1	..	..	..	..	Calm	..	WSW	0·32	Pos.	15	..	10	12	2. 30
May 24. 0	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	70·2	..	WNW	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	50·6	4·48	W by N	..	..	..	..	..	..	..	..	..
8	30·084	62·8	57·7	5·1	..	..	19·7	4·48	Calm	..	..	..	Pos.	..	2	0	..	..
10	..	..	..	..	..	..	84·3	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	42·2	0·00	Calm	..	..	..	..	..	..	..	..	..
14	30·094	54·5	51·8	2·7	..	..	27·0	9·755	Calm	..	..	..	..	0	0	0	..	..
16	30·083	51·0	49·6	1·4	48·0	3·0	62·2	9·755	Calm	..	..	..	Pos.	12	..	8	10	6. 0
18	30·089	52·3	50·2	2·1	..	..	58·8	..	NNW	..	..	..	Pos.	18	..	12	15	3. 0
20	30·098	56·0	51·9	4·1	..	..	..	..	N	..	..	..	Pos.	10	..	5	7	1. 0
22	30·087	63·1	57·6	5·5	48·5	14·6	..	..	N by E	..	NNW	0·56	Pos.	40	..	30	40	..
May 25. 0	30·068	63·4	57·9	5·5	..	..	..	..	NW	..	..	..	Pos.	23	..	10	10	5. 0

DRY THERMOMETER.

May 21d. 22h. The reading was 12°·2 higher than at 20h.

May 21d. 16h, 18h, and 20h. The readings were lower than those of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

May 22d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

MINIMUM RADIATION THERMOMETER.

May 23d. 22h. The instrument had not been exposed.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Cumuli and fragments of scud in every direction.	H B
10	..	Cirro-stratus: large masses of scud and detached cumuli cover the sky.	L
10	..	,, ,,	
4	..	Cirro-stratus around the horizon: light clouds and scud in various directions.	
1	..	Cirro-stratus towards the N.; clear elsewhere.	L
1	..	Cirro-stratus in the S. E. and around the horizon: very hazy.	H B
2	..	Cirro-stratus near the S. horizon: hazy.	
5	..	Cirro-stratus and vapour to a considerable altitude: a dense fog.	
6	..	,, ,,	
8	..	,, the fog is disappearing.	H B
0	Transit	Cloudless.	T D
6	Transit	Cirro-stratus: cumuli in various forms are scattered over a great portion of the sky.	
5	..	Cirro-strati and cumuli around the horizon: clear about the zenith.	T D
7	..	Cumulo-stratus to the N. and in the S. E.: cirri and detached cumuli S. of the zenith.	H B
5	..	Cumuli, comoid cirri, and a few fragments of scud.	
½	..	A few light cirri near the S. horizon.	
1	..	A few lines of cirro-stratus near the N. and W. horizon; cloudless elsewhere.	H B
10	..	Cirro-stratus and scud.	T D
7	..	Cirro-stratus: the stars are shining dimly in the zenith.	
5	..	Cirro-stratus and fleecy clouds extending from the N. horizon to the zenith, and detached portions in several other directions: cloudless in the S.	
7	..	Cirro-stratus and fleecy clouds: some beautiful specimens of cirri in the N. and N. N. E.	
10	..	Cirro-stratus of a thin character covers the sky.	T D
10	..	,,	L
10	Transit	Cirro-stratus and scud: slight rain is falling.	
10	..	,, very gloomy towards the E.	L
10	..	Cirro-stratus.	T D
10	..	Cirro-strati, cumuli, and scud: the Sun shines faintly, and there are breaks of some extent near the zenith.	T D
3	..	Cirro-strati and fleecy clouds towards the N.; clear elsewhere.	L
10	..	Cirro-strati, fleecy clouds, and scud cover the sky: hazy.	
9	..	Cirro-strati and fleecy clouds: clear in the zenith: a slight fog.	
..	..		
..	..		
..	..		
..	..		
10	..	Cumulo-strati, cirro-strati, and scud cover the sky: foggy.	
..	Transit		
..	..		
..	..		
..	..		
8	..	Cirro-strati, fleecy clouds, and scud: small breaks in every direction.	
..	..		
..	..		
10	..	Cirro-stratus.	
2	..	Cirro-stratus towards the N. horizon; clear elsewhere.	
0	New	Cloudless.	
0	..	,,	L
10	..	Cirro-stratus and scud: a few breaks to the N. N.W.	H B
10	Transit	Cirro-stratus and scud: occasional breaks.	

ELECTRICITY.

May 21d. 18h, 20h, and 22h. There were sparks at the distances of 0in·04, 0in·03, and 0in·03, respectively.

May 22d. 0h. There were sparks at the distance of 0in·02.

HENLEY'S ELECTROMETER.

May 21d. 18h and 20h. The reading at each observation was 2°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
May 25. 2	30·048	66·5	59·5	7·0	..	..	..		..	..			WNW	..	..	..	Pos.	23	25	8	10	20. 0
4	30·010	68·3	62·2	6·1	58·0	10·3	69·1		..	..			WNW	..	..	..	Pos.	30	..	20	25	13. 0
6	29·990	66·3	60·0	6·3	..	..	54·5		..	..			NNW	..	..	..	Pos.	15	..	10	12	10. 0
8	29·981	64·2	58·7	5·5	..	..				4·48			NW	..	..	..	Pos.	25	..	18	20	17. 0
10	29·989	59·2	55·2	4·0	52·5	6·7	86·5						NNW	..	..	..	Pos.	10	..	8	10	9. 0
12	29·981	56·5	54·0	2·5	..	..	47·4			0·00			Calm	..	..	..	Pos.	5	8	3	..	5. 0
14	29·967	54·3	53·2	1·1	..	..							Calm	..	..	..	Pos.	5	8	3	..	..
16	29·960	55·5	54·1	1·4	53·0	2·5	62·5			9·755			W by N	..	..	..	Pos.	..	2	0	..	..
18	29·974	56·0	54·0	2·0	..	..	59·2			..			NW	..	..	..	Pos.	..	2	0	..	..
20	29·988	57·1	52·7	4·4	..	..				..			N by W	..	..	..	Pos.	3	5	..	..	3. 0
22	30·012	59·5	52·8	6·7	47·0	12·5	..		..	..			NNW	..	NNW	2·24	Pos.	..	2	0	..	..
May 26. 0	30·022	59·0	53·0	6·0	..	..	..		..	..			NNW	..	..	..	Pos.	..	2	0	..	..
2	30·014	59·8	52·6	7·2	..	..	..		..	..			NW	..	..	..	Pos.	..	2	0	..	..
4	30·002	61·0	54·2	6·8	45·0	16·0	62·7			..			NNW	..	..	..	Pos.	20	20	8	10	18. 0
6	29·997	61·4	54·5	6·9	..	..	43·5						N by W	..	..	..	Pos.	20	25	8	10	18. 0
8	30·008	56·0	50·8	5·2	..	..				4·48			NNW	..	..	..	Pos.	8	8	5	5	11. 0
10	30·016	53·5	48·3	5·2	44·0	9·5	85·5						NNW	..	..	..	Pos.	12	15	8	10	11. 0
12	30·013	52·0	47·7	4·3	..	..	35·8			0·00			NW	..	..	..	Pos.	30	30	12	20	6. 0
14	30·011	47·8	45·7	2·1	..	..							Calm	..	..	..	Pos.	25	20	8	12	4. 0
16	30·004	43·8	43·0	0·8	42·7	1·1	63·0			9·755			Calm	..	..	..	Pos.	25	20	8	12	..
18	30·003	45·0	43·7	1·3	..	..	59·5			..			Calm	..	..	..	Pos.	..	2	0	..	..
20	30·004	53·5	50·7	2·8	..	..				..			Calm	..	..	..	Pos.	..	2	0	..	..
22	29·985	59·2	53·0	6·2	47·0	12·2	..		..	..			WSW	..	NNW	1·85	Pos.	20	..	12	15	17. 0
May 27. 0	29·959	62·7	55·5	7·2	..	..	..		..	..			W by N	0 to ½	..	..	Pos.	25	..	15	20	16. 0
2	29·931	65·2	56·4	8·8	..	..	..		..	..			W by S	..	..	..	Pos.	17	..	12	15	10. 0
4	29·913	64·5	55·2	9·3	48·0	16·5	67·6			..			WNW	..	..	..	Pos.	20	20	10	15	7. 0
6	29·895	64·5	56·4	8·1	..	..	46·6						N by W	0 to ½	NW	0·67	Pos.	20	25	12	20	6. 0
8	29·917	60·0	53·7	6·3	..	..				4·48			N	0 to ½	..	..	Pos.	30	30	15	20	4. 0
10	29·936	56·6	51·6	5·0	48·0	8·6	93·5						N	..	..	..	Pos.	25	20	10	12	5. 0
12	29·951	54·8	49·9	4·9	..	..	38·3			0·00			N by W	..	..	..	Pos.	17	20	12	15	9. 0
14	29·961	51·4	50·0	1·4	..	..							N	..	..	..	Pos.	15	..	10	12	7. 0
16	29·977	47·3	45·6	1·7	44·0	3·3	63·0			9·755			N by W	..	N	0·50	Pos.	10	..	6	8	5. 0
18	29·990	46·6	45·2	1·4	..	..	60·0			..			N by E	..	..	..	Pos.	..	2	0	..	..
20	30·028	54·0	50·9	3·1	..	..				..			Calm	..	..	..	Pos.	..	2	0	..	..
22	30·051	61·0	52·7	8·3	42·5	18·5	..		..	..			NE	..	NNE	1·06	Pos.	5	8	3	5	10. 0
May 28. 0	30·069	62·5	53·4	9·1	..	..	..		..	..			NNE	..	..	..	Pos.	5	8	3	..	5. 0
2	30·076	64·9	55·4	9·5	..	..	..		..	..			N by E	..	..	..	Pos.	3	5	..	..	6. 0
4	30·084	63·0	54·7	8·3	43·0	20·0	70·3			..			N by E	..	..	..	Pos.	..	2	0	..	..
6	30·093	59·8	53·0	6·8	..	..	46·1						Calm	..	..	..	Pos.	..	2	0	..	..
8	30·110	56·0	51·0	5·0	..	..				4·48			Calm	..	..	..	Pos.	..	2	0	..	..
10	30·153	51·2	48·5	2·7	46·0	5·2	96·0						Calm	..	..	..	..	0	0	0	..	..
12	30·157	47·8	46·2	1·6	..	..	38·0			0·00			Calm	..	..	..	Pos.	..	2	0	..	..
14	30·169	47·2	46·2	1·0	..	..							Calm	..	..	..	Pos.	30	40	15	20	16. 0
16	30·172	46·6	45·5	1·1	44·5	2·1	63·5			9·755			Calm	..	..	..	Pos.	5	8	3	..	..
18	30·180	46·5	45·4	1·1	..	..	60·2			..			Calm	..	..	..	Pos.	..	2	0	..	..
20	30·198	55·0	51·6	3·4	..	..				..			Calm	..	..	..	Pos.	35	40	15	20	8. 0
22	30·207	59·3	53·2	6·1	48·5	10·8	..		..	..			Calm	..	NNE	1·00	Pos.	40	60	20	27	1. 30

MINIMUM FREE THERMOMETER.
May 25d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

ELECTRICITY.
May 28d. 22h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud: dense vapour near the horizon.	H B
10	..	Cumulo-strati, cirro-strati, and large masses of scud cover the sky: occasional sunshine.	L
2	..	Cirro-strati and fleecy clouds towards the S. horizon: light clouds in various directions.	
2	..	Cirro-stratus towards the N. and S. horizon; clear elsewhere.	
0	..	Cloudless.	L
1	..	Cirro-stratus around the horizon, especially the N.W.	H B
9½	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,, various small breaks S. of the zenith. [zenith.	
5	..	Cirro-stratus in the N. E. and in the S. E.: some cumuli near the W. horizon: several cirri are visible S. of the	H B
7	..	Cirro-strati, cumuli, and scud in every direction; of great density near the horizon.	T D
9	..	Cirro-stratus: a few small breaks N. of the zenith.	
10	Transit Greatest dec. N.	Cirro-stratus, cumulo-stratus, and masses of scud in every direction.	T D
10	..	Cirro-stratus and scud: breaks of small extent in every direction.	H B
7	..	Cirro-strati: a few cumuli and masses of dark scud: some cirri visible in the breaks.	
6	..	,,	
9	..	Cirro-stratus of a thin character nearly covers the sky; near the N. horizon it is more dense.	H B
4	..	Cirro-stratus.	T D
3	..	Cirro-stratus in the E.: hazy around the horizon.	
0	..	Cloudless.	
2	..	Some lines of cirri are exhibited N. of the zenith; clear elsewhere.	
0	..	Cloudless: a thin haze prevails.	T D
0	..	,,	L
9	..	Cumuli, fleecy clouds, and large masses of scud in every direction: small breaks about the zenith and towards the S. horizon.	
9	Transit	Cumuli and large masses of scud cover the greater part of the sky.	
8	..	Cirro-stratus and masses of dark scud in every direction.	
9	..	Cirro-stratus in the S. and S. S.W. horizon; detached portions of the same class of cloud, and masses of dark scud are scattered over the whole sky: some breaks E. of the zenith.	
8	..	Cirro-strati, cumuli, light cirri, and scud in every direction.	
10	..	Cirro-stratus and masses of dark scud.	T D
10	..	Cirro-stratus.	L
8	..	Cirro-stratus covers the greater part of the sky: some breaks about the zenith.	
2	..	Cirro-stratus towards the N., and a few cirri in various directions.	
2	..	Cirro-stratus in the N. and W. horizon: reticulated cirri about the zenith.	
1	..	Cirro-stratus towards the N. horizon; clear elsewhere.	L
2	..	Detached cumuli in every direction: fragments of white scud aroqnd the zenith.	H B
7	..	Cirro-stratus and fragments of scud near the horizon: a large cumulo-stratus to the N. N.W. of the zenith, and various cumuli in other directions.	
8	..	Cirro-strati and scud around the zenith: cumuli near the horizon.	H B
3	Transit	Fleecy and light clouds are scattered in every direction.	L
2	..	Cumuli, fleecy clouds, and scud in various directions.	
1	..	Cirro-stratus towards the N. and S. horizon; clear elsewhere.	
10	..	Cirro-stratus and fleecy clouds cover the sky.	L
4	..	Cirro-stratus around the N. and S. horizon.	H B
9	..	Cirro-strati and scud in every direction: a few breaks S. of the zenith.	
10	..	,,	
2	..	Cirro-stratus and vapour around the horizon.	
3	..	Cirro-stratus, light scud, and vapour to a considerable altitude above the horizon.	H B
10	..	The sky is covered with a thin cirro-stratus.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
May 29. 0	30·204	63·1	56·2	6·9	..	..	..			..			Calm	..	..	..	Pos.	40	70	30	40	2. 30
2	30·195	68·2	61·2	7·0	..	..	..			..			Calm	..	..	..	Pos.	40	70	30	40	2. 0
4	30·175	67·7	58·9	8·8	49·0	18·7	71·3			..			Calm	..	..	..	Pos.	35	40	15	20	5. 0
6	30·173	63·8	57·0	6·8	..	..	46·1			4·48			SSW	..	..	..	Pos.	30	40	12	15	12. 0
8	30·176	59·3	54·1	5·2	..	..	———						SSW	..	..	..	Pos.	28	35	10	12	13. 0
10	30·199	52·6	48·8	3·8	45·5	7·1	92·0			0·00			Calm	..	..	..	..	0	0	0	..	..
12	30·199	49·1	46·3	2·8	..	..	35·6						Calm	..	..	..	Pos.	..	2	0	..	..
14	30·190	46·3	44·2	2·1	..	..	———			9·755			Calm	..	..	..	Pos.	..	2	0	..	..
16	30·178	45·5	43·7	1·8	42·0	3·5	63·8						Calm	..	..	..	Pos.	..	2	0	..	..
18	30·178	45·8	44·7	1·1	..	..	61·0			..			Calm	..	..	..	Pos.	..	2	0	..	..
20	30·181	56·3	51·9	4·4	..	..	..			..			Calm	..	..	..	Pos.	40	..	50	70	12. 0
22	30·186	64·7	55·6	9·1	46·0	18·7	..			..			Calm	..	S	0·80	..	..	..	..	..	..
May 30. 0	30·155	69·1	59·4	9·7	..	..	..			..			SW	..	..	..	Pos.	40	..	30	60	..
2	30·128	72·2	62·7	9·5	..	..	..			..			..	..	..	..	Pos.	15	..	10	12	16. 0
4	30·101	71·3	61·6	9·7	56·0	15·3	76·7			..			..	..	..	..	Pos.	30	30	17	25	6. 0
6	30·070	70·2	62·3	7·9	..	..	49·5			4·48			..	..	..	..	Pos.	20	20	10	10	..
8	30·066	63·5	58·2	5·3	..	..	———						..	..	..	..	Pos.	30	40	25	27	11. 0
10	30·069	58·6	54·7	3·9	51·0	7·6	99·5			0·00			..	..	..	..	Pos.	20	25	15	17	7. 0
12	30·066	55·1	52·7	2·4	..	..	41·3						..	..	..	..	Pos.	..	2	0	..	..
14	..	..	..	..	..	..	———			9·755			..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	64·8						..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	61·8			..			..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			..	..	..	..	..	..	..	..	..	..
22	30·063	69·5	61·2	8·3	..	..	..			..			..	..	SW	0·40	Pos.	30	25	17	20	4. 0
May 31. 0	..	..	..	..	..	..	..			..			ENE	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..			..			E	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	84·3			..			SE	..	..	..	..	..	..	..	..	..
6	30·001	72·5	63·7	8·8	..	..	50·3			4·48			SE	..	..	..	Pos.	35	30	20	25	Instantly
8	..	..	..	..	..	..	———						Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	105·0			0·00			E by S	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	38·0						Calm	..	..	..	..	..	..	..	..	..
14	30·045	51·2	50·7	0·5	..	..	———			9·755			Calm	..	..	..	Pos.	..	2	0	..	..
16	30·042	50·5	50·2	0·3	..	..	65·0						Calm	..	..	..	..	0	0	0	..	..
18	30·053	52·3	52·2	0·1	52·0	0·3	63·0			..			Calm	..	..	..	..	0	0	0	..	..
20	30·062	57·9	56·5	1·4	..	..	..			..			Calm	..	..	..	Pos.	25	20	12	15	7. 0
22	30·055	69·7	64·0	5·7	58·0	11·7	..			..			E	..	ESE	0·80	Pos.	35	..	25	30	14. 0
June 1. 0	30·061	73·0	62·7	10·3	..	..	..			..			ESE	..	..	..	Pos.	25	..	18	20	10. 0
2	30·054	74·0	62·7	11·3	..	..	..			..			E by N	0 to ½	..	..	Pos.	..	2	0	..	..
4	30·043	71·9	62·5	9·4	57·0	14·9	77·2			..			ESE	..	..	..	Pos.	..	2	0	..	..
6	30·031	67·4	60·8	6·6	..	..	49·4			4·48			ESE	..	..	..	Pos.	..	2	0	..	..
8	30·057	61·6	57·2	4·4	..	..	———						E by N	..	ESE	1·02	Pos.	..	2	0	..	..
10	30·073	56·5	54·5	2·0	53·0	3·5	97·2			0·00			ENE	..	..	..	Pos.	..	2	0	..	..
12	30·079	53·5	52·4	1·1	..	..	41·8						Calm	..	..	..	Pos.	..	2	0	..	..
14	30·070	50·8	50·2	0·6	..	..	———			9·755			Calm	..	..	..	Pos.	..	2	0	..	..
16	30·067	49·0	48·7	0·3	48·0	1·0	66·5						Calm	..	..	..	..	0	0	0	..	..
18	30·078	48·7	48·4	0·3	..	..	63·5			..			Calm	..	..	..	..	0	0	0	..	..
20	30·107	58·5	57·7	0·8	..	..	..			..			Calm	..	..	..	Pos.	10	..	8	10	3. 0
22	30·096	70·8	64·1	6·7	59·0	11·8	..			..			NNE	..	ENE	0·63	Pos.	40	50	20	25	..
June 2. 0	30·096	73·6	62·7	10·9	..	..	..			..			ENE	..	..	..	Pos.	35	40	8	10	..

DRY THERMOMETER.

May 29d. 22h. The reading was 18°·9 higher than at 18h.
May 31d. 22h. The reading was 11°·8 higher than at 20h.
June 1d. 22h. The reading was 22°·1 higher than at 18h.

MINIMUM FREE THERMOMETER.

May 29d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.
June 1d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS	Observer.
10	..	The sky is covered with a thin cirro-stratus: occasional gleams of sunshine.	T D
8	..	Cirro-stratus, cumulo-stratus, and masses of light scud.	T D
9	Transit	Cirro-stratus and scud around the place of the Sun, and various detached cumuli in other directions: very hazy.	H B
9	..	Cirro-stratus and scud in every direction: various cumuli near the horizon.	
1	..	Cirro-stratus and vapour near the horizon; clear elsewhere.	H B
0	..	Cloudless.	D
0	..	,,	D
0	..	,,	L
0	..	,,	T D
0	..	,,	T D
0	..	,, a thin fog.	H B
0	..	,,	D
1	..	Cirro-stratus around the horizon.	H B
0	..	Cloudless.	T D
0	Transit	,,	T D
3	..	Cirro-stratus and vapour near the horizon: very hazy.	H B
2	..	,, ,,	H B
0	..	Cloudless: hazy.	L
3	..	Cirro-stratus in the W. at a low elevation: hazy.	L
..	..		
..	Apogee		
..	..		
..	..		
0	..	Cloudless.	T D
..	..		
..	..		
..	..		
0	Transit	Cloudless.	
..	..		
..	..		
..	..		
0	..	,,	
0	..	,,	
0	..	,, hazy.	
0	..	,, ,,	T D
0	..	,,	L
0	..	Cloudless.	
0	..	,,	L
0	..	,,	T D
0	Transit	,,	
0	..	,,	
0	..	,,	T D
0	..	,,	L
0	..	,,	
0	..	,, a slight fog.	
0	1st Qr.	,, foggy.	
10	..	A thin cirro-stratus covers the sky.	L
½	..	Linear cirri along the N. and N. W. horizon.	H B
½	..	Linear cirri along the N. and N. W. horizon.	

ELECTRICITY.

May 29d. 0h and 2h. There were sparks at the distances of 0in·03 and 0in·02 respectively.

May 30d. 0h. There was a spark at the distance of 0in·03.

OSLER'S ANEMOMETER.

May 30d. 22h. The direction-pencil was found off the rack-work, and it had been off since 30d. 1h.

RAIN.

May 31d. 12h. The amount collected during the month of May in the rain-gauge No. 4, was 1in·50, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period was 1in·46.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
June 2. 2	30·087	76·5	63·9	12·6	..	..	..	..	E	..	..	..	Pos.	25	30	10	10	15. 0
4	30·082	73·5	63·0	10·5	50·0	23·5	79·8	..	E by S	..	..	..	Pos.	15	20	10	12	12. 0
6	30·086	69·2	57·9	11·3	..	..	49·9	4·48	E by S	..	..	..	Pos.	20	25	15	17	16. 0
8	30·086	63·5	56·9	6·6	..	..	———		Calm	..	..	..	Pos.	30	30	20	25	10. 0
10	30·094	57·8	55·4	2·4	52·0	5·8	105·0	0·00	Calm	..	..	..	Pos.	18	20	12	15	7. 0
12	30·094	53·9	52·9	1·0	..	..	41·0		Calm	..	..	..	Pos.	30	40	8	10	4. 0
14	30·084	50·8	50·7	0·1	..	..	———	9·755	Calm	..	..	..	Pos.	5	8	3	..	6. 0
16	30·085	49·5	49·2	0·3	48·5	1·0	67·2		Calm	..	..	..	Pos.	..	2	0	..	..
18	30·103	49·7	49·7	0·0	..	..	64·5	..	Calm	..	..	..	Pos.	..	2	0	..	..
20	30·112	60·6	57·8	2·8	..	..	..	..	Calm	..	..	..	Pos.	15	20	5	8	0. 49
22	30·113	71·6	64·1	7·5	60·0	11·6	..	..	Calm	..	E	1·17	Pos.	2	2	0	0	..
June 3. 0	30·111	77·2	65·2	12·0	..	..	..	..	ENE	..	..	..	Pos.	25	20	12	15	0. 50
2	30·091	80·0	63·9	16·1	..	..	..	..	E	..	..	..	Pos.	35	30	17	25	1. 0
4	30·067	79·1	61·4	17·7	44·0	35·1	83·1	..	ENE	..	..	..	Pos.	23	25	8	10	7. 0
6	30·061	73·8	59·9	13·9	..	..	50·8	4·48	E by S	..	..	..	Pos.	20	20	8	10	3. 30
8	30·068	66·5	57·2	9·3	..	..	———		E by S	..	..	..	Pos.	30	30	12	10	12. 0
10	30·071	59·1	55·7	3·4	53·5	5·6	116·5	0·00	Calm	..	..	..	Pos.	35	40	15	20	..
12	30·070	55·2	53·6	1·6	..	..	40·8		Calm	..	..	..	Pos.	25	20	12	15	5. 30
14	30·055	52·5	52·0	0·5	..	..	———	9·755	Calm	..	..	..	Pos.	..	2	0	..	..
16	30·051	51·0	50·5	0·5	50·7	0·3	68·8		Calm	..	..	..	Pos.	..	2	0	..	..
18	30·055	51·0	50·8	0·2	..	..	65·5	..	Calm	..	..	..	Pos.	..	2	0	..	..
20	30·062	62·0	59·9	2·1	..	..	..	..	Calm	..	..	..	Pos.	30	25	12	15	6. 0
22	30·060	73·0	67·5	5·5	59·0	14·0	..	..	NE	..	E	1·88	Pos.	17	20	12	15	12. 0
June 4. 0	30·057	78·7	65·4	13·3	..	..	..	..	E	..	..	..	Pos.	40	..	30	40	..
2	30·046	78·8	64·2	14·6	..	..	..	..	ESE	..	..	..	Pos.	30	..	25	30	27. 0
4	30·031	77·7	64·4	13·3	50·0	27·7	82·9	..	ESE	..	..	..	Pos.	18	..	12	15	8. 0
6	30·029	72·8	63·5	9·3	..	..	54·1	4·48	Calm	..	..	..	Pos.	30	..	20	25	12. 0
8	80·023	65·0	59·6	5·4	..	..	———		Calm	..	..	..	Pos.	35	30	20	25	8. 0
10	30·043	60·0	56·8	3·2	53·5	6·5	105·7	0·00	Calm	..	..	..	Pos.	..	2	0	25	..
12	30·047	56·5	54·4	2·1	..	..	46·0		Calm	..	..	..	Pos.	..	2	0	..	..
14	30·032	55·2	53·2	2·0	..	..	———	9·755	Calm	..	..	..	Pos.	..	2	0	..	..
16	30·025	54·0	52·7	1·3	50·0	4·0	69·8		Calm	..	..	..	Pos.	..	2	0	..	..
18	30·024	54·7	53·2	1·5	..	..	66·2	..	Calm	..	..	..	Pos.	..	2	0	..	..
20	30·031	65·2	61·4	3·8	..	..	..	..	Calm	..	..	..	Pos.	..	2	0	..	..
22	30·023	73·5	66·5	7·0	61·0	12·5	..	..	ENE	..	E	0·32	Pos.	40	30	30	..	15. 0
June 5. 0	30·016	78·2	68·1	10·1	..	..	..	..	E	..	..	..	Pos.	40	..	40	50	..
2	29·999	78·9	65·7	13·2	..	..	..	..	E	0 to ½	..	..	Pos.	30	30	15	20	2. 30
4	29·996	76·5	63·2	13·3	50·0	26·5	82·6	..	E by N	..	..	..	Pos.	15	20	10	12	4. 0
6	29·981	74·5	63·0	11·5	..	..	54·0	4·48	E by S	..	..	..	Pos.	..	2	0	..	..
8	29·987	65·5	55·7	9·8	..	..	———		ESE	..	..	..	Pos.	..	2	0	..	..
10	29·999	60·2	55·7	4·5	50·0	10·2	104·5	0·00	Calm	..	..	..	Pos.	..	2	0	..	..
12	29·989	58·2	55·8	2·4	..	..	..		Calm	..	..	..	Pos.	5	8	3	..	8. 0
14	29·989	55·4	53·9	1·5	..	..	———	9·755	Calm	..	..	..	Pos.	10	15	5	8	..
16	29·966	53·8	51·3	2·5	49·5	4·3	70·2		Calm	..	..	..	Pos.	..	2	0	..	..
18	29·970	54·1	53·5	0·6	..	..	67·2	..	Calm	..	..	..	Pos.	10	15	5	8	2. 30
20	29·968	63·6	61·1	2·5	..	..	..	..	Calm	..	..	..	Pos.	40	60	30	40	9. 0
22	29·966	74·3	68·2	6·1	64·0	10·3	..	..	Calm	..	E	1·53	Pos.	40	40	18	27	10. 0
June 6. 0	29·956	82·2	70·1	12·1	..	..	..	..	ESE	..	..	..	Pos.	35	30	15	20	5. 0
2	29·925	83·9	70·1	13·8	..	..	..	..	S	..	..	..	Pos.	40	40	17	25	7. 0

DRY THERMOMETER.

June 2d. 22h. The reading was 21°·9 higher than at 18h.
June 3d. 22h. The reading was 22° higher than at 18h.
June 4d. 22h. The reading was 18°·8 higher than at 18h.
June 5d. 22h. The reading was 10°·7 higher than at 20h.

MINIMUM FREE THERMOMETER.

June 2d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.
June 4d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless.	H B
0	..	,,	L
0	..	,,	
0	Transit	,,	
0	..	,,	L
0	..	,,	H B
0	In Equator	,, very hazy.	
0	..	,, a thin fog.	
0	..	,, foggy.	
0	..	,,	H B
0	..	,,	T D
0	..	Cloudless.	
0	..	,,	T D
0	..	,,	H B
0	..	,,	
0	Transit	,,	
0	..	,,	H B
0	..	,,	T D
0	..	,,	
0	..	,, a dense mist prevails.	
0	..	,, the mist is less dense.	
0	..	,, the mist has disappeared.	T D
0	..	,, a slight haze.	L
0	..	Cloudless: a slight haze.	
0	..	,, ,,	
0	..	,, occasional slight gusts.	
4	..	Reticulated cirri in various directions.	L
7	Transit	Cirro-stratus around the horizon.	T D
5	..	,,	
3	..	Cirro-stratus and fleecy clouds in various directions.	
9	..	Cirro-stratus.	
8	..	,,	
5	..	Cirro-stratus and light clouds about the zenith.	
2	..	Cirro-stratus towards the N. horizon: some cirri about the zenith.	
5	..	Cirro-stratus in various directions: very hazy.	T D
8	..	Thin cirro-stratus: light fleecy clouds around the zenith.	H B
5	..	Thin cirro-stratus in the horizon: fleecy clouds E. of the zenith.	T D
2	..	A few cirri and fleecy clouds about the zenith.	L
0	..	Cloudless.	
1	..	Cirro-stratus and vapour towards the N. and W. horizon; clear elsewhere.	
2	Transit	Cirro-stratus and vapour around the horizon; clear elsewhere.	L
7	..	Cirro-stratus and fleecy clouds.	H B
4	..	Cirro-stratus in large portions S. and E. of the zenith: vapour and thin scud around the horizon.	
3	..	Cirro-stratus and vapour around the horizon.	
3	..	Cirro-stratus and vapour near the horizon: fragments of scud in various directions.	
1	..	Cirro-stratus near the N. and E. horizon.	H B
3	..	Cirro-stratus around the horizon, at a low elevation.	T D
4	..	Cirro-stratus around the horizon: portions of light cirri about the zenith, and a few rocky cumuli in the E. S. E.	
8	..	Cirro-stratus and cumulo-stratus in the horizon to a considerable elevation: a few breaks of some extent in the E. and E. N. E. of the zenith.	T D

MINIMUM RADIATION THERMOMETER.
June $5^d.22^h$. The reading was omitted.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
June 6. 4	29·916	80·1	68·0	12·1	60·0	20·1	87·2	..	ESE	..	..	..	Pos.	20	..	8	10	..
6	29·903	76·0	61·8	14·2	..	..	57·8	4·48	ESE	..	..	..	Pos.	5	5	3	..	12. 0
8	29·910	71·8	65·7	6·1	..	..	——		Calm	..	..	..	Pos.	40	50	15	12	..
10	29·916	65·6	62·0	3·6	60·0	5·6	109·0	0·00	Calm	..	..	..	Pos.	40	50	20	25	9. 0
12	29·918	61·6	58·8	2·8	..	..	49·5		Calm	..	..	..	Pos.	25	20	12	15	5. 0
14	..	..	..	..	..	..	——	9·755	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	71·0		Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	68·0	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·848	75·8	68·3	7·5	..	..	..	..	Calm	..	ESE	0·85	Pos.	40	..	40	70	13. 0
June 7. 0	..	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
4	29·796	84·0	67·7	16·3	..	..	..	..	..	..	..	..	Pos.	10	10	5	5	8. 0
6	..	..	..	..	..	..	89·1	..	..	..	..	..	..	..	..	..	..	..
							59·8	4·48										
8	29·759	79·1	66·6	12·5	..	..	——		..	..	..	..	Pos.	10	..	5	8	..
10	..	..	..	..	..	..	114·5	0·000	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	56·7		..	..	..	..	..	..	..	..	..	..
14	29·752	65·8	61·9	3·9	..	..	——	9·795	..	..	..	..	Pos.	40	48	20	30	1. 0
16	29·737	62·0	61·3	0·7	60·0	2·0	71·5		..	..	..	..	Pos.	35	30	12	17	3. 0
							68·8	..										
18	29·736	60·5	59·7	0·8	..	..	..	..	..	..	..	..	Pos.	35	30	12	17	2. 0
20	29·742	65·0	62·2	2·8	..	..	..	..	..	..	..	..	Pos.	40	40	20	28	3. 0
22	29·752	69·3	63·9	5·4	55·0	14·3	..	..	..	..	WSW	2·37	Pos.	15	..	10	12	5. 0
June 8. 0	29·756	70·7	64·9	5·8	..	..	..	..	SW	..	..	..	Pos.	15	..	10	12	7. 0
2	29·732	74·2	66·4	7·8	..	..	..	..	SW	..	..	..	Pos.	15	..	10	12	5. 0
4	29·708	73·5	64·7	8·8	59·5	14·0	..	..	SW	..	..	..	Pos.	..	2	0	..	..
6	29·678	72·4	64·2	8·2	..	..	78·8	..	SW	..	..	..	Pos.	35	30	15	25	0. 47
							54·1	4·48										
8	29·676	68·2	62·7	5·5	..	..	——		SW	..	..	..	Pos.	40	40	20	30	2. 0
							98·7	0·00										
10	29·695	61·0	58·1	2·9	57·0	4·0	50·0		WSW	..	..	..	Pos.	..	2	0	..	..
12	29·690	58·0	56·0	2·0	..	..	——	9·795	SW	..	..	..	Pos.	..	2	0	..	..
14	29·682	55·2	54·0	1·2	..	..	71·2		SSW	..	..	..	Pos.	..	2	0	..	..
16	29·663	53·5	52·9	0·6	51·0	2·5	60·5	..	SW	..	..	..	Pos.	..	2	0	..	..
18	29·663	56·6	53·2	3·4	..	..	..	..	WSW	..	..	..	Pos.	..	2	0	..	..
20	29·676	65·0	58·0	7·0	..	..	..	..	WSW	..	..	..	Pos.	14	..	10	12	7. 0
22	29·669	67·6	60·8	6·8	55·5	12·1	..	..	WSW	..	WSW	2·73	Pos.	25	20	12	15	5. 0
June 9. 0	29·675	73·0	64·7	8·3	..	..	..	..	SW	..	..	..	Pos.	30	25	15	20	7. 0
2	29·661	73·6	64·0	9·6	..	..	78·3	..	S by W	..	..	..	Pos.	30	30	15	25	6. 0
4	29·651	72·5	62·9	9·6	54·0	18·5	53·6	4·48	S by W	..	..	..	Pos.	10	10	6	8	9. 0
6	29·668	69·2	61·7	7·5	..	..	——		SW	..	..	..	Pos.	..	2	0	..	..
8	29·686	64·5	60·7	3·8	..	..	99·3	0·00	SW	..	..	..	Pos.	..	2	0	..	..
10	29·716	60·5	57·9	2·6	53·0	7·5	49·3		SW	..	..	..	Pos.	18	..	12	15	5. 0
12	29·734	57·0	55·3	1·7	..	..	——	9·795	SW	..	..	..	Pos.	20	25	12	15	12. 0
14	29·741	54·1	53·0	1·1	..	..	71·0		SSW	..	..	..	Pos.	5	5	3	..	10. 0
							68·5	..										

OSLER'S ANEMOMETER.

June 7d. 22h. It was found that the direction-pencil had become loose; no direction of the wind was therefore recorded between 2h and 22h.

ELECTRICITY.

June 6d. 22h. There was a spark at the distance of 0in·03.

June 7d. 14h and 20h. There were sparks at the distances of 0in·04 and 0in·03 respectively.

June 8d. 8h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
9½	..	Cirro-stratus, fleecy clouds, and scud.	H B
7	..	Thin cirro-stratus in various directions: extensive portions of brown scud N. of the zenith: clear in the E.	
5	..	Cirro-stratus in the N. and N.W. horizon: various linear cirri S. and E. of the zenith.	
7	Transit	Cirro-stratus of some density in the N. and N. N. E. horizon.	H B
8	..	Thin cirro-stratus in several directions, and of various densities: stars are occasionally visible in the E. and E. S. E.	T D
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus and vapour: a thin fog prevails.	H B
..	..		
..	..		
6	..	Cumuli and fragments of scud in various directions: linear cirri S. of the zenith: cirro-stratus and vapour near	
..	..	the horizon. At $4^h.40^m$ the barometer read $29^{in}.779$; dry thermometer, $79°.5$; wet thermometer, $65°.4$; wind, S. S.W.; pressure, ¼; clouds, 10: cumulo-strati, cirro-strati, and scud.	
5	..	Detached cumuli and fragments of scud in every direction: cirro-stratus in the S.W. horizon.	H B
..	..		
..	Transit		
10	..	Overcast: cirro-stratus and masses of dark scud: a shower of rain.	T D
8	..	Cirro-stratus around the horizon, with the exception of the N. and N. N. E.; portions of cirri and scud in every other direction: the rain has ceased.	
10	..	The sky is covered with a thin cirro-stratus, and some portions of dark scud in the S. S.W.	
7	..	Cirro-stratus and masses of white scud flying rapidly over the sky.	T D
10	..	Cirro-stratus, fleecy clouds, and scud cover the sky: a few small breaks about the zenith, but of small extent.	L
10	..	Cirro-stratus and fleecy clouds cover the sky.	
10	..	,,	L
6	..	Cirro-stratus, cumulo-stratus, and some portions of light clouds are scattered over the greater portion of the sky, and particularly in the N. N. E.	T D
8	..	Massive and finely-formed cumuli N. and N. E. of the zenith: cirro-stratus in the E. horizon: some lines of cirri and feather-shaped clouds around the zenith.	
6	..	Cirro-stratus in the E. horizon: clear in the S. of the zenith: masses of imperfectly-formed cumuli, with light cirri, are scattered over the remainder of the sky.	
3	..	A bank of cirro-stratus extending from the N. N. E. to the N. N.W. at a low elevation: fleecy clouds and thin cirro-stratus rapidly moving from the S.: a corona is visible around the Moon.	T D
10	Transit	Cirro-stratus and fleecy clouds cover the sky.	L
1	..	A few light clouds are scattered about the sky.	
2	..	Cirro-stratus in various directions, and a few cirri about the zenith.	
10	..	Cirro-stratus, fleecy clouds, and scud cover the sky.	
3	..	Cirro-stratus towards the N., and masses of loose scud in various directions.	L
8	..	Cirro-strati, cumuli, and masses of dark scud: a few breaks of some extent are exhibited in the N. and N. N. E.	T D
9	..	Cirro-stratus and scud in every direction: massive cumuli in the S. S.W., and some patches of blue sky and light fleecy clouds N. of the zenith.	T D
5	..	Fine specimens of cumuli, with portions of light cirri, are scattered in every direction.	L
3	Full.	Detached cumuli and large masses of loose scud in various directions.	
8	..	Cirro-stratus, fleecy clouds, and large masses of scud in various directions.	
8	..	Cirro-stratus, fleecy clouds, and scud in all directions: some drops of rain are falling.	
4	Greatest declination S.	Cirro-strati and fleecy clouds are scattered over the sky. At $8^h.10^m$ a perfect rainbow was visible for twenty minutes.	L
1	..	Light clouds in every direction.	H B
2	Transit	Light clouds near the Moon's place and near the S. horizon.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
June 9. 16	29·764	54·4	53·4	1·0	51·5	2·9	..	..	SSW	..	..	..	Pos.	..	2	0	..	..
18	29·783	59·7	57·7	2·0	..	..	..	..	SSW	..	..	..	Pos.	..	2	0	..	..
20	29·795	62·9	60·1	2·8	..	..	..	..	S by W	..	..	..	Pos.	5	5	3	..	..
22	29·807	63·8	61·4	2·4	60·2	3·6	..	..	SSW	..	SW	3·00	Pos.	15	12	10	10	7. 0
June 10. 0	29·824	66·9	62·4	4·5	..	..	..	..	SW	..	..	..	Pos.	25	20	12	15	6. 0
2	29·837	67·9	63·5	4·4	..	..	..	..	SW	..	..	..	Pos.	20	15	10	12	8. 0
4	29·834	69·6	64·5	5·1	61·0	8·6	..	..	WSW	..	SW	1·97	Pos.	30	30	15	20	15. 0
6	29·843	68·0	63·2	4·8	..	..	70·4	..	SW	..	..	..	Pos.	40	40	20	25	10. 0
8	29·859	65·7	62·0	3·7	..	..	58·4	4·48	SSW	..	..	..	Pos.	35	40	18	20	..
10	29·883	61·2	59·2	2·0	58·0	3·2	90·7	0·00	SSW	..	..	..	Pos.	10	10	5	5	10. 0
12	29·909	60·2	58·8	1·4	..	..	54·0	9·795	SSW	..	..	..	Pos.	..	2	0	..	..
14	29·938	59·5	58·2	1·3	..	..	71·8	..	SW	..	..	..	Pos.	..	2	0	..	..
16	29·951	57·7	57·1	0·6	56·5	1·2	68·8	..	SW	..	WSW	0·53	Pos.	..	2	0	..	..
18	29·989	60·5	58·7	1·8	..	..	..	..	SW	..	..	..	Pos.	..	2	0	..	..
20	30·019	63·2	60·1	3·1	..	..	..	..	WSW	..	..	..	Pos.	..	2	0	..	..
22	30·040	67·2	62·1	5·1	58·0	9·2	..	..	W	..	W	0·38	Pos.	40	..	25	25	9. 0
June 11. 0	30·047	73·8	66·4	7·4	..	..	..	..	WSW	..	..	..	Pos.	18	..	12	15	6. 0
2	30·042	76·2	63·5	12·7	..	..	..	..	WSW	..	..	..	Pos.	15	..	10	12	5. 0
4	30·047	77·4	65·1	12·3	56·8	20·6	..	..	WSW	..	..	..	Pos.	25	20	12	15	6. 0
6	30·056	76·2	64·5	11·7	..	..	82·1	..	W	..	W	0·17	Pos.	35	30	15	20	7. 0
8	30·063	71·4	61·6	9·8	..	..	57·4	4·48	W by N	..	..	..	Pos.	40	30	20	25	8. 0
10	30·083	65·7	60·7	5·0	57·5	8·2	106·5	0·00	Calm	..	..	..	Pos.	30	30	12	15	6. 0
12	30·097	61·2	58·1	3·1	..	..	49·0	9·795	Calm	..	..	..	..	..	..	..	..	..
14	30·102	59·0	57·6	1·4	..	..	73·5	..	Calm	..	..	..	Pos.	15	15	10	12	5. 0
16	30·091	56·6	55·7	0·9	54·0	2·6	71·5	..	Calm	..	..	..	Pos.	8	10	6	7	6. 0
18	30·093	61·0	60·7	0·3	..	..	..	..	Calm	..	WNW	0·80	Pos.	8	..	5	7	4. 0
20	30·101	65·6	62·4	3·2	..	..	..	..	Calm	..	..	..	Pos.	30	30	20	25	7. 0
22	30·098	76·2	67·7	8·5	59·5	16·7	..	..	Calm	..	SW	0·37	Pos.	40	..	30	35	..
June 12. 0	30·092	79·8	67·9	11·9	..	..	..	..	SW	..	..	..	Pos.	15	..	5	8	..
2	30·075	82·4	68·7	13·7	..	..	..	..	SW	..	..	..	Pos.	20	..	10	12	8. 0
4	30·042	79·4	67·2	12·2	58·0	21·4	85·4	..	SW	..	..	..	Pos.	..	2	0	..	..
6	30·031	77·6	66·6	11·0	..	..	55·8	4·48	..	..	..	..	Pos.	..	2	0	..	..
8	30·036	72·7	65·0	7·7	..	..	111·5	0·00	..	..	..	..	Pos.	18	20	12	15	7. 0
10	30·041	66·5	61·4	5·1	55·0	11·5	48·0	9·795	..	..	..	..	Pos.	40	..	25	30	9. 0
12	30·042	61·4	58·9	2·5	..	..	73·5	..	..	..	..	..	Pos.	40	..	20	20	10. 0
14	30·030	57·5	56·2	1·3	..	..	73·2	..	..	..	..	..	Pos.	40	..	20	25	4. 0
16	30·026	56·7	55·6	1·1	55·0	1·7	..	..	..	..	..	..	Pos.	25	30	12	15	3. 0
18	30·030	55·8	54·9	0·9	..	..	..	..	..	..	..	..	Pos.	20	25	10	10	2. 30
20	30·040	65·8	61·9	3·9	..	..	..	..	..	..	..	..	Pos.	30	35	12	15	7. 0
22	30·036	74·5	66·1	8·4	59·7	14·8	..	..	..	..	SSW	0·93	Pos.	40	40	15	20	8. 0
June 13. 0	30·023	77·0	66·5	10·5	..	..	..	..	ENE	..	..	..	Pos.	25	30	12	15	3. 0
2	30·000	80·0	67·1	12·9	..	..	..	..	NE	..	..	..	Pos.	40	40	20	27	2. 30
4	29·972	80·5	68·0	12·5	58·0	22·5	..	..	E by S	..	..	..	Pos.	40	..	20	25	11. 0
6	29·957	73·8	63·6	10·2	..	..	..	..	ESE	..	..	..	Pos.	20	20	8	10	15. 0
8	29·972	67·8	60·1	7·7	..	..	..	..	ESE	..	..	..	Pos.	8	10	5	5	3. 0

DRY THERMOMETER.

June 11d. 22h. The reading was 10° ·6 higher than at 20h.
June 12d. 20h. The reading was 10° higher than at 18h.

MINIMUM FREE THERMOMETER.

June 10d. 22h and 11d. 22h. The readings were higher than those of the Dry Thermometer at 16h.

OSLER'S ANEMOMETER.

June 12d. 22h. The direction-pencil was found off the rack-work, and it had been off since 4h. 5m.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud.	H B
9	..	,, some breaks in the clouds more or less extensive, frequently occur.	
10	..	,, a few drops of rain are falling.	H B
10	..	,, ,,	T D
10	..	Cirro-stratus and scud.	
10	..	Cirro-stratus and scud, and occasional sunshine.	T D
10	..	Cirro-stratus and scud.	H B
10	..	,, [then visible.	
10	..	,, At $6^h.10^m$ the clouds became slightly broken near the N. horizon, and several cumuli were	
3	..	Cirro-stratus in masses near the horizon: light cirri, both linear and cymoid, are visible in other directions: the wind is blowing in occasional gusts to $\frac{3}{4}$.	H B
10	..	Cirro-stratus and scud.	T D
7	Transit	Cirro-stratus and masses of scud in every direction, with a few clear breaks in the S. and S.W.	
5	..	Cirro-stratus in the N. horizon reaching to the zenith; fleecy clouds and some portions of light scud are scattered over the remainder of the sky.	
10	..	Cirro-stratus and scud.	
10	..	,, the clouds are broken in several directions.	T D
7	..	Cirro-stratus and large masses of scud in every direction: a few drops of rain are falling.	L
8	..	Cirro-stratus, fleecy clouds, and scud: a few cirri towards the N., and some small breaks here and there.	
7	..	Cirro-stratus, fleecy clouds, and large masses of scud in every direction.	L
8	..	Cirro-stratus, fleecy clouds, and light scud: some extensive breaks S. of the zenith.	T D
6	..	Cirro-stratus around the horizon; portions of cirri and fleecy clouds are scattered over the remainder of the sky.	
8	..	Cirro-stratus and fleecy clouds in every direction.	
8	..	Thin cirro-stratus covers the greater portion of the sky, through which some stars are visible.	T D
8	..	A thin cirro-stratus and large masses of scud in every direction: the Moon is dimly visible through the clouds: clear around the zenith.	L
8	Perigee	A thin cirro-stratus covers the greater portion of the sky: some small breaks in various directions.	
10	Transit	A thin cirro-stratus covers the sky.	
6	..	Cirro-stratus around the horizon: light clouds and scud in various directions.	
2	..	A few light clouds and cirro-stratus towards the N.	L
4	..	Cirro-stratus around the horizon: cumuli and scud N. of the zenith; clear elsewhere.	H B
9	..	Cumuli and scud in every direction.	H B
7	..	Cumuli, light cirri, and scud: some breaks in various directions.	T D
6	..	Cumuli, cirro-strati, and scud are scattered over the sky.	
7	..	Cumuli, cirro-strati, and scud in every direction.	T D
3	..	Cirro-strati and fleecy clouds around the horizon; clear elsewhere.	L
1	..	Cirro-stratus towards the N.; clear elsewhere: a slight haze.	L
2	..	Cirro-stratus around the horizon: hazy.	H B
0	..	Cloudless: hazy near the horizon.	
1	Transit	Cirro-stratus around the horizon.	
0	..	Cloudless: hazy.	
1	..	Cirri around the zenith, and principally S. of it.	H B
0	..	Cloudless.	T D
1	..	With the exception of a few portions of detached cumuli scattered here and there, the sky is cloudless.	
3	..	Cirro-stratus in the N. horizon, at a low elevation: some detached cumuli in several directions.	T D
7	..	Cirri, passing into cirro-strati, in every direction, but more plentifully distributed N. of the zenith: several massive cumuli are visible S. of the zenith.	H B
8	..	Cirro-cumuli principally cover the sky near and around the Sun's place: there are several cirro-stratus clouds.	
8	..	Cirro-strati and scud.	

ELECTRICAL INSTRUMENTS.

June $11^d.12^h$. The instruments were omitted to be read by inadvertence.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
June 13. 10	29·980	61·3	58·2	3·1	56·0	5·3	86·6	54·8			4·48		Calm	..	..	..	Pos.	20	25	12	15	5. 0
12	29·983	58·0	56·4	1·6	..	..							Calm	..	..	..	Pos.	25	20	10	15	7. 0
14	..	..	..	..	..	..	111·5	47·0			0·00		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..							Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..					9·795		Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..							ENE	..	..	..	..	..	..	..	..	..
22	29·983	74·0	63·4	10·6	..	..	73·5	73·0		..			E by N	..	E	1·03	Pos.	35	20	20	25	10. 0
June 14. 0	29·984	76·5	65·5	11·0	..	..	..			..			E by S	..	..	..	Pos.	25	..	15	20	7. 0
2	..	..	..	..	..	..	..			..			E by N	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	83·5	54·6		..	4·48		SE	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..							ESE	..	..	..	..	..	..	..	..	..
8	29·962	68·5	61·4	7·1	..	..							ESE	..	..	..	Pos.	25	..	15	20	4. 0
10	..	..	..	..	..	..	114·5	47·5			0·00		Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..							Calm	..	..	..	..	..	..	..	..	..
14	29·999	56·0	54·8	1·2	..	..					9·795		Calm	..	..	..	..	0	0	0	0	..
16	29·999	54·5	53·5	1·0	53·0	1·5	73·5						Calm	..	..	..	..	0	0	0	0	..
18	30·016	56·4	54·7	1·7	..	..	73·2			..			Calm	..	E	1·67	Pos.	25	20	12	20	7. 0
20	30·039	66·0	61·2	4 8	..	..	..			..			NE	..	..	..	Pos.	35	30	15	20	8. 0
22	30·051	75·8	64·7	11·1	58·0	17·8	..			..			ENE	..	ENE	0·15	Pos.	15	..	10	12	5. 0
June 15. 0	30·061	80·8	67·2	13·6	..	..	..			..			ESE	..	..	..	Pos.	..	2	0	..	..
2	30·065	81·7	67·0	14·7	..	..	..			..			ESE	..	..	..	Pos.	..	2	0	..	..
4	30·051	80·6	67·2	13·4	59·4	21·2	86·8			..			SE	..	..	..	Pos.	..	2	0	..	..
6	30·041	79·0	66·6	12·4	..	..	58·8			4·48			SSE	..	..	..	Pos.	30	20	12	15	8. 0
8	30·164	73·9	65·2	8·7	..	..							Calm	..	..	..	Pos.	37	25	15	20	3. 0
10	30·104	65·5	61·7	3·8	59·5	6·0	110·5			0·00			Calm	..	NE	0·12	Pos.	25	20	12	15	3. 0
12	30·128	63·0	60·2	2·8	..	..	50·2						Calm	..	..	..	Pos.	17	..	10	12	5. 0
14	30·140	61·3	59·2	2·1	..	..					9·795		Calm	..	..	..	Pos.	12	..	8	10	4. 0
16	30·138	59·0	58·0	1·0	56·0	3·0	74·0						Calm	..	..	..	Pos.	30	..	20	25	7. 0
18	30·151	60·0	58·2	1·8	..	..	74·0			..			Calm	..	..	..	Pos.	25	..	15	20	10. 0
20	30·172	69·5	60·2	9·3	..	..	..			..			Calm	..	..	..	Pos.	25	..	15	20	8. 0
22	30·172	78·8	68·1	10·7	61·5	17·3	..			..			NE	..	ESE	0·88	Pos.	40	..	15	20	..
June 16. 0	30·182	81·1	69·8	11·3	..	..	..			..			ENE	..	..	..	Pos.	8	10	5	5	6. 0
2	30·181	81·2	68·4	12·8	..	..	..			..			..	..	..	..	Pos.	..	2	0	..	..
4	30·181	78·8	64·7	14·1	59·0	19·8	85·5			..			..	..	..	..	Pos.	..	2	0	..	..
6	30·179	75·7	65·6	10·1	..	..	54·6			4·48			..	..	..	..	Pos.	..	2	0	..	..
8	30·182	68·5	60·0	8·5	..	..							..	..	..	..	Pos.	..	2	0	..	..
10	30·195	61·5	56·5	5·0	51·0	10·5	107·0			0·00			..	..	..	..	Pos.	25	..	15	20	6. 0
12	30·203	57·3	55·8	1·5	..	..	44·5						..	..	..	..	Pos.	40	60	20	25	..
14	30·199	55·4	54·0	1·4	..	..					9·795		..	..	..	..	Pos.	30	40	15	20	5. 0
16	30·187	54·0	53·7	0·3	52·5	1·5	74·2						..	..	..	..	Pos.	15	20	8	10	7. 0
18	30·186	55·1	54·2	0·9	..	..	74·2			..			..	..	..	..	Pos.	30	40	20	23	4. 0
20	30·195	67·0	63·0	4·0	..	..	..			..			Calm	..	..	..	Pos.	40	60	25	30	6. 0
22	30·195	76·2	67·8	8·4	62·0	14·2	..			..			Calm	..	E	1·50	Pos.	40	50	20	27	5. 0
June 17. 0	30·187	81·0	68·7	12·3	..	..	..			..			ESE	..	..	..	Pos.	35	30	14	20	5. 0
2	30·169	80·8	67·7	13·1	..	..	..			..			E	..	..	..	Pos.	35	30	14	20	4. 0
4	30·139	80·0	66·3	13·7	54·0	26·0	..			..			E by S	..	..	..	Pos.	20	25	12	10	4. 0
6	30·119	75·5	63·4	12·1	..	..	..			..			E by S	..	..	..	Pos.	30	35	15	20	7. 0
8	30·135	68·7	61·3	7·4	..	..	..			..			E by S	..	..	..	Pos.	40	..	40	40	10. 0

BAROMETER.
June 15d. 8h. The reading was 0in·123 higher than at 6h.

DRY THERMOMETER.
June 16d. 20h. The reading was 11°·9 higher than at 18h.

MINIMUM FREE THERMOMETER.
June 14d. 22h and 16d. 22h. The readings were higher than those of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
4	..	Cirri around the zenith and in various other directions: fragments of cirro-stratus near the horizon: the sky became nearly clear soon after the last observation.	H B
0	..	Cloudless.	T D
..	..		
..	Transit		
..	..		
..	..		
0	..	A few light clouds, but to no numerical extent.	
0	..	Cloudless.	
..	..		
..	..		
..	..		
0	..	,,	
..	..		
..	..		
1	..	With the exception of a small bank of cirro-stratus in the N., at a low elevation, the sky is cloudless.	
0	..	Cloudless.	
0	Transit	,, a thin mist prevails.	
0	..	A few light clouds, but to no numerical extent.	T D
0	..	Cloudless.	L
0	..	Cloudless.	
0	..	,,	L
0	..	,,	T D
0	..	,,	
1½	..	A bank of cirro-stratus, extending from the N.W. to the W. S.W horizon; the remainder of the sky is cloudless.	
2	..	Cirro-stratus in the N., extending to the W., at a low elevation; the remainder of the sky is cloudless.	T D
10	..	Clouds came up during the last quarter of an hour, and the sky is now wholly covered.	L
10	In Equator	Cirro-stratus and fleecy clouds.	
10	..	,,	
9	Transit	Cirro-stratus and fleecy clouds cover the greater part of the sky: clear in the zenith.	
0	Last Qr.	Cloudless.	L
0	..	,,	H B
½	..	With the exception of a few cumuli near the N. horizon, the sky is cloudless.	
0	..	Cloudless.	H B
0	..	,, the wind is blowing in occasional gusts to ½.	L
0	..	,,	
0	..	,,	
0	..	,,	L
0	..	Cloudless, but hazy.	H B
0	..	Cloudless.	
0	..	,,	
0	..	,,	
0	Transit	,, foggy.	H B
0	..	,,	T D
½	..	With the exception of a few light cumuli, the sky is cloudless.	
½	..	,,	T D
1	..	A few light cirri and fleecy clouds near the N. horizon; cloudless elsewhere.	H B
1	..	Light cirri N. of the zenith: fleecy clouds near the N. horizon.	
1	..	Light clouds around the N. and N.W. horizon.	

OSLER'S ANEMOMETER.

June 16d. 18h. The direction-pencil was found off the rack-work, and it had been off since 1h.

ELECTRICITY.

June 16d. 20h and 22h, and 17d. 8h and 10h. There were sparks at the distances of 0in·01 and 0in·02 respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
June 17. 10	30·130	63·7	60·6	3·1	..	..	83·6			..			E	..	..	..	Pos.	40	..	40	50	17. 0
12	30·133	60·5	59·0	1·5	..	..	57·6			4·48			Calm	..	..	..	Pos.	35	30	15	20	12. 0
14	30·117	57·6	57·2	0·4	..	..							Calm	..	..	..	Pos.	25	20	12	15	6. 0
16	30·095	57·0	56·7	0·3	56·8	0·2	106·5			0·00			Calm	..	..	..	Pos.	18	..	10	12	.. ..
18	30·097	58·5	57·2	1·3	..	..	50·5						Calm	..	..	..	Pos.	..	2	0	..	.. ..
20	30·101	69·4	64·2	5·2	..	..				9·795			Calm	..	..	..	Pos.	30	20	12	15	8. 0
22	30·095	77·5	67·7	9·8	60·0	17·5	74·4		74·4	..			NE	..	E	1·80	Pos.	10	12	8	10	5. 0
June 18. 0	30·081	80·7	66·4	14·3	..	..	..		..	..			ENE	..	..	..	Pos.	..	2	0	..	..
2	30·065	82·2	67·2	15·0	..	..	..		..	..			ENE	..	..	..	Pos.	..	2	0	..	..
4	30·034	80·5	67·7	12·8	60·0	20·5	86·8			..			ESE	..	..	..	Pos.	..	2	0	..	.. ..
6	30·016	75·0	64·2	10·8	..	..	58·0			4·48			ESE	..	..	..	Pos.	..	2	0	..	.. ..
8	30·016	67·6	58·7	8·9	..	..							ESE	..	ESE	1·22	Pos.	40	30	15	20	3. 0
10	30·018	60·0	58·7	1·3	57·0	3·0	113·2			0·00			Calm	..	..	..	Pos.	..	2	0	..	..
12	30·012	60·0	59·4	0·6	..	..	52·0						Calm	..	..	..	Pos.	..	2	0	..	..
14	30·005	58·8	58·2	0·6	..	..				9·795			Calm	..	..	..	Pos.	..	2	0	..	..
16	29·992	58·0	57·7	0·3	57·0	1·0	76·5						Calm	..	..	..	Pos.	10	10	7	8	2. 0
18	29·995	58·8	58·2	0·6	..	..	74·8			..			Calm	..	..	..	Pos.	18	20	12	15	4. 0
20	29·999	61·0	59·9	1·1	..	..	..		..	..			Calm	..	..	..	Pos.	20	25	15	20	5. 0
22	29·994	68·6	64·6	4·0	61·0	7·6	..		..	..			Calm	..	E	0·28	Pos.	5	5	3	..	1. 30
June 19. 0	29·965	79·5	66·2	13·3	..	..	..		..	..			N by E	..	..	..	Pos.	30	40	15	20	3. 0
2	29·950	84·9	66·2	18·7	..	..	..		..	..			..	..	..	..	Pos.	40	60	25	35	2. 30
4	29·930	82·5	67·0	15·5	58·0	24·5	88·9			..			..	..	..	..	Pos.	40	70	30	40	1. 30
6	29·911	82·3	70·8	11·5	..	..	58·5			4·48			..	..	..	..	Pos.	40	70	30	40	1. 0
8	29·927	75·0	66·6	8·4	..	..							..	..	..	..	Pos.	20	25	15	18	4. 0
10	29·940	69·0	65·0	4·0	60·0	9·0	114·0			0·00			..	..	..	..	Pos.	10	12	7	8	3. 0
12	29·941	63·5	61·5	2·0	..	..	50·5						..	..	..	..	Pos.	..	2	0	..	..
14	29·942	60·6	59·2	1·4	..	..				9·795			..	..	..	..	Pos.	5	5	5	..	8. 0
16	29·937	58·8	58·2	0·6	57·0	1·8	76·5						..	..	..	..	Pos.	..	2	0	..	..
18	29·954	59·3	58·5	0·8	..	..	75·0			..			..	..	..	..	..	0	0	0	..	..
20	29·971	68·5	64·7	3·8	..	..	..		..	..			..	..	..	..	Pos.	12	15	5	8	4. 0
22	29·984	78·2	69·4	8·8	64·0	14·2	..		..	..			N	..	N	0·37	Pos.	..	2	0	..	
June 20. 0	29·991	82·9	71·1	11·8	..	..	..		..	..			NNE	..	..	..	Pos.	40	30	17	25	1. 0
2	29·986	87·0	72·1	14·9	..	..	..		..	..			NNE	..	..	..	Pos.	40	40	20	30	0. 30
4	29·984	82·4	68·8	13·6	62·0	20·4	91·1			..			ENE	0 to 2	..	..	Neg.	..	..	..	..	..
6	29·999	77·4	69·0	8·4	..	..	61·3			4·48			N by W	0 to ½	..	..	Pos.	5	5	3	..	2. 0
8	30·031	68·3	63·7	4·6	..	..							N by W	..	..	..	..	0	0	0	..	..
10	30·063	66·1	62·4	3·7	60·0	6·1	114·0			0·00			NNE	..	..	..	..	0	0	0	..	..
12	30·068	65·0	61·7	3·3	..	..	61·0						NNE	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..				9·795			NNE	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	76·8						NNE	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	76·0			..			NNE	..	..	..	..	..	..	..	..	..
20	30·070	61·5	59·2	2·3	..	..	..		..	..			ENE	..	..	..	..	0	0	0	..	..
22	30·078	62·0	59·1	2·9	..	..	..		..	..			NE	..	NE	2·68	..	0	0	0	..	..
June 21. 0	..	..	..	..	..	..	..		..	..			E by N	..	..	..	..	..	..	..	..	..
2	30·023	77·0	67·4	9·6	..	..	..		..	..			ENE	..	..	..	Pos.	..	2	0	..	..
4	..	..	..	..	..	..	..		..	..			E by N	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..		..	..			E	..	..	..	..	..	..	..	..	..

MINIMUM FREE THERMOMETER.
June 17d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

OSLER'S ANEMOMETER.
June 19d. 20h. The direction-pencil was found off the rack-work and had been so since 19d. 2h.

HENLEY'S ELECTROMETER.
June 20d. 4h. The reading was 8°: the other instruments were not in connexion with the conducting wire.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS	Observer.
½	..	Cirro-stratus around the horizon, especially towards the N.	H B
0	..	Cloudless: a thin haze prevails.	T D
3	..	Thin cirro-strati in various directions.	
0	..	Cloudless: a thin haze prevails.	
0	..	A few light cirri N. of the zenith; cloudless elsewhere.	
1	Transit	Cirro-stratus in the N., at a low elevation: a few light cirri S. of the zenith; cloudless elsewhere.	T D
0	..	A few light clouds, but to no numerical extent.	L
0	..	Cloudless.	
1	..	A bank of fleecy clouds towards the W. horizon, and some fine specimens of cirri in various directions.	L
1½	..	Some light cirri and fleecy clouds to the N. and N. E. of the zenith.	T D
0	..	A few cirri N. of the zenith, but to no numerical extent.	
0	..	Cloudless.	T D
0	..	,,	L
10	..	A thin cirro-stratus covers the sky, and a few stars are occasionally visible about the zenith.	
10	..	Cirro-stratus: hazy.	
10	..	,, foggy.	
10	..	,, a thick fog.	
10	..	,, ,,	L
6	Transit	Cirro-stratus and vapour S. of the zenith: foggy.	H B
7	..	Cirro-strati and light clouds: a slight fog.	H B
8	..	The sky is covered in several directions with various clouds of the cirro-stratus character.	T D
10	..	A cirro-stratus cloud covers the sky, through which the Sun is plainly visible.	
0	..	Cloudless, with the exception of a few light cirri S. of the zenith.	T D
2	..	Cirri and light clouds in various directions.	L
1	..	A bank of cirro-stratus towards the N. horizon, and a few light clouds in various directions.	L
1	..	Cirro-stratus and vapour near the horizon, especially to the N.	H B
1	..	Cirro-stratus and vapour: hazy towards the N.	
2	..	,, foggy.	
3	..	Cirro-stratus and vapour around the horizon; light clouds in other directions.	
2	..	Cirro-stratus near the horizon: a few cirro-cumuli in the N. N.W., and linear cirri in various directions.	H B
5	Transit	Cirro-strati and fleecy clouds, extending from the N. horizon to the zenith: lines of cirri and a few detached cumuli in various directions.	T D
7	..	Cirro-strati and fleecy clouds to the N. and N.E. of the zenith, and some portions of finely-formed cumuli in the S.	
8	..	Large masses of cumuli and cumulo-strati in every direction, but more particularly in the N.W., exhibiting an electrical appearance.	T D
8	..	Cumulo-strati in the S. and S. E.: thunder has been heard since the last observation.	H B
6	..	Cirri and fleecy clouds, of no definite modification, in every direction: clear to the S. of the zenith.	
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,, several flashes of lightning have been seen since the last observation.	H B
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud: a slight misty rain falling at intervals.	T D
10	Transit	,,	
..	..		
0	..	Cloudless.	
..	..		
..	..		

ELECTRICITY.

June 18d. 8h. There was a spark at the distance of 0in·02.

June 19d. 0h, 2h, 4h, and 6h. There were sparks at the distances of 0in·01, 0in·02, 0in·03, and 0in·02 respectively.

June 20d. 0h, 2h, and 4h. There were sparks at the distances of 0in·01, 0in 02, and 0in·04 respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
June 21. 8	..	..	..	..	..	..	78·6	..	E	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	56·8	4·48	E by N	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..			E by N	..	..	..	..	..	..	..	..	..
14	29·920	56·6	56·2	0·4	..	..	102·0	0·00	Calm	..	..	..	..	0	0	0	..	..
16	29·884	58·5	57·8	0·7	57·0	1·5	51·4		Calm	..	..	..	..	0	0	0	..	..
18	29·859	61·0	60·4	0·6	..	..		9·795	Calm	..	..	..	..	0	0	0	..	..
20	29·857	68·0	65·8	2·2	..	..	77·0		E by N	..	..	..	Pos.	..	2	0	..	..
22	29·832	76·2	69·4	6·8	65·0	11·2	75·8	..	NNE	..	E	2·48	Pos.	10	12	8	10	7. 0
June 22. 0	29·790	85·0	72·0	13·0	..	..	..	..	ESE	..	..	..	Pos.	8	10	5	7	4. 0
2	29·736	85·0	72·7	12·3	..	..	..	..	E by N	..	..	..	Pos.	14	..	8	10	1. 0
4	29·685	85·2	72·7	12·5	64·4	20·8	..	..	E by S	0 to ¼	..	..	Pos.	35	30	15	20	..
6	29·648	82·0	70·2	11·8	..	..	89·3	..	..	0 to 1	..	..	Pos.	25	20	10	12	4. 0
8	29·614	77·0	67·8	9·2	..	..	59·9	4·77	..	..	..	..	Pos.	30	25	15	20	3. 30
10	29·609	71·3	65·1	6·2	61·0	10·3	112·6	0·34	Calm	..	ESE	1·58	Pos.	27	20	12	15	7. 0
12	29·522	68·0	63·9	4·1	..	..	59·2		SSE	..	..	..	Neg.	..	..	..	..	..
14	29·492	64·7	63·6	1·1	..	..	77·0	10·165	Calm	..	..	..	Neg.	..	..	40	60	0. 20
16	29·464	63·5	62·7	0·8	61·0	2·5	75·5	..	Calm	..	SW	0·42	..	0	0	0	..	..
18	29·446	60·5	60·2	0·3	..	..	..	..	W by N	0 to 1	..	..	..	0	0	0	..	..
20	29·450	60·6	60·2	0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·443	62·8	62·6	0·2	62·0	0·8	..	..	WSW	..	WSW	1·02	..	0	0	0	..	..
June 23. 0	29·460	62·5	59·6	2·9	..	..	..	..	WSW	½ to 3½	..	..	Neg.	..	25	10	..	13. 0
2	29·473	63·5	58·0	5·5	..	..	..	..	WSW	0 to ½	..	..	Pos.	10	..	8	..	..
4	29·504	63·5	58·0	5·5	52·0	11·5	67·4	..	WSW	½ to 1½	..	..	Neg.	10	..	5	8	1. 10
6	29·504	63·2	56·8	6·4	..	..	50·6	4·77	WSW	½ to 2	..	..	..	0	0	0	..	..
8	29·526	58·6	52·9	5·7	..	..			WSW	0 to ½	..	..	Pos.	..	2	0	..	..
10	29·522	54·7	51·7	3·0	49·0	5·7	83·0	0·03	Calm	..	..	..	Pos.	16	..	10	12	1. 0
12	29·500	54·0	51·6	2·4	..	..	44·0		SW	..	..	..	Pos.	..	2	0	..	..
14	29·484	53·2	50·8	2·4	..	..		10·215	SW	..	..	..	Pos.	5	5	3	..	6. 0
16	29·455	50·7	48·7	2·0	45·8	4·9	77·0		Calm	..	..	..	Pos.	8	8	4	..	2. 0
18	29·430	52·5	51·2	1·3	..	..	73·8	..	Calm	..	..	..	Pos.	10	10	5	..	4. 0
20	29·394	58·1	55·2	2·9	..	..	..	..	Calm	..	..	..	Pos.	3	5	..	..	2. 0
22	29·360	61·0	57·4	3·6	55·0	6·0	..	..	Calm	..	SW	4·95	..	0	0	0	..	..
June 24. 0	29·329	58·5	56·2	2·3	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	29·272	60·5	56·1	4·4	..	..	..	..	Calm	..	..	..	Pos.	20	..	10	12	5. 0
4	29·247	59·3	53·5	5·8	48·0	11·3	68·5	..	Calm	..	..	..	Pos.	8	10	5	..	1. 30
6	29·232	62·2	55·3	6·9	..	..	49·8	4·77	WSW	..	..	..	Pos.	30	30	15	20	17. 0
8	29·253	57·0	52·5	4·5	..	..			Calm	..	..	..	Pos.	12	15	5	8	..
10	29·272	53·7	50·9	2·8	45 0	8·7	87·6	0·00	Calm	..	..	..	..	..	..	4	..	10. 0
12	29·296	53·0	49·8	3·2	..	..	43·5		Calm	..	..	..	..	..	..	4	..	17. 0
14	29·298	50·8	48·7	2·1	..	..		10·230	Calm	..	..	..	..	0	0	0	..	..
16	29·309	50·5	48·5	2·0	47·0	3·5	77·0		Calm	..	..	..	..	0	0	0	..	..
18	29·335	50·6	48·6	2·0	..	..	72·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·362	57·7	53·5	4·2	..	..	..	..	WSW	½ to 1	..	..	..	0	0	0	..	..
22	29·387	63·5	55·6	7·9	..	..	..	..	WSW	1 to 2½	WSW	3·25	..	..	0	0	..	..
June 25. 0	29·404	59·5	52·7	6·8	..	..	..	..	WSW	1 to 2½	..	..	Neg.	..	..	..	..	..

MINIMUM FREE THERMOMETER.

June 21d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

OSLER'S ANEMOMETER.

June 22d. 8h. The direction-pencil was found off the rack-work and had been so since June 22d. 5h.

June 22d. 12h. 20m. A gust of 3 lbs. pressure on the square foot was recorded.

June 24d. 23h. A gust of 4½ lbs. pressure on the square foot was recorded.

DEW POINT THERMOMETER.

June 24d. 22h. The observation was inadvertently omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud.	T D
10	..	,,	
10	..	,, a thick fog prevails.	
8½	..	Cirro-stratus around the horizon: some large breaks to the W. and N.W. of the zenith.	T D
0	..	A few light clouds towards the N., but to no numerical extent.	L
3	Transit	Cirri and fleecy clouds N. of the zenith, and in various directions; also there are a few cirro-cumuli.	
3	..	Large masses of cumuli and cumulo-strati around the horizon: loose scud and cirro-stratus in various directions.	
4	..	Cumuli, cumulo-strati, and loose fragments of scud are scattered in various directions.	
7	..	Cirro-stratus in the S. and S. E., and large masses of detached cumuli in every direction.	
8	..	Cumuli, cumulo-strati, and scud: the clouds exhibit an electrical appearance, and thunder has been heard in the S. S. E.	
6	Greatest declination N.	Cumuli, cumulo-strati, scud, and fleecy clouds: distant thunder has been heard since the last observation.	
9	..	Cumulo-strati, cirro-strati, and large masses of scud: constant flashes of lightning from clouds in the N. and the S.W.	
10	..	Cirro-stratus and scud: rain falling.	
10	..	,, ,,	
10	..	,, rain falling occasionally.	
10	..	,,	
10	..	,,	L
10	Transit	Cirro-stratus, cumulo-stratus, and scud: a heavy shower of rain.	H B
10	..	Cirro-stratus and scud: the wind is blowing in gusts to 1½.	H B
10	..	,, there are small breaks about the zenith, and a few drops of rain have been falling occasionally: the wind is blowing in gusts to 1½.	L
8	New	Cumuli, cumulo-strati, and cirro-strati in various directions: some breaks about the zenith.	
7	..	Cirro-strati, cumuli, and scud: the wind is blowing in gusts to ½.	
7	..	Cirro-stratus and dense scud.	
9	..	Cirro-stratus.	
4	..	Cirro-stratus and dark scud N. of the zenith.	
2	..	Fragments of scud and cirro-stratus in various directions.	
9	..	Fleecy clouds of no definite modification and cirro-strati cover the sky.	
7	..	Cirro-stratus and scud in the S. and S. E.; clear towards the N.	
10	..	Cirro-stratus and scud.	
10	..	Cirro-stratus and scud: a thin rain is falling.	
10	Transit	,, rain is falling heavily.	
10	..	,, rain is falling in slight showers.	
9½	..	Cirro-stratus, cumulo-stratus, and scud: the clouds are dark and threatening in the E.	L
6	..	Cirro-stratus and dark scud near the horizon: cirri around the zenith: cirro-cumuli in the S. S.W.	H B
10	..	Stratus to the N.: scud to the S.: a thin film of cloud over the sky.	G
10	..	Cirro-stratus: the sky has become unusually black, and the night is quite dark: lightning in the S. and S. S.W.	G
9	..	Cirro-stratus and scud: small breaks in various directions.	L
10	..	,,	T D
7	..	Cirro-stratus, scud, and fleecy clouds in every direction.	T D
8	..	Cumuli, cirro-strati, fleecy clouds, and rapidly-moving scud: the wind is blowing in gusts to 1.	H B
9	..	With the exception of a few small portions, the sky is nearly covered with a loose kind of cumuli: there is no upper cloud.	G
8	..	Cumuli, large masses of white scud, and cirro-strati: small breaks in various directions: a few drops of rain are falling: the wind is blowing in gusts to 1½ and 2.	L

HENLEY'S ELECTROMETER.

June 22d. 12h. The reading was 15°.

ELECTRICITY.

June 22d. 12h. There were sparks at the distance of 0in. 08.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
June 25. 2	29·406	67·5	56·2	11·3	.	..	..	..	WSW	1 to 2½	..	..	..	0	0	0	..	..
4	29·436	65·0	55·2	9·8	48·0	17·0	..	..	WNW	½ to ¾	..	..	Neg.	..	..	50	70	Instantly
6	29·458	62·8	53·9	8·9	..	..	71·9 / 49·6	..	W	0 to ¼	..	..	..	0	0	0	..	..
8	29·485	60·6	50·6	10·0	..	..	——	4·77	Calm	..	..	..	Pos.	15	20	8	10	8. 0
10	29·524	55·3	50·7	4·6	45·5	9·8	92·5 / 42·6	0·00	Calm	..	..	..	..	..	20	20	..	
12	29·541	51·5	49·7	1·8	..	..	——	10·230	Calm	..	..	..	Pos.	..	2	0	..	..
14	29·549	49·5	48·7	0·8	..	..	77·0 / 71·2		Calm	..	..	..	Pos.	..	2	0	..	..
16	29·560	49·7	49·0	0·7	48·7	1·0			Calm	..	..	..	..	0	0	0	..	..
18	29·554	51·0	50·0	1·0	..	..		..	Calm	..	WSW	2·39	Pos.	35	30	12	20	6. 0
20	29·566	57·9	55·0	2·9	..	..	..	..	Calm	..	..	..	Pos.	30	20	12	15	..
22	29·607	62·6	56·9	5·7	52·0	10·6	..	..	Calm	..	S	0·66	..	0	0	0	..	..
June 26. 0	29·564	63·5	57·5	6·0	..	..	..	..	S	..	..	..	..	0	0	0	..	..
2	29·554	61·2	59·4	1·8	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
4	29·547	63·6	57·8	5·8	51·0	12·6	69·4 / 56·3	..	SSW	½ to 1	SW	0·90	..	0	0	0	..	..
6	29·527	63·0	57·5	5·5	..	..	——	4·77	S by W	..	..	..	..	0	0	0	..	..
8	29·531	58·9	56·7	2·2	..	..			Calm	..	..	..	Pos.	..	2	0	..	..
10	29·530	57·4	56·1	1·3	55·0	2·4	92·3 / 52·5	0·02	Calm	..	..	..	Pos.	27	20	12	15	7. 0
12	29·518	56·7	55·7	1·0	..	..	——	10·265	Calm	..	..	..	..	0	0	0	..	..
14	29·501	56·5	55·6	0·9	..	..			Calm	..	..	..	..	0	0	0	..	..
16	29·497	56·2	55·7	0·5	55·0	1·2	77·0 / 71·0		Calm	..	..	..	..	0	0	0	..	..
18	29·496	56·8	56·0	0·8	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	29·511	60·0	57·5	2·5	..	..	..	..	Calm	..	..	..	Pos.	30	..	20	25	5. 0
22	29·512	67·9	61·8	6·1	54·0	13·9	..	..	Calm	..	SSW	1·98	Pos.	40	..	30	30	18. 0
June 27. 0	29·539	63·1	60·9	2·2	..	..	..	..	SSW	..	..	..	Pos.	40	0	30	..	..
2	29·550	62·8	61·1	1·7	..	..	..	..	SSW	..	SW	0·47	Pos.	30	0	10	15	7. 0
4	29·559	70·7	60·5	10·2	55·0	15·7	72·8 / 53·0	..	SW	½ to 1½	..	..	Pos.	25	0	10	15	4. 0
6	29·582	65·3	58·2	7·1	..	..	——	4·78	SW	½ to 1	..	..	Pos.	15	..	8	10	2. 0
8	29·606	62·2	57·0	5·2	..	..			SW	..	..	..	Pos.	35	..	20	25	8. 0
10	29·646	56·8	54·2	2·6	52·0	4·8	96·4 / 47·2	0·02	Calm	..	WSW	1·38	Pos.	20	..	10	15	3. 0
12	29·678	54·2	52·9	1·3	..	..	——	10·310	Calm	..	..	..	Pos.	3	5	..	..	2. 0
14	..	..	..	..	..	..	77·0 / 70·5		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..		..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..
22	29·747	64·5	59·5	4·5	..	..	..	..	S by W	..	SSW	2·63	Pos.	5	8	3	..	5. 0
June 28. 0	..	..	..	..	..	..	..	..	S by W	½ to 1	..	..	..	..	..	..	..	..
2	29·734	67·7	59·1	8·6	..	..	..	..	SSW	1 to 2½	..	..	Pos.	3	5	..	..	..
4	29·723	69·2	60·0	9·2	..	..	72·9 / 58·0	..	S by W	½ to 1½	..	..	Pos.	5	8	3	..	3. 0
6	..	..	..	..	..	..	——	4·78	S by W	¾ to 1½	..	..	..	..	..	..	..	..
8	29·704	64·1	58·4	5·7	..	..			S by E	..	..	..	Pos.	10	15	8	10	9. 0
10	..	..	..	..	..	..	92·5 / 52·5	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	——	10·330	Calm	..	..	..	..	..	..	..	..	..
14	29·649	58·5	55·9	2·6	..	..			Calm	..	..	..	Pos.	10	10	5	8	9. 0
16	29·637	59·3	56·7	2·6	55·0	4·3	.. / 70·0	..	Calm	..	..	..	Pos.	3	5	2	..	8. 0
18	29·651	60·0	59·4	0·6	..	..		..	Calm	..	..	..	Pos.	..	2	0	..	..
20	29·668	61·3	60·0	1·3	..	..	..	..	SW	..	..	..	Pos.	5	5	3	..	7. 0
22	29·680	71·5	63·7	7·8	59·0	12·5	..	..	SW	..	SSW	4·87	Pos.	..	2	0	..	..

MINIMUM FREE THERMOMETER.

June 25d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

June 26d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

HENLEY'S ELECTROMETER.

June 25d. 4h. The reading was 15°.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	Transit	Masses of cumuli and portions of cirri are scattered over the sky.	T D
9	..	Cumuli, cirro-strati, and masses of dark scud: thunder was heard since the last observation.	T D
4	..	Cumuli towards the S.: a few cirri about the zenith: masses of loose scud in every direction: the wind is blowing in gusts to 1.	L
1	..	Cumuli near the S. horizon: cirro-stratus and vapour near the N. horizon.	H B
0	..	A few clouds, but of no numerical extent.	G
3	..	Cirro-stratus and portions of vapour in the N.; the remainder of the sky is clear.	T D
0	..	Cloudless.	
8	..	Cirro-stratus, scud, and fleecy clouds, with a few clear breaks.	
10	..	Cirro-stratus and fleecy clouds: the Sun is faintly visible.	
10	..	Cirro-stratus and scud.	T D
10	..	Cirro-stratus, fleecy clouds, and large masses of scud: the wind is blowing in gusts to $\frac{1}{2}$.	L
10	..	Cirro-stratus, fleecy clouds, and large masses of scud.	
10	Transit	Cirro-stratus and scud: a few drops of rain have been falling since the last observation.	L
10	..	,, a few drops of rain falling at intervals.	T D
10	..	,, rain falling.	
10	..	,, ,,	
10	..	,, ,,	T D
10	..	,, slight rain falling occasionally.	L
10	..	,,	
10	..	,,	
10	..	,,	
5	..	Cumuli, cirro-strati, and vapour around the horizon: loose scud in various directions.	L
9	..	Cumulo-strati to the N. and N. E.: cirro-strati, fleecy clouds, and scud in various directions.	H B
10	..	Cirro-stratus and scud: rain is falling heavily; thunder was heard at $23^h.\ 35^m$.	
7	..	Cirro-stratus and scud S. of the zenith: a bank of cumuli towards the N.W. horizon.	H B
5	Transit	Large cumuli towards the N. horizon, and in various directions: loose masses of white scud floating about: the wind is blowing in gusts to $\frac{3}{4}$.	L
9	..	Cumuli, cirro-strati, and large masses of scud cover the principal part of the sky: a few breaks towards the S. horizon.	
1	Apogee	Cirro-stratus towards the W. horizon: a few masses of loose scud in various directions.	
0	..	Cloudless.	L
1	..	Cirro-stratus and vapour around the horizon.	H B
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud.	
..	..		
$9\frac{1}{2}$	..	Cirro-stratus and scud: cumuli around the N. horizon: some breaks S. of the zenith, and near the horizon: the wind is blowing in gusts to $1\frac{1}{2}$.	
9	Transit	Cirro-stratus, cumuli, and scud are generally distributed over the sky.	
..	..		
8	..	Cirro-stratus and scud N. of the zenith: several breaks S. of the zenith.	
..	..		
..	..		
2	..	Cirro-stratus in lines near the horizon in the N. and N.W., and also in fragments near the S. horizon.	
5	..	Cirro-stratus and light scud N. of the zenith, and fragments of cirro-stratus near the S. horizon.	
10	..	Cirro-stratus: a slight rain falling.	
2	..	Cirro-stratus and scud in the S. E., and a few cumuli to the N.: the rain has ceased.	H B
6	..	Cumuli, cirri, and a few portions of scud are scattered over the sky in every direction.	T D

ELECTRICITY.

June $25^d.\ 4^h$. There were sparks at the distance of $0^{in.}05$.

GALVANOMETER.

June $5^d.\ 4^h$. There was a current of 3° towards A.

TEMPERATURE OF THE WATER OF THE THAMES.

June $27^d.\ 22^h$. The Maximum Thermometer was found to be out of order, and was removed for the purpose of being repaired.

Day and Hour Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
June 29. 0	29·682	71·0	60·6	10·4	..	..	..			..			SW	½ to 1½	..	..	Pos.	..	2	0	..	..
2	29·685	74·1	61·0	13·1	..	..	..			..			SW	1 to 3½	..	..	..	0	0	0	..	..
4	29·675	72·5	60·5	12·0	51·0	21·5	75·8			..			SW	½ to 2½	..	..	Pos.	5	5	3	..	3. 0
6	29·674	68·8	58·1	10·7	..	..	53·8			4·78			SW	1 to 3½	SW	3·36	..	0	0	0	..	..
8	29·686	63·6	56·0	7·6	..	..	——			——			SSW	½ to 1½	..	..	Pos.	..	2	0	..	..
10	29·710	57·9	53·8	4·1	50·0	7·9	97·5			0·00			S by W	..	..	..	Pos.	15	20	8	10	11. 0
12	29·733	55·5	53·8	1·7	..	..	48·3			——			S by W	..	..	..	Pos.	25	20	12	15	10. 0
14	29·733	54·5	53·5	1·0	..	..	——			10·330			S by W	..	..	..	Pos.	35	30	15	20	5. 0
16	29·738	53·5	52·7	0·8	52·0	1·5	..						S by W	..	..	..	Pos.	35	30	15	20	6. 0
18	29·758	54·9	53·7	1·2	..	..	70·0			..			S by W	..	SSW	1·77	..	0	0	0	..	..
20	29·772	61·5	57·4	4·1	..	..	..			..			SSW	½ to 1½	..	..	Pos.	27	20	10	12	7. 0
22	29·772	65·7	57·3	8·4	48·0	17·7	..			..			SW	0 to 1	WSW	1·30	Pos.	3	3	..	..	7. 0
June 30. 0	29·786	69·8	59·6	10·2	..	..	..			..			SW	¾ to 2½	..	..	Pos.	..	2	0	..	..
2	29·781	72·3	61·4	10·9	..	..	..			..			SSW	¾ to 2½	WSW	2·87	..	0	0	0	..	..
4	29·783	69·2	59·0	10·2	52·0	17·2	..			..			SW	¾ to 2½	..	..	..	0	0	0	..	..
6	29·803	63·5	57·8	5·7	..	..	76·4			..			SW	..	..	..	..	0	0	0	..	..
							53·1			4·84												
8	29·825	59·5	57·7	1·8	..	..	——			——			SW	..	..	..	..	..	..	..	..	..
							97·2			0·06												
10	29·842	56·5	55·0	1·5	54·5	2·0	45·5			——			SSW	..	..	..	..	0	0	0	..	..
12	29·881	54·0	52·7	1·3	..	..	——			10·415			SSW	..	..	..	..	0	0	0	..	..
14	29·892	53·2	52·0	1·2	..	..	..			..			SSW	..	..	..	..	0	..	0	..	..
16	29·905	53·0	51·6	1·4	50·0	3·0	66·0			..			SSW	..	..	..	..	0	0	0	..	..
18	29·893	52·8	51·2	1·6	..	..	..			..			SSW	..	SW	1·55	..	0	0	0	..	..
20	29·898	59·8	57·2	2·6	..	..	..			..			SW	0 to ⅓	..	..	..	0	0	0	..	..
22	29·893	66·5	59·3	7·2	51·5	15·0	..			..			SW	0 to ½	WSW	1·58	Pos.	..	2	0	..	..
July 1. 0	29·900	69·0	60·4	8·6	..	..	..			..			SW	½ to 2½	..	..	Pos.	5	5	3	..	6. 0
2	29·892	69·3	60·4	8·9	..	..	..			..			SW	½ to 1	..	..	Pos.	5	5	3	..	12. 0
4	29·889	66·5	60·0	6·5	55·0	11·5	72·5			..			SW	½ to 1	..	..	Pos.	..	2	0	..	..
6	29·877	65·0	59·0	6·0	..	..	59·6			4·84			SW	¼ to 1½	..	..	Pos.	12	..	8	10	6. 0
8	29·868	61·3	56·7	4·6	..	..	——			——			SW	½ to 2	..	..	Pos.	16	..	10	12	5. 0
10	29·863	59·5	56·4	3·1	53·0	6·5	91·8			0·00			SW	0 to ½	..	..	Pos.	..	2	0	..	..
12	29·863	59·2	56·7	2·5	..	..	57·5			——			SW	¼ to 1½	..	..	Pos.	2	3	3	..	10. 0
14	29·843	60·2	57·9	2·3	..	..	——			10·430			SW	¼ to 3	..	..	Pos.	..	2	0	..	..
16	29·833	59·1	58·2	0·9	57·5	1·6	..						SW	0 to ⅓	..	..	Neg.	..	2	0	..	..
18	29·841	59·5	58·2	1·3	..	..	65·5			..			SW	0 to ¾	..	..	Pos.	..	2	0	..	..
20	29·862	63·7	60·8	2·9	..	..	..			..			SW	¼ to 2	..	..	Pos.	..	2	0	..	..
22	29·885	64·0	61·5	2·5	60·0	4·0	..			..			SW	0 to ¼	SW	7·25	Pos.	..	2	0	..	..
July 2. 0	29·901	72·0	66·6	5·4	..	..	..			..			SW	½ to 1	..	..	..	0	0	0	..	..
2	29·904	72·7	67·2	5·5	..	..	..			..			SW	½ to 1	..	..	..	0	0	0	..	..
4	29·909	73·3	67·8	5·5	62·5	10·8	76·8			..			WSW	½ to 1½	..	..	Pos.	10	15	7	8	17. 0
6	29·924	70·7	62·9	7·8	..	..	61·6			4·84			W	½ steady	..	.	Pos.	12	15	6	8	..
8	29·939	68·3	62·9	5·4	..	..	——			——			WSW	..	..	..	Pos.	5	5	3	..	7. 0
10	29·967	66·1	63·7	2·4	62·3	3·8	94·5			0·00			SW	..	..	..	Pos.	25	30	15	20	20. 0
12	29·992	64·0	62·0	2·0	..	..	58·3			——			WSW	..	..	..	..	0	0	0	..	..
14	29·990	62·3	60·9	1·4	..	..	——			10·430			WSW	..	..	..	..	0	0	0	..	..
16	29·994	62·0	60·7	1·3	..	..	..			..			WSW	..	..	..	..	0	0	0	..	..
18	30·010	61·8	60·6	1·2	..	..	65·2			..			SW	..	..	..	Pos.	35	30	12	20	5. 0
20	30·041	65·5	62·6	2·9	..	..	..			..			WSW	..	..	..	..	0	0	0	..	..

MINIMUM FREE THERMOMETER.

June 29d. 22h. The reading was higher than that of the Dry Thermometer at 16h.
June 30d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.
July 1d. 22h. The reading was higher than those of the Dry Thermometer at 12h, 16h, and 18h.

DEW POINT THERMOMETER.

July 2d. 16h. The observation was inadvertently omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Detached portions of massive cumuli in various directions. There are large portions of blue sky.	T D
6	..	Cirro-stratus in the S. E. horizon, at a considerable elevation: large masses of cumuli in various directions.	T D
4	..	Irregularly formed cumuli, fleecy clouds, and scud in various directions: the wind is blowing in gusts to 2.	H B
2	Transit	A few cumuli in various directions, and some scud, rapidly passing, over the sky: frequent gusts of wind to 2.	
0	..	Cloudless.	
0	..	,,	H B
0	..	,,	T D
0	..	,,	
0	..	,, hazy in the horizon.	
0	..	,, ,,	
7	..	Cirro-stratus, cumulo-stratus, and fleecy clouds in every direction.	T D
6	..	Cumuli, cirro-strati, and scud in every direction.	H B
4	In Equator	Massive cumuli in every direction: cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$.	
7	..	Cumuli, cumulo-strati, cirro-strati, and scud: gusts of wind to $1\frac{1}{2}$.	H B
8	..	Cirro-stratus extending from the N. and E. horizon to the zenith: detached cirri, with masses of cumuli and scud, in every direction: the wind is blowing in gusts to $1\frac{1}{2}$.	T D
8	Transit	Cirro-stratus, cumulo-stratus, and scud: a heavy shower of rain occurred since the last observation, and lasted ten minutes.	
10	..	Cirro-stratus and dark scud, especially in the S., where the clouds have a dark and lowering appearance: rain falling heavily.	
5	..	Cirro-stratus, cumulo-stratus, and scud in detached portions: the rain ceased falling soon after the last observation.	T D
0	..	Cloudless.	L
6	..	Cirro-stratus and fleecy clouds in various directions.	
0	..	Cloudless.	
1	..	A bank of fleecy clouds towards the S. horizon, and some light clouds in various directions.	
1	..	A few cirri and light clouds in various directions: the wind is blowing in occasional gusts to $\frac{1}{2}$.	L
7	..	Cirro-stratus and scud: a few cumuli near the S. horizon: the wind is blowing in frequent gusts to 1 and $1\frac{1}{2}$.	H B
10	..	Cirro-stratus and dense scud: the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	Cirro-stratus and scud: occasional gusts of wind to 2.	H B
10	..	,, ,, to $1\frac{1}{2}$ and 2.	L
10	Transit	,, ,, to 1 and $1\frac{1}{2}$.	
10	..	,, ,, to $1\frac{1}{2}$.	
10	1st Qr.	,, a few drops of rain are falling occasionally: the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	L
10	..	,, rain falling in large drops: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	H B
10	..	,, the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	
10	..	,, rain falling.	
10	..	,, the rain has ceased: the wind is blowing in frequent gusts to $1\frac{1}{2}$.	
$9\frac{1}{2}$	..	,, a few breaks in various directions: the wind is blowing gusts to 2.	H B
10	..	,,	T D
$9\frac{1}{2}$	..	Cirro-stratus and scud: a few breaks in the zenith.	
10	..	,, ,,	T D
8	..	,, cumulo-stratus near the N. N.W. horizon: breaks in various directions.	H B
10	..	,, the wind is blowing in gusts to 1.	
10	Transit	,,	
10	..	,, a few breaks in various directions.	H B
10	..	,,	T D
10	..	,,	
10	..	,,	
9	..	Cirro-stratus and fleecy clouds: some breaks in the zenith: the Sun gleams through the clouds at intervals.	
10	..	Cirro-stratus and scud.	T D

OSLER'S ANEMOMETER.

June 29^{d}. 2^{h}. 20^{m}. A gust of $4\frac{1}{2}$ lbs. pressure on the square foot was recorded.

RAIN.

June 30^{d}. 12^{h}. The amount collected during the month of June in the rain-gauge No. 4 was 0^{in}. 50, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period was 0^{in} 43.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	RAIN GAUGES. Stand of No. 1, (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°		in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
July 2. 22	30·046	66·5	63·0	3·5	60·0	6·5	..	..	..			SW	..	WSW	4·55	..	0	0	0	..	..
July 3. 0	30·053	72·2	65·0	7·2	..	..	..	..				WSW	..	..	..	..	0	0	0	..	..
2	30·051	70·5	63·9	6·6	..	..	..	..				WSW	..	..	..	..	0	0	0	..	..
4	30·027	73·0	64·6	8·4	59·5	13·5	77·6	..				WSW	..	..	..	Pos.	..	2	0	..	..
6	30·014	73·5	64·8	8·7	..	..	57·1		4·84			SW	..	..	..	Pos.	..	2	0	..	..
8	30·012	70·0	62·7	7·3	..	..	—					SSW	..	..	..	Pos.	..	2	0	..	..
10	30·026	62·6	59·2	3·4	57·3	5·3	98·5			0·00		Calm	..	..	..	Pos.	..	2	0	..	..
12	30·029	58·5	57·0	1·5	..	..	44·5					Calm	..	..	..	Pos.	..	2	0	..	..
14	30·029	55·2	53·8	1·4	..	..	—			10·430		Calm	..	..	..	Pos.	12	..	8	10	4. 0
16	30·029	54·0	52·4	1·6	51·0	3·0	..					Calm	..	..	..	Pos.	24	..	15	18	5. 0
18	30·035	53·3	52·0	1·3	..	..	65·5					Calm	..	..	..	Pos.	35	..	20	25	5. 0
20	30·038	64·2	61·0	3·2	..	..	..					Calm	..	..	..	Pos.	40	..	20	25	7. 0
22	30·023	73·5	64·4	9·1	57·0	16·5	..		..			Calm	..	WSW	1·73	Pos.	25	..	10	10	2. 30
July 4. 0	30·016	81·3	64·9	16·4	..	..	..	..				SSW	..	..	..	Pos.	40	..	40	40	9. 0
2	29·987	84·5	65·4	19·1	..	..	..	..				SSW	..	..	..	Pos.	28	..	30	30	7. 0
4	29·962	86·8	67·2	19·6	55·0	31·8	91·8	..				SSW	..	..	..	Pos.	40	..	20	25	6. 0
6	29·939	83·4	66·7	16·7	..	..	61·4		4·84			S	..	..	..	Pos.	40	..	25	30	5. 0
8	29·924	78·2	66·0	12·2	..	..	—					Calm	..	..	..	Pos.	30	..	15	20	8. 0
10	29·909	67·8	61·4	6·4	58·0	9·8	115·8			0·00		Calm	..	..	..	Pos.	40	..	20	30	8. 0
12	29·880	64·7	61·7	3·0	..	..	52·8					Calm	..	..	..	Pos.	40	..	40	40	8. 0
14	..	..	..	..	..	..	—			10·430		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..					Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	66·8					Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..		..			Calm	..	..	..	..	..	..	..	..	..
22	29·636	86·2	71·7	14·5	..	..	..		..			SE	..	ESE	0·94	Pos.	40	..	20	30	9. 0
July 5. 0	29·574	89·2	72·5	16·7	..	..	..	..				SSE	½ to 2	..	..	Pos.	40	..	25	35	8. 0
2	..	..	..	..	..	..	..					S	½ to 3	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..		..			SW	1 to 4	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	93·3					SW	1 to 3½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	52·4		5·01			SW	1 to 3½	..	..	..	..	..	..	..	..
10	29·547	61·3	58·0	3·3	..	..	—					SW	1 to 3	..	..	Pos.	35	..	20	28	6. 0
12	..	..	..	..	..	..	113·0			0·20		SW	..	..	..	..	..	..	..	..	..
14	29·561	56·0	54·1	1·9	..	..	47·5			10·665		SW	½ to 1	..	..	..	0	0	0	..	..
16	29·532	52·0	50·8	1·2	48·5	3·5	..		..			SSW	..	..	..	Pos.	..	2	0	..	..
18	29·509	54·3	53·2	1·1	..	..	67·5		..			SW	..	..	..	..	0	0	0	..	..
20	29·512	59·2	55·9	3·3	..	..	..		..			SW	0 to ½	..	..	Pos.	..	2	0	..	..
22	29·503	62·3	57·4	4·9	55·7	6·6	..		..			SSW	1 to 3	SSW	7·03	Pos.	..	2	0	..	..
July 6. 0	29·465	65·5	61·6	3·9	..	..	..	..				SW	0 to 2	..	..	Neg.	..	2	0	..	..
2	29·436	65·0	59·6	5·4	..	..	..	..				SSW	½ to 4	..	..	Neg.	..	2	0	..	..
4	29·388	64·0	57·2	6·8	49·5	14·5	70·1	..				SSW	½ to 3½	..	..	Pos.	20	20	12	10	14. 0
6	29·323	59·2	57·7	1·5	..	..	56·6		5·01			SSW	0 to 1	..	..	Pos.	23	25	15	12	6. 0
8	29·288	58·8	57·5	1·3	..	..	—					SW	¼ to 1½	SW	3·30	Pos.	..	2	0	..	..
10	29·319	58·5	57·4	1·1	56·7	1·8	87·0			0·04		WSW	1 to 2½	..	..	Pos.	..	2	0	..	..
12	29·353	59·5	55·7	3·8	..	..	55·0					WSW	1½ to 3	WSW	3·92	Pos.	..	2	0	..	..
14	29·424	58·0	55·2	2·8	..	..	—			10·735		W by S	¼ to 1	..	..	Pos.	..	2	0	..	..
16	29·461	57·4	54·5	2·9	52·6	4·8	..		..			W by S	¼ steady	..	..	Pos.	..	2	0	..	..
18	29·533	56·5	53·4	3·1	..	..	66·8		..			WSW	..	..	..	Pos.	0	0	0	..	..

DRY THERMOMETER.

July 3d. 22h. The reading was 20°·2 higher than at 18h.

July 4d. 10h. The reading was 10°·4 lower than at 8h.

MINIMUM FREE THERMOMETER.

July 3d. 22h. The reading was higher than those at 14h, 16h, and 18h.

July 5d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud.	L
10	..	Cirro-stratus and scud: a few small breaks towards the E. horizon, but to no numerical extent.	
10	..	Cirro-stratus, fleecy clouds, and scud: occasional breaks in various directions to no numerical extent.	L
0	..	A few slight cirri in the S.W. horizon; cloudless elsewhere.	T D
0	..	Cloudless.	
0	Transit	,,	
0	..	,, hazy in the horizon.	T D
0	..	,,	L
0	..	,,	
0	..	,,	
0	..	,,	
0	..	,,	L
0	..	,, vapour near the N. horizon.	H B
0	..	Cloudless: vapour near the N. horizon.	
0	..	,,	
0	..	,,	H B
0	..	,,	L
0	Transit	,,	
0	..	,,	L
0	..	,, a slight haze near the Moon's place.	H B
..	..		
..	..		
..	..		
..	..		
0	..	,,	L
0	..	Cloudless.	
..	..		
..	..		
..	..		
..	..		
1	Transit	A bank of cirro-stratus towards the N.; clear elsewhere: rain fell from 4^h to $4^h.30^m$, and several peals of thunder were heard between these times.	L
..	..		
$9\frac{3}{4}$	..	Cirro-stratus and scud: some drops of rain occasionally falling.	H B
3	..	Cirro-stratus and fragments of scud.	
10	..	Cirro-stratus and scud: rain is falling.	
8	..	Cirro-stratus and rapidly-moving scud; also some massive cumuli: the rain has ceased falling.	H B
6	..	Cumuli and cirri in detached portions.	T D
7	..	Cumuli and cirri in detached portions. At $22^h.40^m$ a heavy shower of rain fell, and thunder was heard.	
8	..	Cumuli, cirri, and scud: a few breaks S. E. of the zenith: rain has fallen at intervals since the last observation: the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	T D
10	..	Cirro-stratus and scud: the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	H B
10	..	,, rain falling slightly: the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	Cirro-stratus and scud in the S.W.; frequent showers of rain have fallen since the last observation.	
10	Transit	Cirro-stratus and scud: rain falling slightly: the wind is blowing in gusts to $2\frac{1}{2}$.	H B
10	..	Cirro-stratus and masses of dark scud: the wind is blowing in gusts to 2 and 3.	T D
10	..	,, rain is falling.	
10	..	Cirro-stratus and scud: the wind is blowing in gusts to 2.	
10	..	,,	

OSLER'S ANEMOMETER.

July $6^d.0^h.30^m$ and $8^h.10^m$. Gusts of 4 lbs. pressure on the square foot were recorded.

ELECTRICITY.

July $4^d.12^h$. There were sparks at the distance of $0^{in}.03$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
July 6. 20	29·588	56·9	53·0	3·9	..	..	..		..	..		..	W by S	..	..	..	..	..	0	0	..	..
22	29·622	58·4	54·0	4·4	50·0	8·4	..		..	..		..	WSW	..	W	2·78	..	..	0	0	..	..
July 7. 0	29·703	61·3	54·2	7·1	..	..	..		..	..		..	WNW	0 to ½	WNW	0·64	..	..	0	0	..	..
2	29·665	62·8	54·6	8·2	..	..	..		..	..		..	W by S	0 to ½	..	..	..	..	0	0	..	..
4	29·686	63·7	54·8	8·9	45·5	18·2	64·6		..	..		..	W by S	0 to ½	..	..	..	..	0	0	..	..
6	29·694	61·3	53·8	7·5	..	..	55·3		..	5·01		..	W by S	..	..	..	Pos.	35	30	15	25	5. 0
8	29·708	59·6	53·2	6·4	..	..	———		..			..	W by S	..	..	..	Pos.	..	2	0	..	..
10	29·735	58·7	53·7	5·0	49·0	9·7	83·2		..	0·01		..	Calm	..	..	..	Pos.	..	2	0	..	..
12	29·753	55·7	52·6	3·1	..	..	46·7		..			..	Calm	..	..	..	Pos.	..	2	0	..	..
14	29·749	53·0	51·0	2·0	..	..	———		..	10·750		..	Calm	..	..	..	Pos.	..	2	0	..	..
16	29·731	52·7	50·5	2·2	49·0	3·7	..		..			..	Calm	..	..	..	Pos.	..	2	0	..	..
18	29·726	52·5	50·2	2·3	..	..	66·0		..	..		..	Calm	..	..	..	..	..	0	0	..	..
20	29·735	56·2	54·2	2·0	..	..	..		..	..		..	Calm	..	..	..	Pos.	10	..	5	8	3. 0
22	29·721	61·3	59·0	2·3	54·0	7·3	..		..	..		..	Calm	..	W	1·22	Pos.	..	2	0	..	..
July 8. 0	29·714	64·6	60·1	4·5	..	..	..		..	..		..	S by W	..	..	..	Pos.	..	2	0	..	..
2	29·695	64·2	59·9	4·3	..	..	..		..	..		..	Calm	..	..	..	Pos.	5	..	3	..	6. 0
4	29·667	66·2	60·4	5·8	55·0	11·2	68·3		..	..		..	S by W	..	..	..	Pos.	..	2	0	..	..
6	29·650	65·3	59·4	5·9	..	..	57·8		..	5·05		..	Calm	..	..	..	Pos.	..	2	0	..	..
8	29·644	62·2	58·0	4·2	..	..	———		..			..	Calm	..	..	..	Pos.	..	2	0	..	..
10	29·652	58·7	57·4	1·3	56·0	2·7	80·0		..	0·03		..	Calm	..	..	..	Pos.	10	..	8	10	1. 0
12	29·611	57·7	56·7	1·0	..	..	54·0		..			..	Calm	..	..	..	Pos.	20	..	10	10	7. 0
14	29·594	57·2	57·4	−0·2	..	..	———		..	10·805		..	Calm	..	..	..	Pos.	8	10	5	5	16. 0
16	29·563	58·0	56·5	1·5	55·0	3·0	..		..			..	Calm	..	..	..	Pos.	25	30	15	20	9. 0
18	29·559	59·0	58·2	0·8	..	..	65·0		..	..		..	Calm	..	..	..	Neg.	..	2	0	..	..
20	29·552	60·1	59·5	0·6	..	..	..		..	..		..	Calm	..	..	..	Pos.	..	2	0	..	..
22	29·548	61·0	59·8	1·2	59·0	2·0	..		..	..		..	Calm	..	S	1·69	Pos.	35	30	15	20	4. 0
July 9. 0	29·543	63·0	61·1	1·9	..	..	..		..	..		..	S by E	..	..	..	Pos.	27	20	10	15	8. 0
2	29·534	67·0	65·5	1·5	..	..	..		..	..		..	S by W	..	..	..	..	..	0	0	..	
4	29·506	68·7	64·3	4·4	60·5	8·2	73·3		..	..		..	SSW	..	..	..	Pos.	10	12	8	10	15. 0
6	29·494	67·7	62·8	4·9	..	..	56·8		..	5·25		..	S by W	..	..	..	Pos.	12	15	10	10	18. 0
8	29·501	64·0	60·8	3·2	..	..	———		..			..	S by W	..	..	..	Pos.	5	5	3	..	6. 0
10	29·512	60·8	59·7	1·1	58·0	2·8	91·0		..	0·27		..	Calm	..	..	..	Pos.	..	2	0	..	..
12	29·536	59·0	58·2	0·8	..	..	53·8		..			..	Calm	..	..	..	Pos.	..	2	0	..	..
14	29·547	57·8	57·5	0·3	..	..	———		..	11·055		..	Calm	..	..	..	Pos.	..	2	0	..	..
16	29·553	56·7	56·5	0·2	56·7	0·0	..		..			..	Calm	..	..	..	Pos.	..	2	0	..	..
18	29·570	58·0	57·4	0·6	..	..	65·0		..	..		..	Calm	..	..	..	Pos.	..	2	0	..	..
20	29·604	61·2	59·7	1·5	..	..	..		..	..		..	Calm	..	..	..	Pos.	..	2	0	..	..
22	29·631	60·5	60·7	−0·2	60·0	0·5	..		..	..		..	Calm	..	S	2·55	Neg.	..	..	..	..	..
July 10. 0	29·663	63·0	62·7	0·3	..	..	..		..	..		..	Calm	..	..	..	Neg.	..	..	..	..	0. 1·3
2	29·697	66·3	63·4	2·9	..	..	..		..	..		..	WSW	..	..	..	Pos.	15	..	12	15	..
4	29·741	64·8	64·5	0·3	62·5	2·3	71·7		..	..		..	W by S	..	WSW	0·52	Neg.	..	..	30	50	..
6	29·760	63·2	62·2	1·0	..	..	49·4		..	5·50		..	N by E	..	..	..	..	..	0	0	..	..
8	29·807	61·5	59·2	2·3	..	..	———		..			..	N by E	½ to 1	..	..	..	..	0	0	..	..
10	29·861	57·6	56·5	1·1	56·0	1·6	87·2		..	0·36		..	N by E	..	..	..	..	..	0	0	..	..
12	29·902	53·0	52·7	0·3	..	..	43·0		..			..	Calm	..	..	..	..	..	0	0	..	..
14	29·918	50·4	50·2	0·2	..	..	———		..	11·370		..	Calm	..	..	..	..	..	0	0	..	..
16	29·939	49·2	49·2	0·0	49·0	0·2	..		..	..		..	Calm	..	N	0·70	..	..	0	0	..	..
18	29·947	49·8	49·4	0·4	..	..	65·2		..	..		..	Calm	..	..	..	Pos.	..	2	0	..	..
							..		..	..		..	Calm	..	..	..	Pos.	..	..	8	10	3. 0

DRY THERMOMETER.

July 8d. 14h and 9d. 22h. The readings were lower than those of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

July 6d. 22h. The reading was recorded as 61°·6, which is evidently erroneous, as the greater number of the readings of the Dry Thermometer were less than 60°; the number is supposed to be 5° in error, and, altered by this number, it becomes 56°·6, which has been used in subsequent calculations; the number thus altered, however, is still 0°·1 higher than the reading of the Dry Thermometer at 18h.

July 7d. 22h. The reading was higher than that of the Dry Thermometer at 14h, 16h, and 18h, by 2°·3, 2°·6, and 2°·8, respectively: it is very probable that some error was committed in the reading, but there is not sufficient evidence to authorize any alteration; the number therefore, as recorded, has been used in subsequent calculations.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Greatest declination S.	Cirro-stratus and scud: a few breaks, but to no numerical extent.	T D
10	..	,,	L
10	..	,,	
10	..	,, some breaks of small extent occasionally occur.	L
10	..	,, slightly broken in the zenith: the Sun gleams faintly through the clouds.	T D
10	..	,, a few small breaks in the zenith	
10	..	,,	
10	..	,,	
10	Transit	,, the Moon has been visible occasionally since the last observation.	T D
9	..	Cirro-stratus and fleecy clouds: a few breaks towards the S.	L
10	..	Cirro-stratus, fleecy clouds, and scud.	
10	..	,,	
10	..	Cirro-stratus and fleecy clouds: a few drops of fine rain have been falling occasionally since the last observation.	L
10	..	Cirro-stratus and scud.	H B
10	..	Cirro-stratus and scud.	
10	..	,, a shower of rain commenced falling about five minutes after the last observation.	H B
10	..	,,	L
10	..	,,	
10	..	,,	
10	..	,, a slight rain falling.	L
10	Transit Full	,, a few drops of rain occasionally falling.	H B
10	..	,,	
10	..	,,	
10	..	,, slight rain falling.	
10	..	,, ,,	H B
10	..	,, a thin rain falling at intervals.	T D
10	..	,, a slight rain falling at intervals.	
9	..	,, a few breaks in the zenith: the rain has ceased.	T D
10	..	Cirro-stratus, cumulo-stratus, and scud.	H B
9	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	H B
10	..	,, rain falling.	T D
10	Transit	,, the Moon's place is visible: the rain has ceased.	
10	Perigee	,, the Moon has been visible through an extensive break since the last observation.	
10	..	,, slight breaks about the zenith.	
10	..	,, the Sun is occasionally visible through a break in the clouds.	T D
10	..	Cirro-stratus, cumulo-stratus, and large masses of scud: rain falling slightly, and thunder occasionally heard.	L
10	..	Cirro-stratus and scud: rain has been falling at intervals since the last observation.	
10	..	Cirro-stratus, cumulo-stratus, and scud: thunder heard occasionally.	L
7	..	,, rain has been falling heavily during the last half hour.	T D
9	..	,, rain has been falling since the last observation, and continues falling slightly.	
8	..	Cirro-stratus around the horizon: a few breaks S. W. of the zenith: the rain has ceased.	
2	..	A bank of cirro-stratus in the S. horizon at a low elevation: detached portions of cirrus in the N.	T D
0	..	Cloudless.	L
0	Transit	,,	
0	..	,, a slight fog.	
4	..	Cirro-stratus and fleecy clouds in various directions: clear about the zenith.	

MINIMUM FREE THERMOMETER.—July 8^d. 22^h. The reading was higher than those of the Dry Thermometer at 10^h, 12^h and 14^h.
July 9^d. 22^h. The reading was higher than that of the Dry Thermometer at 16^h.

ELECTRICITY.—July 2^d. 22^h. There were sparks at the distance of 0^{in}·09.
July 10^d. 0^h, 4^h, and 22^h. There were sparks at the distances of 0^{in}·12, 0^{in}·13, and 0^{in}·01, respectively.

HENLEY'S ELECTROMETER.—July 9^d. 22^h. The reading was 15°.
July 10^d. 0^h and 4^h. The readings were 20° and 5° respectively.

GALVANOMETER.—July 9^d. 22^h. There was a current of 20° towards A.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 10. 20	29·969	56·5	55·0	1·5	..	..	..	..	N	..	..	..	Pos.	..	..	10	12	2. 0
22	29·976	63·8	57·7	6·1	52·9	10·9	..	..	N	..	NNW	0·61	Neg.	..	..	30	50	13. 0
July 11. 0	29·988	66·2	59·5	6·7	..	..	..	..	NW	..	..	..	Pos.	..	..	25	20	..
2	29·989	67·4	59·2	8·2	..	..	..	..	W by N	..	..	..	Pos.	..	..	5	5	5. 0
4	29·994	65·5	57·5	8·0	..	..	68·8	..	NW	..	..	..	Pos.	..	..	15	20	4. 0
6	29·994	63·7	57·0	6·7	..	..	52·4	5·50	NW	..	..	..	Pos.	..	..	10	14	6. 0
8	30·002	61·0	54·5	6·5	..	..	——		NW	..	..	..	Pos.	..	..	8	10	3. 0
10	30·021	58·5	53·7	4·8	50·0	8·5	90·5	0·00	Calm	..	..	..	Pos.	..	..	10	12	4. 0
12	30·021	56·5	54·5	2·0	..	..	..		Calm	..	..	..	Pos.	..	..	30	30	10. 0
14	..	..	..	..	..	..	——	11·370	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	65·2	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	30·020	64·5	58·7	5·8	..	..	..	..	WSW	..	NW	1·44	Pos.	30	25	12	18	8. 0
July 12. 0	..	..	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
4	29·968	76·0	64·6	11·4	..	..	80·1	..	WSW	..	..	..	Pos.	40	30	17	25	5. 0
6	..	..	..	..	..	..	55·1		WSW	..	..	..	..	..	..	..	..	..
8	29·979	68·0	60·9	7·1	..	..	——	5·50	W by S	..	..	..	Pos.	..	2	0	..	..
10	..	..	..	..	..	..	103·0	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..
14	29·949	56·6	54·7	1·9	..	..	——	11·370	Calm	..	WSW	2·28	Pos.	30	..	10	10	13. 0
16	29·947	54·5	53·5	1·0	52·0	2·5	..		Calm	..	..	..	Pos.	3	..	2	..	..
18	29·945	54·6	53·7	0·9	..	..	65·2	..	Calm	..	..	..	Pos.	25	..	12	15	..
20	29·944	61·7	59·9	1·8	..	..	..	..	Calm	..	S	0·90	Pos.	40	..	50	50	10. 0
22	29·925	73·0	65·4	7·6	61·0	12·0	..	..	Calm	..	E	0·15	Pos.	40	..	40	45	3. 0
July 13. 0	29·912	78·5	68·1	10·4	..	..	..	..	S	..	..	..	Pos.	40	..	30	40	7. 0
2	29·886	81·5	68·7	12·8	..	..	..	..	SW	..	..	..	Pos.	40	..	35	40	10. 0
4	29·843	81·8	67·5	14·3	..	..	..	..	SSW	..	..	..	Pos.	20	..	10	10	..
6	29·775	77·6	65·5	12·1	..	..	..	..	S	..	..	..	Pos.	25	..	20	20	13. 0
8	29·785	73·0	64·4	8·6	..	..	86·0	..	S	..	..	..	Pos.	5	..	3	..	6. 0
10	29·776	67·0	62·3	4·7	58·0	9·0	59·8	5·50	Calm	..	..	..	Pos.	20	..	8	10	10. 0
12	29·756	64·5	61·2	3·3	..	..	——		Calm	..	..	..	Pos.	..	2	0	..	..
14	29·694	61·6	58·5	3·1	..	..	110·5	0·00	Calm	..	..	..	Pos.	..	2	0	..	..
16	29·632	59·4	58·2	1·2	58·4	1·0	52·0		Calm	..	..	..	Pos.	..	2	0	..	..
18	29·595	61·5	61·0	0·5	..	..	——	11·375	ENE	..	..	..	Pos.	..	2	0	..	..
20	29·582	67·2	63·6	3·6	..	..	..		SSE	..	..	..	Pos.	..	2	0	..	..
22	29·568	74·5	69·0	5·5	64·0	10·5	..	..	SSW	..	SSW	0·18	Pos.	..	2	0	..	..
July 14. 0	29·566	77·3	69·4	7·9	..	..	..	..	SSW	0 to ½	..	..	Pos.	..	2	0	..	..
2	29·562	78·0	69·4	8·6	..	..	..	..	SSW	½ to 1½	..	..	..	..	0	0	..	..
4	29·556	73·5	68·7	4·8	63·2	10·3	..	..	SSW	½ to 1	SSW	1·80	Pos.	..	2	..	..	..
6	29·559	78·5	67·8	10·7	..	..	..	..	SW	½ to 1½	..	..	Pos.	..	2	..	..	..

DRY THERMOMETER.
July 12d. The rise between 20h and 22h is unusually great.

DEW POINT THERMOMETER.
July 11d. 4h and 13d. 4h. The readings were omitted.

MINIMUM FREE THERMOMETER.
July 10d. 22h and 13d. 22h. The readings were higher than those of the Dry Thermometer at 16h.
July 12d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
6	..	Cirro-stratus and fleecy clouds in every direction: extensive breaks in the N. and towards the E.	L
8	..	Cirro-stratus, fleecy clouds, and light scud in every direction: the Sun occasionally shines through the clouds.	H B
9	..	Cirro-stratus, fleecy clouds, and scud.	
9½	..	,,	H B
10	..	,,	L
8	..	Cirro-stratus and fleecy clouds: small breaks in various directions, mostly towards the S.	
7	..	Cirro-stratus, fleecy clouds, and scud: clear about the zenith.	
10	..	Cirro-stratus, fleecy clouds, and scud cover the sky.	L
10	..	Cirro-stratus and scud: a slight fog.	H B
..	..		
..	Transit		
..	..		
..	..		
3	..	Detached cumuli and fragments of cirri are scattered over the sky.	T D
..	..		
..	..		
0	..	Cloudless.	
..	..		
3	..	Light portions of cumuli, cirri, and fine specimens of fleecy clouds are scattered over the sky.	T D
..	..		
..	..		
0	..	Cloudless.	H B
2	Transit	Cirro-cumuli to the E. and N. N. E.: fragments of scud in various directions.	
2	..	Cirro-cumuli extending from the N.W. to the S. E.	
4	..	Fleecy clouds are distributed in every direction.	H B
0	In Equator	Cloudless.	T D
4	..	Cirro-stratus exists N. E. of the zenith, and, in detached fragments, is scattered over the remainder of the sky.	
0	..	Cloudless.	T D
3	..	Light cirri in every direction.	H B
2	..	Light cirri, principally linear.	
6	..	Cirro-stratus S. of the zenith: a few cirro-cumuli and cirri to the N. of the zenith: part of a rainbow is visible.	
5	..	Cirro-stratus above the N.W. horizon, and in large masses above the N. horizon: a few cirro-cumuli to the N.: fragments of scud near the horizon in the S. and E.	H B
8	..	Cirro-stratus in large masses: a few of the larger stars are visible through the breaks.	T D
5	..	Cirro-stratus in the N. horizon, to a considerable altitude; also in the E. and the S. S. E., and detached portions in the zenith.	
4	..	Cirro-stratus around the horizon and in the N., extending to the zenith: a shower of rain has fallen since the last observation.	
10	Transit	Cirri, cirro-cumuli, scud, and fleecy clouds in every direction.	
8	..	Cirri, cirro-cumuli, scud, and fleecy clouds in every direction: there are some clear breaks of large extent S.W. of the zenith.	T D
9	..	The sky is nearly covered with cirro-stratus: there are several portions of blue sky, from which it would appear that there is no upper cloud: there has been occasional sunshine since the last observation.	G
4	..	Detached cumuli and large masses of loose scud in various directions: some breaks, mostly S. of the zenith: the wind in occasional gusts to ½.	L
3	..	Fleecy and light clouds are scattered in various directions: a few cirri and cirro-cumuli a little N. of the zenith: the wind in gusts to ¾.	L
6	..	Cirri, cirro-cumuli, and light clouds are scattered over the sky: the wind in gusts to ¾+.	T D
4	..	Cumuli, cirri, light scud, and fleecy clouds prevail in every direction: the wind in gusts to 1+.	

RADIATION MINIMUM THERMOMETER.

July 11^{d}. 22^{h} and 12^{d}. 22^{h}. The readings were not taken.

ELECTRICITY.

July 11^{d}. 12^{h}. There was a spark at 0^{in}·01.

July 12^{d}. 20^{h} and 22^{h}. There were sparks at the distances of 0^{in}·02 and 0^{in}·02 respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 14. 8	29·592	72·6	60·7	11·9	..	..	85·5	..	WSW	½ to 1	SW	0·89	Pos.	..	2	0	..	..
10	29·649	67·0	58·1	8·9	52·5	14·5	56·0	5·50	WSW	..	..	..	Pos.	..	2	0	..	..
12	29·693	61·2	55·2	6·0	..	..	100·0	0·00	Calm	..	..	..	Pos.	20	..	10	..	..
14	29·714	57·7	55·8	1·9	..	..	51·0		Calm	..	..	..	Pos.	10	..	5	..	..
16	29·741	55·8	55·2	0·6	..	..		11·375	Calm	..	..	..	Pos.	..	2	0	..	..
18	29·765	56·0	55·4	0·6	..	..	68·2		Calm	..	..	..	Pos.	..	2	0	..	..
20	29·779	61·7	58·5	3·2	..	..	67·2	..	W by S	..	..	..	Pos.	..	2	0	..	
22	29·789	66·6	60·0	6·6	56·0	10·6	..	..	W by S	0 to ¼	WSW	2·51	Pos.	..	2	0	..	..
July 15. 0	29·796	68·8	60·4	8·4	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
2	29·787	71·0	61·4	9·6	..	..	..	..	W	..	..	..	Pos.	2	2	0	..	..
4	29·772	73·0	62·0	11·0	54·0	19·0		..	W by S	..	..	..	Pos.	2	2	0	..	..
6	29·774	72·7	62·0	10·7	..	..	76·5	..	WSW	..	..	..	Pos.	2	2	0	..	..
8	29·774	68·4	62·7	5·7	..	..	58·6	5·50	SW	..	..	..	Pos.	10	..	10	..	5. 0
10	29·783	62·4	59·4	3·0	57·0	5·4	96·2	0·00	SSW	..	..	..	Pos.	2	2	0	..	..
12	29·757	58·5	57·2	1·3	..	..	..		Calm	..	WSW	2·00	Pos.	2	2	0	..	..
14	29·733	60·5	59·7	0·8	..	..		11·375	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·695	60·0	59·4	0·6	59·0	1·0	68·5	..	SW	..	..	..	..	0	0	0	..	..
18	29·662	62·5	60·0	2·5	..	..	67·0	..	SSW	..	..	..	..	0	0	0	..	..
20	29·645	63·0	60·2	2·8	..	..	..	..	SW	0 to 1	..	..	Pos.	2	2	0	..	..
22	29·621	66·5	62·7	3·8	58·0	8·5	..	..	SW	0 to ½	SW	1·25	Pos.	2	2	0	..	..
July 16. 0	29·616	68·0	62·8	5·2	..	..	..	..	SSW	½ to 1	..	..	..	..	..	..	..	..
2	29·549	67·9	63·4	4·5	..	..	..	..	SSW	½ to 1	..	..	..	..	..	..	..	..
4	29·506	66·8	61·7	5·1	56·0	10·8	71·8	..	SSW	½ to 1	..	..	..	..	..	..	..	..
6	29·435	64·0	59·9	4·1	..	..	56·6		SSW	..	..	..	Pos.	12	..	8	10	4. 0
8	29·383	60·3	59·0	1·3	..	..		5·50	SSW	..	..	..	Neg.	2	2	0	..	..
10	29·360	59·2	57·7	1·5	56·0	3·2	87·0		SSW	..	..	..	Pos.	..	..	5	..	..
12	29·326	57·9	56·6	1·3	..	..	52·3	0·00	SSW	..	..	..	Pos.	2	2	0	..	..
14	29·263	58·2	57·1	1·1	..	..			SSW	..	..	..	Pos.	2	2	0	..	..
16	29·256	58·3	56·2	2·1	55·3	3·0	68·5	11·390	SW	½ to 1	SW	3·78	Pos.	2	2	0	..	..
18	29·266	56·9	55·2	1·7	..	..	67·0	..	SW	¾ steady	..	..	Pos.	2	2	0	..	..
20	29·286	61·5	57·5	4·0	..	..	..	..	SW	½ to 1	..	..	Pos.	2	2	0	..	..
22	29·288	67·2	60·4	6·8	52·5	14·7	..	..	SW	¾ steady	WSW	1·97	Pos.	12	..	8	10	4. 0
July 17. 0	29·287	68·2	61·4	6·8	..	..	..	..	WSW	..	..	..	Pos.	18	..	12	15	3. 0
2	29·301	67·5	57·9	9·6	..	..	..	..	WSW	¾ to 1	..	..	Pos.	15	..	10	12	5. 0
4	29·316	68·2	55·7	12·5	47·5	20·7	..	..	W by S	¾ to 3	..	..	Pos.	20	..	12	15	7. 0
6	29·330	67·0	57·1	9·9	..	..	73·1	..	W by S	1½ to 4½	..	..	..	0	0	0	..	..
8	29·344	61·5	55·2	6·3	..	..	54·6		WSW	¼ steady	..	..	..	0	0	0	..	..
10	29·372	58·5	53·2	5·3	48·8	9·7		5·54	WSW	½ to 1	..	..	..	0	0	0	..	..
12	29·381	54·7	51·7	3·0	..	..	94·0	0·06	WSW	¼ to ½	..	..	Pos.	2	2	0	..	..
14	29·376	54·0	51·1	2·9	..	..	49·0		WSW	..	WSW	3·20	Pos.	2	2	0	..	..
16	29·342	54·9	52·0	2·9	49·0	5·9	68·5	11·480	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·314	55·5	54·7	0·8	..	..	66·0	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·269	56·6	56·0	0·6	..	..	..	..	SSW	0 to ½	SW	1·15	Pos.	2	2	0	..	..
22	29·217	60·2	60·0	0·2	59·0	1·2	..	..	SSW	½ to 1½	SSW	1·90	Pos.	2	2	0	..	..

DEW POINT THERMOMETER.

July 14d. 16h. The reading was omitted.

MINIMUM FREE THERMOMETER.

July 14d. 22h. The reading was higher than that of the Dry Thermometer at 16h.
July 15d. 22h. The reading was higher than that of the Dry Thermometer at 12h.
July 17d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

RADIATION MINIMUM THERMOMETER.

July 15d. 22h. The reading could not be taken; the index had not been set at 14d. 22h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
3	..	Cirri in light fragments are scattered over the sky: cirro-stratus in the N. horizon, to a considerable altitude.	T D
2	..	Detached portions of cirri in the horizon, extending from the S.W. to the N. N. E.: a few light clouds in the zenith, but to no numerical extent.	T D
0	..	Cloudless.	G
0	..	,,	
3	..	Cirro-stratus around the horizon, but principally in the N.: a few clouds about the place of the Moon.	
2	Transit	With the exception of some cirri scattered about the zenith and to the N. of it, and a few clouds near the N. horizon, the sky is free from cloud.	
0	..	A few light clouds, but to no numerical extent; otherwise cloudless.	G
10	..	Cirro-stratus and scud, with a few cumuli towards the N. horizon, cover the sky.	L
10	..	Cirro-stratus and scud.	
9	3rd Qr.	Cirro-stratus, scud, and fleecy clouds: a few breaks N. of the zenith.	L
4	..	A loose kind of cumulus is scattered over various parts of the sky: a pale blue sky generally.	G
8	..	Loose cumuli and cumulo-strati nearly cover the sky.	
6	..	The greater part of the northern sky is covered by cirro-stratus; small cumuli and cirro-cumuli are scattered about the southern portion of the sky.	
0	..	Cloudless.	G
0	..	,,	L
10	..	Cirro-stratus.	
10	..	,, a very light rain has been falling; it lasted but a short time.	
10	..	,, the wind in gusts to $\frac{3}{4}$.	
10	Transit	Cirro-stratus and scud: the wind in gusts to 1.	L
10	..	,, a few drops of thin rain have been falling since the last observation.	T D
10	..	Cirro-stratus and scud: the wind in gusts to 1.	
10	..	,, the Sun gleams faintly through the clouds at intervals.	T D
10	..	,, the wind in gusts to $\frac{3}{4}$.	L
10	..	,, the wind in gusts to 1.	
10	..	,, rain falling slightly: the wind in gusts to $\frac{1}{2}$.	L
10	..	A slight rain has fallen occasionally since the last observation: the wind in gusts to 1+.	G
10	..	Cirro-stratus and scud: some stars are occasionally visible through breaks in the clouds.	T D
10	..	,, a thin rain falling.	
7	..	,, the sky is clear S. E. of the zenith, the Moon being visible through the breaks.	
9	..	Cirro-stratus, scud, and fleecy clouds: small breaks in the zenith, a few patches of blue sky being visible.	
8	Transit	Cumuli, cumulo-strati, scud, and fleecy clouds in every direction.	T D
9	..	Cumuli; cirro-strati, and large masses of scud: the wind in occasional gusts to $\frac{1}{2}$.	L
10	..	Cirro-strati, cumuli, fleecy clouds, and scud.	
10	..	,,	L
5	..	Cumuli, cumulo-strati, and scud.	T D
6	..	,,	
8	..	Cirro-stratus, scud, and fleecy clouds: a large portion of blue sky is exhibited S.W. of the zenith.	
5	..	Cirro-stratus in the S. horizon: detached portions of cirri and thin clouds are scattered over the remainder of the sky.	T D
0	..	Cloudless.	G
8	..	Cirro-stratus covers every portion of the sky except the N., where a few stars are visible: the clouds came up at 12h. 10m, and since that time it has been alternately clear and cloudy.	
10	..	Cirro-stratus: a few drops of rain are falling.	
10	..	Overcast: a surging wind: gusts of wind occasionally to $1\frac{1}{2}$ and to 2.	
10	Transit.	,, rain falling: the wind is in gusts to 1 and to $1\frac{1}{2}$.	G
10	..	,, rain falling slightly: the wind is in gusts to 1 and $1\frac{1}{2}$.	L

OSLER'S ANEMOMETER.

July 14d. 20h. The direction-pencil was found broken, and had been so from 10h; but the air was known to be in a calm state between 10h and 19h.

MAXIMUM THERMOMETER USED IN DETERMINING THE TEMPERATURE OF THE WATER OF THE THAMES.

July 15d. 22h. Previously to this observation the instrument had been returned after repair.

ELECTRICAL APPARATUS.

July 16d. 0h. The conducting wire was broken, and it was repaired by 5h.

Day and Hour Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 18. 0	29·187	69·0	64·7	4·3	..	..	..	..	SSW	1 to 4	..	..	Pos.	2	2	0	..	..
2	29·182	72·3	64·8	7·5	..	..	..	..	SW	2½ to 9	..	..	Pos.	2	2	0	..	..
4	29·218	67·8	59·2	8·6	54·0	13·8	..	..	SW	1 to 5	..	..	..	..	..	..	..	..
6	29·242	66·5	59·6	6·9	..	..	..	..	WSW	2 to 5	..	..	..	..	..	..	..	..
8	29·296	61·6	56·7	4·9	..	..	72·1 / 50·6 / 5·65	..	WSW	½ to 1	..	..	Pos.	10	..	10	..	..
10	29·325	57·5	54·7	2·8	52·0	5·5	89·0 / 52·0 / 0·00	11·670	SW	½ to 1½	..	..	Pos.	2	2	0	..	..
12	29·318	58·0	55·2	2·8	..	..	68·5 / 65·5	..	SW	..	..	..	Pos.	2	2	0	..	..
14	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SW	½ to 2	..	..	..	..	..	..	..	..
22	29·469	66·7	60·2	6·5	..	..	..	..	WSW	½ to 2½	SW	6·20	Pos.	2	2	0	..	..
July 19. 0	29·523	66·0	59·4	6·6	..	..	..	..	SW	½ to 2	..	..	Pos.	..	..	5	..	..
2	..	..	..	..	..	..	..	..	SSW	¼ to 3½	..	..	..	..	..	..	..	..
4	29·633	70·8	61·1	9·7	..	..	..	..	SSW	½ to 2½	..	..	Pos.	..	..	10	..	..
6	..	..	..	..	..	..	73·3 / 57·0 / 5·65	..	SSW	½ to 1½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	..	..	S by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	91·5 / 46·8 / 0·00	..	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
14	29·681	55·7	54·9	0·8	..	..	..	11·670	Calm	..	..	..	..	0	0	0	..	..
16	29·684	56·0	55·2	0·8	54·0	2·0	68·0 / 65·5	..	Calm	..	..	..	..	0	0	0	..	..
18	29·699	56·6	55·9	0·7	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·719	59·2	57·2	2·0	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·758	62·5	58·6	3·9	55·0	7·5	..	..	Calm	..	SW	4·23	Pos.	2	2	0	..	..
July 20. 0	29·794	67·6	59·4	8·2	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
2	29·804	72·8	61·7	1·1	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
4	29·826	71·6	62·0	9·6	..	..	..	..	SW	..	..	..	Pos.	15	..	10	12	4. 0
6	29·840	71·0	61·2	9·8	..	..	..	..	SW	½ to 1	..	..	..	..	..	..	..	..
8	29·874	63·7	58·0	5·7	..	..	..	5·65	SW	..	..	..	Pos.	18	..	12	15	5. 0
10	29·884	58·4	54·8	3·6	..	..	99·5	0·00	SSW	..	..	.	Pos.	25	..	18	20	4. 0
12	29·884	55·7	54·2	1·5	..	..	50·0	11·670	SSW	..	..	..	..	0	0	0	..	..
14	29·867	55·5	54·7	0·8	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
16	29·839	56·3	55·4	0·9	..	..	68·0	..	SSW	..	..	..	..	0	0	0	..	..
18	29·816	57·5	56·6	0·9	..	..	65·8	..	SSW	..	..	..	..	0	0	0	..	..
20	29·801	62·2	59·7	2·5	..	..	..	..	SSW	..	..	..	Pos.	35	30	12	15	10. 0
22	29·786	68·0	62·2	5·8	..	..	..	..	SW	1 to 2	SW	3·75	Pos.	2	2	0	..	..
July 21. 0	29·771	66·0	60·2	5·8	..	..	..	..	SW	½ to 3½	..	..	Pos.	2	2	0	..	..
2	29·760	67·5	61·2	6·3	..	..	..	..	SW	¼ to 3½	..	..	Pos.	2	2	0	..	..
4	29·745	69·0	61·0	8·0	..	..	..	..	SW	½ to 3	..	..	Pos.	37	30	15	20	11. 0
6	29·719	66·5	59·8	6·7	..	..	..	..	SW	¼ to 2	..	..	Pos.	2	2	0	..	..
8	29·711	63·6	59·7	3·9	..	..	..	..	SW	0 to ½	..	..	Pos.	2	2	0	..	..

MINIMUM FREE THERMOMETER.

July 19d. 22h. The reading was higher than those of the Dry Thermometer at 14h, 16h, and 18h.

POSITION OF THE THERMOMETERS.

July 19d. 22h. After this time the several thermometers carried by the revolving-frame, which to this time was planted in the N.E. re-entering angle of the Magnetic Observatory, were removed, and placed in temporary situations about the Observatory: the readings of the Maximum and Minimum Thermometers were not recorded on July 20d, 21d, and 22d at 22h, in consequence of their positions being considered unsatisfactory.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
9	..	Cirro-stratus and large masses of white scud in every direction: a few breaks about the zenith, and occasionally near the Sun's place: the wind is blowing in gusts to 2.	L
5	..	Cirro-stratus and large masses of scud passing rapidly over from the W.: the wind in gusts to $2\frac{1}{2}$ and 3.	L
10	..	A gale of wind; frequent gusts to 3: large masses of scud passing over.	G
10	..	The gale continues, but the lulls are of more frequent occurrence, and of longer duration: there are gusts of wind frequently to $2\frac{1}{2}$, and occasionally to 3.	
1	..	The appearance of the sky has been very variable, it having been at times free from cloud, and at other times partially covered by cirro-cumuli; at present, with the exception of a few small cumuli in the N. W., it is cloudless.	
7	..	The wind has abated since 8^h, and the sky has been principally cloudless since that time: at present the greater part of the E. hemisphere is free from cloud, and the whole of the W. is covered by it: at times, since 8^h, the sky to the N. has been beautifully mottled with coloured cirro-cumuli.	G
10	..	Overcast: cirro-stratus: a few drops of rain fell at about $11^h.\ 20^m$.	L
..	..		
..	..		
..	..		
..	..		
7	Transit	The wind has been blowing strongly all the morning, and the appearance of the sky has been continually changing: at present it is clear in the S., but cloudy elsewhere.	G
10	..	The sky is covered by massive cumulo-strati.	
	..		
4	..	Cirri, cumuli, and scud, the latter moving quickly from the W.: the sky has been alternately clear and cloudy since	
	..	the last observation.	
	..		
	..		
	..		
	..		
9	..	Cirro-stratus and scud: a break towards the N. horizon.	
10	..	Cirro-stratus, fleecy clouds, and scud.	
10	Greatest declination N.	,,	G
10	..	Cirro-stratus and scud.	L
10	Transit	,,	T D
8	..	Cumuli, cirri, fleecy clouds, and scud: a few patches of blue sky in various directions.	
8	..	Cumuli in large masses in the E. S. E.; cirro-stratus and light scud are scattered over the remainder of the sky: breaks of small extent in various directions.	T D
8	..	Cumuli, cirro-strati, fleecy clouds, and scud: small breaks in various directions.	L
4	..	Cirro-stratus, fleecy clouds, and scud, principally N. of the zenith.	
8	..	Cirro-stratus and fleecy clouds in all directions.	
3	..	Cirro-stratus towards the N. horizon: fleecy clouds and scud are scattered in various directions.	L
2	..	Cirro-stratus in the N. horizon; cloudless elsewhere.	T D
6	..	Cirro-stratus around the horizon to a considerable altitude, and detached portions in the zenith.	
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,, a thin rain has just commenced falling.	T D
10	..	Cirro-stratus, fleecy clouds, and scud: the wind in gusts to $\frac{1}{2}$.	L
10	Transit	Cirro-stratus, fleecy clouds, and scud: the wind in gusts to $\frac{1}{2}$ and $\frac{3}{4}$.	L
10	..	,, a few small breaks in the zenith: the wind in gusts to $\frac{3}{4}$ and 1.	C T
8	..	Cumuli, cumulo-strati, fleecy clouds, and scud: the wind in occasional gusts to 1.	T D
10	..	Cirro-stratus and scud: the wind in gusts to $1\frac{1}{2}$.	
10	..	,,	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 21. 10	29·725	62·0	58·4	3·6	56·0	6·0	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
12	29·724	59·0	55·7	3·3	..	..	..	5·65	WSW	0 to 1	..	..	Pos.	10	..	10	..	..
14	29·709	58·5	55·2	3·3	..	..	89·5	0·00	WSW	0 to 1	..	..	Pos.	..	..	10	..	..
16	29·715	56·5	54·4	2·1	53·0	3·5	52·2		SW	..	..	..	Pos.	..	..	10	..	..
18	29·735	58·4	55·4	3·0	..	..		11·690	WSW	0 to ¼	..	..	Pos.	..	..	12	..	..
20	29·753	62·5	56·4	6·1	..	..	66·0		W	0 to 2	..	..	Pos.	..	..	10	..	..
22	29·773	66·2	56·2	10·0	50·0	16·2	65·2	..	W by S	0 to ½	SW	7·25	Pos.	12	..	8	10	..
July 22. 0	29·778	70·2	57·5	12·7	..	..	..	..	WSW	⅓ to 1	..	..	Pos.	2	2	0	..	..
2	29·786	72·0	58·7	13·3	..	..	..	..	WSW	½ to 1½	..	..	Pos.	15	..	10	12	6. 0
4	29·790	71·8	60·0	11·8	49·0	22·8	..	..	W by S	½ to 1	..	..	Pos.	40	..	35	..	..
6	29·778	69·5	58·2	11·3	..	..	..	..	WSW	..	..	..	Pos.	40	..	30	..	..
8	29·800	65·0	56·5	8·5	..	..	..	5·65	WSW	..	SW	1·70	Pos.	30	..	20	25	7. 0
10	29·813	61·1	55·7	5·4	51·0	10·1	51·5	0·00	Calm	..	..	..	Pos.	40	..	40	50	15. 0
12	29·823	59·0	55·8	3·2	..	..		11·690	Calm	..	..	..	Pos.	40	..	25	30	..
14	29·797	57·2	54·8	2·4	..	..	66·0	..	Calm	..	..	..	Pos.	27	..	10	17	5. 0
16	29·781	55·6	54·4	1·2	53·0	2·6	65·2	..	Calm	..	..	..	Pos.	18	..	10	15	7. 0
18	29·787	57·5	55·8	1·7	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·779	62·0	58·0	4·0	..	..	..	..	SSW	..	..	..	Pos.	2	2	..	..	..
22	29·764	65·5	59·4	6·1	55·0	10·5	..	..	SSW	0 to ½	W	2·30	Pos.	..	..	10	..	..
July 23. 0	29·742	69·0	60·9	8·1	..	..	..	..	SSW	0 to ½	..	..	Pos.	20	..	10	15	6. 0
2	29·727	76·5	62·7	13·8	..	..	..	..	SSW	½ to 2	..	..	Pos.	27	..	12	15	11. 0
4	29·703	76·0	63·4	12·6	57·0	19·0	78·3	..	SSW	½ to 2½	..	..	Pos.	2	2	..	..	..
6	29·687	72·3	60·9	11·4	..	..	59·1	5·65	SSW	½ to 3	..	..	Pos.	2	2	..	..	..
8	29·693	68·4	60·0	8·4	..	..			SSW	..	..	..	Pos.	2	2	..	..	..
10	29·705	63·5	59·0	4·5	55·0	8·5	99·5	0·00	SSW	..	..	..	Pos.	30	..	10	..	..
12	29·714	59·8	57·2	2·6	..	..	53·5		Calm	..	..	..	..	0	0	0	..	..
14	29·693	59·5	58·2	1·3	..	..		11·690	Calm	..	..	..	..	0	0	0	..	..
16	29·675	58·8	58·2	0·6	..	..	66·5		Calm	..	..	..	..	0	0	0	..	..
18	29·672	60·0	59·0	1·0	..	..	65·2	..	Calm	..	..	..	..	0	0	0	..	..
20	29·672	64·5	62·2	2·3	..	..	..	..	Calm	..	..	..	Pos.	20	..	12	15	12. 0
22	29·668	70·0	63·8	6·2	60·0	10·0	..	..	SSW	..	SSW	4·70	Pos.	40	..	20	30	4. 0
July 24. 0	29·663	68·5	63·2	5·3	..	..	..	..	W	..	..	..	..	0	0	0	..	..
2	29·682	60·3	59·6	0·7	..	..	..	..	NW	..	..	..	Neg.	..	..	..	..	..
4	29·701	60·0	59·0	1·0	58·0	2·0	74·1	..	W by S	..	..	..	Neg.	40	..	25	35	0. 25
6	29·716	58·2	57·9	0·3	..	..	52·0	5·98	SSW	..	..	..	Neg.	35	..	25	35	0. 28
8	29·731	56·3	55·4	0·9	..	..			Calm	..	..	..	Pos.	25	..	15	20	4. 0
10	29·756	55·8	55·2	0·6	55·0	0·8	94·0	0·40	Calm	..	..	..	Pos.	40	..	20	30	6. 0
12	29·757	56·2	55·2	1·0	..	..	46·5		Calm	..	..	..	Pos.	40	..	20	30	7. 0
14	29·775	55·8	55·0	0·8	..	..		12·120	Calm	..	..	..	Pos.	1	2	0	..	..
16	29·786	52·8	52·7	0·1	53·0	−0·2	66·5		Calm	..	..	..	Pos.	20	..	12	15	7. 0
18	29·813	52·5	52·1	0·4	..	..	65·5	..	Calm	..	..	..	..	0	0	0	..	..
20	29·841	58·2	54·7	3·5	..	..	..	..	Calm	..	..	..	Pos.	25	..	12	17	4. 0
22	29·856	64·2	57·9	6·3	50·0	14·2	..	..	Calm	..	WSW	2·45	Pos.	40	..	35	40	7. 0

MINIMUM FREE THERMOMETER.
July 23d. 22h. The reading was lower than that of the Dry Thermometer at 16h.

MAXIMUM RADIATION THERMOMETER.
July 22d. 22h. The reading was omitted by inadvertence.

DEW POINT THERMOMETER.
July 23d. 16h. The observation was omitted through inadvertence.
July 24d. 16h. The reading was higher than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud.	T D
9	..	A few stars have at times been seen since 10^h, but generally the sky has been covered with a thin dark cirro-stratus.	
10	..	Cirro-stratus of a very dense and black character. [only.	
10	..	Cirro-stratus: at $14^h.\ 10^m$ the sky was cloudless and the stars shone brilliantly, but it continued so for a short time	
10	..	Overcast: the clouds are thinner in some places than in others.	
2	..	A few fleecy clouds are scattered over the sky.	T D
5	..	Cumuli and loose scud are scattered in every direction.	L
4	Transit	Cumuli and loose scud are scattered in every direction.	L
8	..	Cirro-stratus, fleecy clouds, and scud: breaks in every direction.	C T
9	..	A small portion of the southern sky is free from cloud; the remainder was covered with loose woolly cumuli, cirro-strati, and scud.	G
6	..	A fine kind of cirro-cumuli N.W. of the zenith: near the horizon all around flat cumulus, partaking of the modifications of the stratus and cumulus; a species of loose cumuli are scattered over every other part of the sky: a deep blue sky between the clouds.	G
6	..	Cirro-stratus at a considerable elevation, extending from the S. S.W. horizon to the N. N. E.; detached portions of imperfectly-formed cumuli, with lines of cirri and fleecy clouds, are scattered over the remainder of the sky.	T D
10	..	The sky is very nearly covered with a mottled cloud: a solitary star is visible near the zenith.	G
9	..	A few stars are dimly visible near the zenith; otherwise overcast.	G
9	..	Cirro-stratus, broken in several directions: the stars are visible in the zenith and in the S. S. E.	T D
10	..	Cirro-stratus and scud.	L
10	..	,,	L
10	New	A thin cirro-stratus covers the sky, through which the Sun occasionally shines.	C T
10	..	There is no portion of the sky free from cloud, although in places it is so thin that blue sky is visible: there have been occasional gleams of sunshine.	G
7	Transit	Cirro-stratus in the S. horizon; a loose kind of cumuli with fleecy clouds are scattered over the remainder of the sky.	T D
0	..	A few lines of cirri in the N. but to no numerical extent; otherwise cloudless.	T D
0	..	Cloudless.	L
0	..	,,	T D
0	..	,,	C T
0	..	A few small clouds near the zenith; with that exception the sky is cloudless.	G
0	..	Cloudless.	L
2	..	A bank of cirro-stratus in the N., a few light clouds in other directions.	
6	..	Cirro-stratus and fleecy clouds: small breaks in every direction.	
7	..	Fleecy clouds: small breaks in every direction.	
8	..	Cirro-stratus and fleecy clouds: clear about the zenith.	L
10	..	Cumuli in large masses extending along the S. horizon, with a few small breaks; the remaining portion of the sky is covered with cirro-stratus and scud.	T D
10	..	Cirro-stratus and scud.	T D
10	Transit	Cirro-stratus: rain commenced falling at $1^h.\ 10^m$, and still continues.	C T
10	..	,, rain falling.	L
10	..	,, ,, it has not ceased since the last observation.	
10	..	Cirro-stratus and scud: the rain ceased falling soon after the last observation.	
10	..	,,	L
10	..	Overcast.	T D
10	..	,,	
0	..	A line of cirrus extending along the N. horizon, of small extent; otherwise the sky is cloudless.	
0	..	Cloudless.	
0	Apogee	,,	T D
2	..	Detached cumuli and light clouds in various directions.	L

POSITION OF THE THERMOMETERS.

July $21^d.\ 22^h$. The several thermometers were attached to the outside of the vertical board of a new revolving-frame, fixed to a post planted at the distance of $23\frac{1}{2}$ feet S. of the S. W. angle of the Magnetic Observatory.

HENLEY'S ELECTROMETER.

July $24^d.\ 2^h$. The reading was 6°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 25. 0	29·865	68·8	58·0	10·8	..	..	..	..	WSW	..	..	..	Pos.	25	..	15	20	5. 0
2	29·859	72·7	61·0	11·7	..	..	..	..	WSW	..	..	..	Pos.	20	..	12	15	4. 0
4	29·877	61·7	54·9	6·8	47·5	14·2	75·3	..	W by S	½ to 2½	..	..	Pos.	35	..	30	40	4. 0
6	29·877	63·4	57·1	6·3	..	..	49·1	..	Calm	..	..	..	Pos.	30	..	35	40	6. 0
8	29·899	62·4	59·2	3·2	..	..		5·98	Calm	..	..	..	Pos.	40	..	25	30	4. 0
10	29·923	55·5	52·9	2·6	51·0	4·5	99·0		Calm	..	..	..	Pos.	30	..	20	25	6. 0
12	29·937	54·6	51·7	2·9	..	..	43·0	0·00	Calm	..	..	..	Pos.	10	..	20	10	..
14	..	..	..	..	..	..			Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	66·5	12·120	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	65·5	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..		..	WSW	..	..	..	..	..	..	..	..	..
22	30·027	64·2	56·7	7·5	..	..	..	..	W by N	..	WSW	2·47	Pos.	20	..	12	15	7. 0
							..	..										
July 26. 0	..	..	..	..	..	..			W by S	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	76·7	..	WSW	..	WSW	0·68	..	..	..	..	..	..
8	..	..	..	..	..	..	57·0	..	SW	..	..	..	..	..	..	..	..	..
10	30·068	61·5	58·2	3·3	..	..		5·98	Calm	..	..	..	Pos.	12	..	8	10	5. 0
12	30·074	57·6	54·4	3·2	..	..	102·8		Calm	..	..	..	Pos.	..	..	7	..	..
14	30·072	57·8	54·6	3·2	..	..	52·5	0·00	Calm	..	..	..	Pos.	..	..	5	..	..
16	30·052	57·6	55·7	1·9	54·5	3·1		12·125	SSW	..	..	..	Pos.	..	..	5	..	..
							66·5	..										
							65·8											
18	30·043	58·8	57·4	1·4	..	..		..	SW	..	..	..	..	0	0	0	..	..
20	30·040	59·7	59·0	0·7	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
22	30·046	63·8	62·7	1·1	62·0	1·8	..	..	SW	..	SSW	2·50	Pos.	2	2	0	..	..
July 27. 0	30·041	72·8	66·4	6·4	..	..	..	..	SW	0 to ½	..	..	Pos.	2	2	0	..	..
2	30·038	75·4	67·2	8·2	..	..	..	..	WSW	¼ to 1½	..	..	Pos.	..	..	4	..	..
4	30·040	73·0	67·0	6·0	61·0	12·0	75·3	..	SW	0 to ¼	..	..	Pos.	2	2	0	..	..
6	30·044	71·3	65·0	6·3	..	..	63·8		SW	..	..	..	Pos.	..	..	5	..	..
8	30·056	67·0	63·6	3·4	..	..		5·98	SSW	..	..	..	Pos.	2	2	0	..	..
10	30·074	64·7	62·4	2·3	..	..	91·6		SW	..	..	..	Pos.	2	2	0	..	..
12	30·073	64·4	63·0	1·4	..	..	62·5	0·00	Calm	..	..	..	..	0	0	0	..	..
14	30·075	64·0	62·7	1·3	..	..			Calm	..	..	..	..	0	0	0	..	..
16	30·073	63·7	62·2	1·5	61·0	2·7	66·5	12·130	Calm	..	..	..	..	0	0	0	..	..
18	30·081	64·0	62·2	1·8	..	..	66·0	..	Calm	..	..	..	..	0	0	0	..	..
20	30·095	67·7	64·5	3·2	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	30·093	71·6	65·8	5·8	63·3	8·3	..	..	Calm	..	SW	2·45	Pos.	2	2	0	..	..
July 28. 0	30·083	75·0	66·4	8·6	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
2	30·066	77·2	66·2	11·0	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
4	30·041	78·2	67·4	10·8	60·0	18·2	85·5	..	Calm	..	..	..	Pos.	30	..	15	20	7. 0
6	30·016	77·0	68·5	8·5	..	..	56·1		Calm	..	..	..	Pos.	15	..	8	10	7. 0
8	30·007	71·7	66·5	5·2	..	..		5·98	Calm	..	..	..	Pos.	16	..	10	12	5. 0
10	30·012	65·0	62·0	3·0	56·0	9·0	109·0		Calm	..	..	..	Pos.	20	..	12	15	7. 0
12	30·005	63·4	61·2	2·2	..	..	50·0	0·00	Calm	..	..	..	Pos.	2	2	0	..	..
14	29·984	60·0	59·0	1·0	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
16	29·975	58·2	58·1	0·1	57·4	0·8	67·5	12·130	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·976	56·6	57·2	–0·6	..	..	66·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·970	67·4	63·7	3·7	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·965	73·5	66·2	7·3	58·0	15·5	..	..	Calm	..	SSE	0·21	Pos.	2	2	0	..	..

DRY THERMOMETER.

July 25d. 4h. The reading was 11°·0 lower than at 2h.
July 28d. 18h. The reading was lower than that of the Wet Thermometer.
July 28d. 20h. The reading was 10°·8 higher than at 18h.

MINIMUM FREE THERMOMETER.

July 27d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
3	..	Detached cumuli, scud, and light cloud are floating about in various directions.	L
4	Transit	Cumulo-strati towards the N. horizon: detached cumuli and loose scud in various directions.	L
8	..	Cirro-stratus and scud: some cumuli in the S. W. horizon. [to the N. and S. W.	C T
2	..	Detached cumuli in various directions; cirri in and near the zenith; the former appears more dense in the horizon	C T
5	..	Cirro-stratus towards the N.; reticulated cirri in and about the zenith; light clouds in various directions.	L
1	..	Cirro-stratus towards the N. horizon; a few light clouds in other directions.	L
1	..	There are a few detached dark clouds a little above the horizon in all directions; the remainder of the sky is cloudless: frequent flashes of lightning have been seen in the E., S.S.E., and S.W. parts of the horizon.	G
..	..		
..	..		
..	..		
..	..		
4	..	Detached cumuli, light scud, and fleecy clouds in all directions.	L
..	..		
..	Transit		
..	..		
..	..		
..	..		
10	..	A thin cirro-stratus covers the sky.	L
10	..	,, [the night much darker.	G
10	..	Cirro-stratus: within the last half-hour the wind has increased in strength, the clouds have been more dense, and	
10	..	Cirro-stratus and scud: the appearance of the sky has frequently changed since 14^h: at $14^h.15^m$ the sky was covered with a thin cirro-stratus, but many stars were dimly seen: at $14^h.25^m$ the sky had the same appearance as at 14^h.	
10	..	Cirro-stratus and scud.	
10	..	A very thin rain is falling.	G
10	..	Cirro-stratus and scud: a very thin rain has been falling since the last observation.	L
9	..	Cumuli, fleecy clouds, and scud cover most of the sky: a break a little S. of the zenith.	L
10	..	Cirro-stratus and scud.	C T
10	Transit	,,	L
9	In Equator	The sky is nearly covered with a white cloud of no particular modification.	
9	..	,, ,,	
10	..	Cirro-stratus.	G
10	..	,,	L
10	..	,,	
10	..	,,	
10	..	,,	
10	..	,,	L
10	..	Cirro-stratus and scud.	T D
10	..	Cirro-stratus and scud: the clouds have been frequently broken since the last observation.	
9	..	Cirro-stratus, cumulo-stratus, scud, and fleecy clouds: several large breaks are shewn S. E. of the zenith.	T D
8	Transit	Detached cumuli, light scud, and fleecy clouds: small breaks mostly S. of the zenith.	L
3	..	Cirro-stratus towards the N. horizon: light and fleecy clouds in various directions.	
3	..	,, ,,	L
4	..	Cirro-stratus and scud: light and fleecy clouds in various directions.	T D
10	..	,,	
4	..	Cirro-stratus around the horizon; the other portions of the sky are cloudless.	
2	..	A few light cirri in various directions.	
1	..	,,	
0	..	A few light clouds to no numerical extent prevail.	
4	..	A fine warm morning: there is much blue sky: white cumuli are scattered about in all directions.	T D

DEW POINT THERMOMETER.
July $27^d.10^h$. The reading was inadvertently omitted.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
July 29. 0	29·938	78·8	68·2	10·6	..	..	..	..	E	..	..	..	..	0	0	0	..	..
2	29·919	80·8	70·8	10·0	..	..	..	..	E	..	..	..	..	0	0	0	..	..
4	29·896	82·5	70·2	12·3	63·5	19·0	..	..	E	..	..	..	..	0	0	0	..	..
6	29·871	76·5	67·2	9·3	..	..	88·3	..	E	..	..	..	..	0	0	0	..	..
8	29·866	70·0	65·2	4·8	..	..	58·6	5·98	E	..	..	..	..	0	0	0	..	..
10	29·871	66·0	64·8	1·2	63·0	3·0	112·0	0·00	E	..	..	..	..	0	0	0	..	..
12	29·877	62·7	62·9	–0·2	..	..	56·5	12·130	Calm	..	..	..	Pos.	2	2	0	..	..
14	29·853	63·2	63·0	0·2	..	..	69·0	..	E by N	..	..	..	Pos.	2	2	0	..	..
16	29·835	62·5	62·3	0·2	62·0	0·5	67·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·834	62·6	62·8	–0·2	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·842	70·0	67·2	2·8	..	..	..	..	ENE	..	..	..	..	0	0	0	..	..
22	29·849	82·7	68·9	13·8	60·0	22·7	..	..	ENE	..	E	1·34	..	0	0	0	..	..
July 30. 0	29·844	87·0	70·6	16·4	..	..	..	..	ENE	0 to ½	..	..	..	0	0	0	..	..
2	29·836	85·5	69·7	15·8	..	..	..	..	E by S	0 to ½	..	..	Pos.	2	2	0	..	..
4	29·828	83·0	66·7	16·3	56·3	26·7	89·1	..	ESE	0 to ¾	..	..	Pos.	..	..	10	..	..
6	29·831	78·7	67·4	11·3	..	..	62·8	5·98	E by S	..	..	..	Pos.	..	..	10	..	..
8	29·839	74·4	66·7	7·7	..	..	110·0	0·00	E by N	..	..	..	Pos.	..	..	10	..	..
10	29·866	68·8	64·0	4·8	60·0	8·8	57·5	12·130	ENE	..	..	..	Pos.	..	..	10	..	..
12	29·859	65·3	62·7	2·6	..	..	69·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
14	29·858	64·5	63·7	0·8	..	..	68·2	..	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·843	64·0	63·2	0·8	62·0	2·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·847	64·2	63·2	1·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·848	70·8	66·9	3·9	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	29·834	81·0	72·7	8·3	66·5	14·5	..	..	NE	..	E	2·40	..	0	0	0	..	..
July 31. 0	29·811	87·6	73·2	14·4	..	..	..	..	ENE	½ to 1	..	..	..	0	0	0	..	..
2	29·796	87·8	73·4	14·4	..	..	..	..	ENE	½ to 1½	..	..	Pos.	2	2	0	..	..
4	29·780	81·3	70·5	10·8	63·0	18·3	91·3	..	ESE	..	..	..	Pos.	2	2	0	..	..
6	29·752	79·2	70·2	9·0	..	..	64·3	..	E by N	0 to ½	..	..	Pos.	2	2	0	..	..
8	29·755	74·0	67·7	6·3	..	..	112·0	5·98	ENE	..	..	..	Pos.	2	2	0	..	..
10	29·751	69·2	66·7	2·5	64·0	5·2	59·2	0·00	ENE	..	..	..	Pos.	2	2	0	..	..
12	29·733	66·2	64·7	1·5	..	..	71·0	12·130	ENE	..	..	..	..	0	0	0	..	..
14	29·716	65·2	64·2	1·0	..	..	69·0	..	E by N	..	..	..	..	0	0	0	..	..
16	29·687	64·2	63·4	0·8	63·4	0·8	..	..	NE	..	..	..	..	0	0	0	..	..
18	29·676	64·4	63·8	0·6	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
20	29·663	65·5	64·5	1·0	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
22	29·638	76·0	70·2	5·8	65·0	11·0	..	..	NE	..	ENE	0·20	..	0	0	0	..	..
Aug 1. 0	29·606	88·4	74·6	13·8	..	..	92·0	..	E	0 to 1½	..	..	..	0	0	0	..	..
2	29·560	88·2	71·9	16·3	..	..	63·4	..	E	1 to 3½	..	..	..	0	0	0	..	..
4	29·541	77·4	72·0	5·4	69·0	8·4	111·0	6·90	E	½ to 2½	..	..	Neg.	..	..	..	..	..
6	29·553	67·5	66·9	0·6	..	..	59·0	~~0·03~~	N by E	..	..	..	Neg.	..	..	..	..	..
8	29·576	67·6	67·5	0·1	..	..	71·5	12·935	E by S	..	..	..	Pos.	2	2	0	..	..
10	29·598	66·4	66·4	0·0	67·0	–0·6	70·2	..	WSW	..	..	..	..	0	0	0	..	..
12	29·582	64·0	64·2	–0·2	..	..	..	..	W by S	..	..	..	..	0	0	0	..	..

DRY THERMOMETER.

July 29d. 12h. The reading was lower than that of the Wet Thermometer.
July 30d. 20h. The reading was 10°·2 higher than at 18h.
July 31d. 20h to August 1d. 6h. The changes were great.
August 1d. 12h. The reading was lower than that of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

July 31d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Cirro-stratus around the horizon to a considerable altitude; light fleecy clouds elsewhere.	C T
7	..	Ill-formed cumuli in the horizon to a considerable altitude: loose scud and fleecy clouds are floating about.	C T
0	..	Cloudless.	T D
0	Transit	A few light cirri in the N., to no numerical extent; otherwise the sky is cloudless.	
2	..	Cirro-stratus in the N. horizon: light cirri are scattered over the zenith; the other portions of the sky are cloudless.	
3	..	Cirro-stratus, extending from the S. S. E. to the N. N. E. horizon, at a low elevation: light clouds are scattered in various directions. (Between 8^h and 9^h there was much lightning in the N. W. G.)	T D
0	..	A fine clear calm night: several small meteors have been seen in different directions: no lightning has been seen.	G
0	..	Lightning in the N. W. has been seen at short intervals, and upwards of thirty meteors have been seen since 12^h.	
1	..	A few clouds in the horizon; otherwise cloudless: a few flashes of lightning have been seen, and some meteors were also seen till daybreak.	
0	..	A rather thick fog, but it is believed that the sky is free from cloud.	
0	..	Cloudless.	G
0	..	,,	L
0	..	A few light clouds, but to no numerical extent.	
0	..	,,	L
1	..	A few light clouds and cirri.	G
0	Transit	Cloudless.	
0	..	,,	
0	..	,,	
0	..	,,	
6	..	Cloudy towards the N. and about the zenith; also towards the S. horizon.	
10	..	Cirro-stratus.	
10	..	,,	
5	..	Cirro-stratus around the horizon: light clouds and scud in various directions.	
3	..	Cirri, light scud, and fleecy clouds in several directions.	G
5	1st Qr.	Detached cumuli, principally in the N. horizon: light cirri and fleecy clouds in various directions.	T D
6	..	Detached cumuli in the N. horizon at a low elevation; the greater part of the remaining portion of the sky is covered with a thin cloud, of the cirro-stratus character: several large breaks of fine blue sky in various directions, principally S. S. E. of the zenith.	C T
8	..	The greater part of the sky is covered with thin cirro-stratus and fleecy clouds.	L
6	Transit	Thin cirro-stratus and fleecy clouds cover the greater portion of the sky: there are small breaks in every direction.	
3	..	Cirro-stratus towards the horizon in the S.: light and fleecy clouds are scattered in various directions.	
2	..	Cirro-stratus about the place of the Moon and towards the S. horizon: light clouds in various directions: some flashes of lightning have been occasionally visible in the W. and S.W.	L
2	..	Cirro-stratus, extending from the S. S. E. horizon to the S. S.W.; the other portion of the sky is cloudless.	T D
10	..	The sky is covered with a uniform cloud of the cirro-stratus character.	
10	..	,,	
10	..	Cirro-stratus and scud.	
10	..	,,	T D
2	..	Fleecy and light clouds around the horizon in narrow lines: a few cirri about the zenith.	L
7	..	A thin cirro-stratus covers a great portion of the sky.	
2	..	A bank of cirro-stratus towards the horizon in the N. and S.: fleecy and light clouds in various directions.	L
10	..	Cumuli, cumulo-strati, and dark scud: thunder has been heard N.W. of the zenith since $3^h.\ 30^m$: rain falling at intervals: a vivid flash of lightning at $4^h.\ 5^m$.	T D
10	..	Cumuli, cumulo-strati, cirro-strati, and scud: rain is descending in torrents, with frequent claps of thunder: the lightning, in faint flashes, is seen at intervals.	
7	Transit	Cumuli, cumulo-strati, cirro-strati, and scud, are scattered over the greater portion of the sky: the storm ceased	
4	..	Cirro-stratus in the N. horizon: haze, through which some of the larger stars are seen. [at $7^h.\ 10^m$.	T D
10	..	A dense fog: frequent flashes of lightning are seen.	G

RAIN.

July $31^d.\ 12^h$. The amount collected during the month of July in the rain-gauge No. 4 was $1^{in.}50$; the reading of the Rev. G. Fisher's rain-gauge was not taken for this month, but the amount for the two months of July and August will be given on August 31.

HENLEY'S ELECTROMETER.

August $1^d.\ 4^h$. The reading was between 30° and 35°.

August $1^d.\ 6^h$. The reading was 10°.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 1. 14	..	..	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..
20	29·575	68·0	65·7	2·3	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
22	29·615	64·3	63·7	0·6	..	..	..	..	SW	..	ENE	0·85	..	..	..	..	..	..
Aug. 2. 0	29·632	65·4	64·2	1·2	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
2	..	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..
4	29·633	75·0	68·2	6·8	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	78·5	..	S by W	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	58·2	..	SSW	..	..	..	..	..	..	..	..	..
10	29·705	61·7	59·6	2·1	..	..		7·09	S by W	..	..	..	..	0	0	0	..	..
12	..	..	..	..	..	..	94·0		S by W	..	..	..	..	..	..	..	..	..
							51·5	0·54										
							71·5	13·495										
14	29·711	58·0	56·8	1·2	..	..	70·0	..	S by W	..	..	..	Pos.	..	..	12	..	..
16	29·709	59·6	58·2	1·4	55·0	4·6		..	S by E	..	..	..	Pos.	..	..	5	..	..
18	29·705	60·0	59·9	0·1	..	..	..	..	ENE	..	..	..	Neg.	40	..	90	..	Recovered instantly.
20	29·695	61·5	61·5	0·0	..	..	..	..	ENE	..	..	..	Neg.	40	..	90	..	..
22	29·669	68·7	66·4	2·3	62·0	6·7	..	..	SSE	..	S	0·65	Pos.	..	..	10	15	..
Aug. 3. 0	29·693	70·6	65·4	5·2	..	..	..	..	SSW	0 to ½	..	..	Pos.	..	..	5	8	..
2	29·726	71·5	64·2	7·3	..	..	..	..	SW	0 to ¼	SSW	0·53	..	0	0	0	..	..
4	29·746	73·5	64·9	8·6	58·0	15·5	..	..	SW	0 to ½	..	..	Pos.	12	..	8	10	4. 0
6	29·772	68·5	61·2	7·3	..	..	77·1	..	Calm	..	..	..	Pos.	..	..	5	..	..
8	29·790	60·3	58·0	2·3	..	..	55·9		Calm	..	..	..	Neg.	..	..	10	..	..
10	29·798	59·2	57·4	1·8	55·0	4·2		7·14	Calm	..	..	..	Pos.	..	..	15	..	..
							93·8	0·03										
12	29·800	58·3	57·2	1·1	..	..	48·5		Calm	..	WSW	0·72	Pos.	10	..	8	..	6. 0
								13·560										
14	29·805	56·0	55·7	0·3	..	..	71·0		Calm	..	..	..	Pos.	15	..	10	..	5. 0
16	29·795	55·3	55·2	0·1	55·0	0·3	70·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·808	56·0	56·5	−0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·820	61·5	60·0	1·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·828	64·8	61·8	3·0	58·5	6·3	..	..	Calm	..	SW	0·65	Pos.	30	..	30	..	..
Aug. 4. 0	29·832	69·2	63·4	5·8	..	..	..	..	S by E	..	..	..	Pos.	20	..	20	..	25. 0
2	29·818	70·4	65·5	4·9	..	..	..	..	S by E	..	..	..	Pos.	10	..	8	..	20. 0
4	29·805	72·8	66·2	6·6	64·0	8·8	..	..	S	..	..	..	Pos.	2	2	0	..	..
6	29·790	71·6	64·2	7·4	..	..	76·0	..	S by W	..	..	..	Pos.	2	2	0	..	..
8	29·801	65·7	61·6	4·1	..	..	59·4		Calm	..	..	..	Pos.	2	2	0	..	..
10	29·818	63·8	61·0	2·8	58·0	5·8		7·70	Calm	..	..	..	Pos.	2	2	0	..	..
12	29·815	59·7	59·7	0·0	..	..	99·5		Calm	..	..	..	Pos.	15	..	10	..	15. 0
							55·0	0·85										
14	29·788	60·5	60·2	0·3	..	..	71·0	14·100	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·790	59·5	59·5	0·0	59·0	0·5	70·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·770	60·2	60·2	0·0	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
20	29·819	61·1	61·0	0·1	..	..	..	..	W by S	..	..	..	Neg.	40	..	..	..	Instantly
22	29·780	61·5	61·4	0·1	62·0	−0·5	..	..	E by S	..	S	0·85	Neg.	..	..	..	..	..

DRY THERMOMETER.

August 3d. 18h. The reading was lower than that of the Wet Thermometer.

MINIMUM FREE THERMOMETER.

August 2d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

August 3d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS	Observer.
..	..		
..	..		
..	..		
7	..	Cirro-stratus, extending from the N. horizon to within 10° of the horizon: cumuli, cirri, and light fleecy clouds are dispersed in various directions.	T D
10	..	Rain falling in torrents, accompanied with flashes of lightning and loud claps of thunder.	
10	..	Rain is still falling, but with less violence: the thunder ceased at $22^h.\ 30^m$.	
..	..		
8	..	Cumuli, cumulo-strati, scud, and fleecy clouds: the clouds are broken N.W. of the zenith.	
..	..		
..	Transit		
2	..	Detached portions of cirro-stratus, extending from the N. N. E. to the W. S.W., at a low elevation: a few light	
..	..	clouds near the zenith and around the Moon.	T D
7	..	The sky between 10^h and 12^h was generally clear: at 12^h thin clouds began to collect, through which stars were dimly seen, and they have continued more or less since that time: at present the greater part of the sky is covered, yet a great many stars are visible: the cloud appears to be chiefly scud.	G
10	..	Overcast: cirro-stratus.	
10	..	,, at $17^h.\ 30^m$ heavy rain began to fall, and a steady rain is falling.	
10	..	There have been frequent showers, and heavy and steady rain is now falling.	G
9	..	Cumuli and cumulo-strati around the horizon: light and fleecy clouds in all directions: a few breaks towards the S.	L
7	..	Cirro-stratus, cumulo-stratus, and large masses of scud in every direction: breaks, mostly about the zenith.	L
7	..	Cirro-stratus, cumulo-stratus, and scud: some large clear breaks, principally N. of the zenith.	T D
4	..	Cumuli and cumulo-strati around the horizon: loose masses of scud in various directions.	L
10	..	Cirro-stratus and scud.	
10	Greatest declination S.	Cirro-stratus: rain falling.	L
9	Transit	There are breaks in the clouds, near the horizon in the N. and S.: the zenith and the parts around it are covered with a dark stratus cloud: the rain continued falling until $9^h.\ 20^m$: a cold damp night.	G
7	..	Thin cirro-stratus, mostly S. of the zenith, through which the Moon is visible: fleecy clouds are scattered in various directions.	L
9	..	Cirro-stratus nearly covers the sky: clear about the zenith.	
9	..	Cirro-stratus, fleecy clouds, and scud: some small breaks in various directions.	
3	..	Cirro-stratus around the horizon: light clouds in various directions.	
9	..	A break towards the N.; cirro-stratus and scud elsewhere.	L
9	..	Cirro-stratus and scud near the horizon: cirro-cumuli near the Sun's place.	H B
9	..	Cirro-stratus and scud nearly cover the sky: an extensive break near the N. horizon.	
10	..	Cirro-stratus and scud: a slight shower since the last observation.	
10	..	Cirro-stratus, fleecy clouds, and scud: a few small breaks, but to no numerical extent.	H B
2	..	Cirro-stratus towards the N. horizon: light and fleecy clouds are scattered in various directions.	L
5	..	Cirro-stratus: light and fleecy clouds are scattered in various directions.	
8	Transit	Cirro-stratus and scud: a break along the N. horizon.	L
5	..	Dense cirro-stratus and scud, extending from the S. E. to the S.W., at a considerable distance above the horizon, and obscuring the Moon: light clouds and haze N. of the zenith.	H B
9	..	Cirro-stratus nearly covers the sky, small breaks frequently occurring between the clouds: a few flashes of lightning have been seen since the last observation, principally towards the S. horizon.	
9	..	Cirro-stratus and scud: frequent flashes of lightning have been seen since the last observation.	
10	..	Cumulo-strati, cirro-strati, and scud: frequent peals of thunder have been heard in the W. and S.W.	
10	..	Overcast: rain falling heavily, accompanied with frequent flashes of lightning and a heavy rolling of thunder.	H B
10	..	,, rain falling, accompanied with flashes of lightning and claps of thunder.	T D

HENLEY'S ELECTROMETER.

August $2^d.\ 12^h$ and 18^h. The readings were 7° and 4° respectively.

August $4^d.\ 20^h$. The reading was 25°.

ELECTRICITY.

August $1^d.\ 22^h$. See Extra Observations.

August $4^d.\ 20^h$. There were several sparks at the distance of $0^{in}.02$ occurring at intervals of a half second.

GALVANOMETER.

August $4^d.\ 20^h$. There was a current of 2° towards A.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 5. 0	29·776	66·5	65·7	0·8	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
2	29·742	72·4	69·8	2·6	..	..	..	..	ENE	½ to 1½	..	..	Pos.	2	2	0	..	..
4	29·727	78·0	71·7	6·3	67·5	10·5	80·8	..	E	..	..	..	Pos.	5	..	5	..	..
6	29·738	74·7	68·8	5·9	..	..	59·5	8·10	ESE	..	..	..	Pos.	2	2	0	..	..
8	29·741	70·8	67·4	3·4	..	..			Calm	..	..	..	Pos.	15	..	12	..	8. 0
10	29·747	65·8	65·2	0·6	64·0	1·8	96·0	0·54	Calm	..	..	..	Pos.	25	..	20	..	13. 0
12	29·735	64·0	63·7	0·3	..	..	58·0		Calm	..	..	..	Pos.	2	2	0	..	..
14	29·723	62·7	62·6	0·1	..	..	71·0	14·730	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·744	63·0	62·7	0·3	62·5	0·5	70·0	..	SE	..	E	1·30	..	0	0	0	..	..
18	29·713	62·6	62·2	0·4	..	..	..	..	N	..	..	..	..	0	0	0	..	..
20	29·742	65·5	64·2	1·3	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
22	29·745	75·4	70·4	5·0	66·0	9·4	..	..	N by E	..	N	0·45	Pos.	2	2	0	..	..
Aug. 6. 0	29·751	78·5	71·9	6·6	..	..	..	..	N	..	..	..	Pos.	12	..	10	..	8. 0
2	29·725	83·7	75·0	8·7	..	..	..	..	N	..	..	..	Pos.	10	..	8	..	..
4	29·704	82·0	75·1	6·9	70·0	12·0	..	..	NNE	..	..	..	Pos.	2	2	0	..	..
6	29·681	81·9	74·4	7·5	..	..	84·5	..	N by W	..	..	..	Pos.	2	2	0	..	..
8	29·690	72·4	69·6	2·8	..	..	61·7	8·10	N	..	..	..	Pos.	2	2	0	..	..
10	29·701	67·9	66·8	1·1	65·0	2·9	110·3	0·00	N	..	..	..	..	0	0	0	..	..
12	29·687	65·7	65·4	0·3	..	..	62·5	14·730	N	..	..	..	..	0	0	0	..	..
14	29·676	64·4	64·5	−0·1	..	..	71·0	..	Calm	..	..	..	..	0	0	0	..	..
16	29·645	63·3	63·3	0·0	63·0	0·3	70·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·633	63·5	63·4	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·625	64·3	64·0	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·619	67·3	65·6	1·7	64·0	3·3	..	..	Calm	..	N	2·10	Pos.	20	..	20	..	2. 0
Aug. 7. 0	29·607	70·6	67·6	3·0	..	..	..	..	Calm	..	..	..	Pos.	8	..	10	..	4. 0
2	29·598	75·1	69·6	5·5	..	..	..	..	WSW	..	..	..	Pos.	8	..	10	..	3. 0
4	29·573	78·7	72·4	6·3	68·0	10·7	79·5	..	SW	..	..	..	Pos.	2	2	0	..	..
6	29·556	74·3	70·2	4·1	..	..	68·0	8·10	S	..	..	..	Pos.	2	2	0	..	..
8	29·566	69·3	67·2	2·1	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
10	29·579	64·5	63·9	0·6	63·0	1·5	101·6	0·00	S	..	..	..	Pos.	2	2	0	..	..
12	29·590	63·1	61·4	1·7	..	..	55·7		S by W	..	..	..	Pos.	2	2	0	..	..
14	29·579	62·0	60·7	1·3	..	..	71·0	14·730	S by W	..	..	..	..	0	0	0	..	..
16	29·565	60·0	59·0	1·0	58·0	2·0	70·0	..	SW	..	..	..	..	0	0	0	..	..
18	29·578	61·7	60·7	1·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·588	64·8	62·4	2·4	..	..	..	..	Calm	..	..	..	Pos.	3	..	5	..	10. 0
22	29·602	68·8	63·8	5·0	61·7	7·1	..	..	S	..	SSW	0·60	Pos.	2	2	0	..	..
Aug. 8. 0	29·599	67·4	63·4	4·0	..	..	74·3	..	SSW	..	..	..	Pos.	2	2	0	..	..
2	29·602	67·6	64·7	2·9	..	..	57·7	8·10	S by W	..	..	..	Pos.	2	2	0	..	..
4	29·596	70·6	63·2	7·4	59·5	11·1	90·7	0·00	SSW	0 to ½	SSW	0·93	Pos.	5	..	5	..	9. 0
6	29·609	66·5	62·7	3·8	..	..	53·3	14·740	SW	0 to 1	..	..	Pos.	5	..	5	..	8. 0
8	29·622	64·3	61·5	2·8	..	..			SW	..	SW	1·37	Pos.	20	..	25	..	13. 0
10	29·647	61·2	58·9	2·3	57·0	4·2	70·8	..	Calm	..	..	..	Pos.	10	..	12	..	13. 0
12	29·663	59·0	57·7	1·3	..	..	69·5	..	Calm	..	..	..	..	0	0	0	..	..

DRY THERMOMETER.

August 6d. 14h. The reading was lower than that of the Wet Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus, cumulo-stratus, and scud: thunder has been heard at intervals, but the rain has ceased falling.	T D
9	..	Cumuli, cumulo-strati, cirro-strati, and scud: the clouds are much broken N. E. of the zenith. Soon after the last observation rain commenced falling, accompanied with flashes of lightning and peals of thunder.	
3	..	Cirro-stratus and scud near the S. horizon; fleecy clouds and scud in other directions.	
$9\frac{3}{4}$	..	Cirro-stratus and scud: near the S. E. horizon it is clear: the air is oppressively close.	
1	..	Fragments of cirro-stratus around the N. horizon: light cirri around the zenith.	
1	..	Cirro-stratus around the N. horizon: light clouds around the Moon's place.	
2	Transit	Thin cirro-stratus in the S. horizon: a few light clouds prevail near the Moon.	
8	..	Cirro-stratus extending from the N. horizon to the zenith in one unbroken cloud; the remaining portion of the sky is nearly covered with clouds of the same character: some stars are occasionally visible.	
10	..	Cirro-stratus and scud.	
10	..	,,	
10	..	,,	T D
10	..	,,	L
10	..	Cirro-stratus and scud.	
7	..	Cumuli towards the S. horizon: cirro-stratus towards the N. and W.: light clouds and small breaks about the zenith.	L
7	..	Cirro-stratus, cumulo-stratus, scud, and light clouds: several clear breaks in various directions, particularly N. E. of the zenith.	T D
1	..	A few light clouds near the N. horizon, clear elsewhere: the air is very hot and oppressive.	
4	..	Cirro-stratus, scud, and fleecy clouds in the S. W. extending to the S. by E. at aconsiderable elevation; detached fragments of scud are scattered in various directions.	
10	..	The sky is covered with one uniform cloud of the cirro-stratus character; a curious haze is prevalent in the N. extending around to the N. N. W.	T D
10	Transit	Cirro-stratus and light vapour.	L
10	..	Cirro-stratus: a thick fog has prevailed since the last observation.	
10	..	,, ,,	
10	Full	,, ,,	
10	..	,, the fog is less dense.	L
10	..	,,	H B
10	..	Cirro-stratus: the fog is less dense.	
$9\frac{3}{4}$	Perigee	,,	
8	..	Cirro-stratus and fleecy clouds.	
4	..	Cumuli and cumulo-strati in the N. W. horizon: cirro-stratus in the N.: clear in the zenith and to the S. of it.	
7	..	Thin cirro-stratus, fleecy clouds, and scud: clear towards the N. and E.	
1	..	A bank of cirro-stratus towards the N. horizon; a few light clouds elsewhere: foggy.	
10	..	Cirro-stratus and scud.	
9	Transit	Cirro-stratus, fleecy clouds, and scud: a few breaks towards the N. and E.	
10	..	Cirro-stratus and scud.	
10	..	,,	
$9\frac{1}{2}$	..	,, the clouds are broken in several places towards the W. and S. W.	
8	..	,, fleecy clouds and scud: some breaks of small extent in several directions, particularly S. W. of the zenith: a slight shower of rain has occurred since the last observation.	
10	..	Cirro-stratus and scud: a slight shower of rain has fallen since the last observation.	
9	..	,, slight showers of rain falling at intervals.	
7	..	Cirro-stratus and scud nearly cover the sky to the N., and there has been also an extensive portion S. of the zenith: the wind is blowing in gusts to $\frac{3}{4}$.	
10	..	Cirro-stratus and scud: a small break S. of the zenith: the wind is blowing in gusts to 1.	
10	..	Cirro-stratus and scud: the wind is blowing in gusts to 1.	
3	..	Cumuli, cirro-strati, and fleecy clouds near the horizon.	
4	..	Cumulo-strati in several directions: light scud in detached portions are scattered over the sky.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 8. 14	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	SW	..	SSW	0·87	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	WSW	0 to 1	..	..	..	..	..	..	..	..
22	29·751	64·5	60·3	4·2	..	..	..	..	WSW	0 to ½	WSW	0·68	Pos.	10	..	10	..	18. 0
Aug. 9. 0	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..
4	29·786	67·7	60·7	7·0	..	..	71·3	..	SW	..	..	..	Pos.	5	..	8	..	10. 0
6	..	..	..	..	..	..	63·0	..	SW	0 to ¼	..	..	..	..	..	..	..	..
8	29·837	63·5	59·8	3·7	..	..	92·3	8·10	SW	0 to ¼	WSW	1·28	Pos.	20	..	20	..	14. 0
10	..	..	..	..	..	..	54·0	0·00	SW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	70·5	14·740	Calm	..	..	..	..	..	..	..	..	..
14	29·874	59·6	57·7	1·9	..	..	69·0	..	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·877	59·0	57·7	1·3	56·0	3·0	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·880	58·0	56·5	1·5	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
20	29·902	60·5	59·2	1·3	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
22	29·909	64·4	57·4	7·0	50·5	13·9	..	..	SW	..	SW	1·09	Pos.	5	..	5	..	..
Aug. 10. 0	29·910	67·3	58·9	8·4	..	..	..	..	WSW	..	..	..	Pos.	6	..	8	..	20. 0
2	29·900	66·6	59·2	7·4	..	..	..	..	SW	..	..	..	Pos.	8	..	10	..	Did not recover in 17m
4	29·902	65·7	59·7	6·0	56·0	9·7	..	..	SSW	..	..	..	Pos.	20	..	17	..	7. 0
6	29·888	65·6	59·7	5·9	..	..	71·7	..	SSW	..	..	..	Pos.	27	..	20	..	10. 0
8	29·888	62·9	59·2	3·7	..	..	55·8	8·10	SSW	..	..	..	Pos.	2	2	0	..	..
10	29·893	62·0	59·9	2·1	58·0	4·0	93·8	0·00	SW	..	..	..	..	0	0	0	..	..
12	29·893	59·5	56·3	3·2	..	..	52·3	14·740	W	..	SW	2·35	Pos.	..	0	5	..	..
14	29·894	58·8	55·2	3·6	..	..	69·2	..	WSW	..	..	..	..	0	0	0	..	..
16	29·904	56·8	53·7	3·1	51·5	5·3	67·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·918	56·0	53·7	2·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·929	59·0	55·7	3·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·940	64·0	58·6	5·4	55·5	8·5	..	..	WSW	..	WSW	2·06	Pos.	5	..	5	..	8. 0
Aug. 11. 0	29·942	66·7	58·7	8·0	..	..	..	..	SW	0 to ½	..	..	Pos.	6	..	8	..	30. 0
2	29·942	69·5	59·9	9·6	..	..	..	..	SW	0 to ¼	..	..	Pos.	5	..	5	..	20. 0
4	29·937	72·8	60·6	12·2	51·5	21·3	73·4	..	W by S	..	..	..	Pos.	..	..	10	..	..
6	29·939	69·0	58·7	10·3	..	..	55·0	..	Calm	..	..	..	Pos.	..	..	10	..	..
8	29·951	64·4	59·1	5·3	..	..	95·5	8·24	Calm	..	..	..	Pos.	..	..	10	..	..
10	29·962	62·5	58·9	3·6	55·0	7·5	55·0	0·22	S by W	..	..	..	Pos.	..	..	3	..	..
12	29·946	57·8	57·2	0·6	..	..	69·5	14·960	SSW	..	..	..	Neg.	2	2	0	..	..
14	29·917	56·5	56·3	0·2	..	..	68·0	..	S by W	..	..	..	Pos.	30	..	30	..	..

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	Transit		
..	..		
..	..		
..	..		
9	..	Cirro-stratus and quickly-passing scud are the prevailing clouds: the wind is blowing in gusts to 1.	H B
..	..		
..	..		
10	..	Cirro-stratus and scud.	
..	..		
9½	In Equator	Cirro-stratus and scud N. of the zenith: some small breaks principally S. of the zenith: scud in large masses near the horizon.	
..	..		
..	..		
9	..	Cirro-stratus and scud: some small breaks in the zenith.	
10	Transit	,, the Moon occasionally gleams through the clouds.	
10	..	,,	
10	..	,, the Sun is occasionally visible through the clouds.	
10	..	Cirro-stratus and dark scud: the Sun is occasionally shining.	
9½	..	Cirro-stratus, fleecy clouds, and scud: some breaks of small extent in every direction: the clouds are less dense than at the last observation.	
10	..	Cirro-stratus and scud: the Sun is occasionally seen.	
10	..	,,	
10	..	,,	
10	..	,, a few breaks have been occasionally seen since the last observation.	H B
10	..	The sky is covered with dense cirro-stratus and scud: at $10^h.25^m$ a thin rain commenced falling.	T D
10	..	Overcast: the rain mentioned at the last observation continued falling till $10^h.45^m$: much scud has passed, and within the last ten minutes the place of the Moon has been occasionally visible.	G
10	..	Overcast: stratus and scud: a large quantity of scud has passed from the S.W.: the clouds have been somewhat lighter, and the Moon has been frequently seen since the last observation.	
10	Transit	The appearance of the sky has been nearly uniform since 14^h: a large quantity of scud has passed.	
10	..	Overcast: stratus and scud.	
9	..	The sky was overcast till $16^h.40^m$, at which time a small quantity of rain fell, and since that time the clouds have become less and less dense: within the last half-hour a portion of the northern sky has been clear.	G
7	..	The clouds in the northern portion of the sky are extensively broken, and a few cirro-cumuli and cirri are shewn in the breaks: to the S. of the zenith the cirro-stratus clouds are dense, and a low dark scud is constantly passing over from the W. S.W.: cumuli are visible in the S. E. and S.W. horizon.	H B
7	..	Cirro-stratus and dark scud to the S. of the zenith: cumulo-strati are scattered around the horizon: the wind is blowing in gusts to 1.	
9	..	Cirro-strati: breaks are seen in various directions, but principally in the S. E.: the wind is blowing in gusts to ¾.	H B
5	..	Cumuli and scud are scattered about the sky.	G
2	..	Cloudless, with the exception of some detached rocky cumuli near the horizon: the sky is of a deep blue colour.	
10	..	The sky has been overcast with scud for some time past, and continues so.	
10	..	The sky has continued covered by cloud since 8^h, with one exception, viz., in the N. near the horizon, where a bright horizontal break of some extent appeared at $8^h.15^m$, and continued till $8^h.45^m$: at $8^h.30^m$ a few drops of rain fell: no meteors have been seen.	G
10	..	Overcast: cirro-stratus and scud: soon after the last observation rain commenced falling, and several flashes of lightning were visible: the rain has continued almost incessantly to the present time: the clouds in the E. S. E. have a tendency to break.	H B
10	..	After the last observation the rain ceased, and the sky resumed the same appearance as in the early part of the night: about 13^h rain began to fall; and at $13^h.25^m$ active negative electricity was shewn, the rain at the latter time was falling heavily.	

Day and Hour Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div	div.	m s
Aug. 11. 16	29·895	57·9	57·7	0·2	57·0	0·9	..	..	Calm	..	..	..	Pos.	3	..	5	..	..
18	29·894	59·5	59·4	0·1	..	..	..	..	Calm	..	..	..	Pos.	40	..	30	..	2. 30
20	29·915	61·4	60·4	1·0	..	..	..	..	Calm	..	..	..	Pos.	40	..	25	..	1. 30
22	29·923	64·0	62·0	2·0	60·5	3·5	..	..	Calm	..	W	2·77	Pos.	30	..	20	..	Recovered instantly
Aug. 12. 0	29·947	64·9	61·8	3·1	..	..	..	..	NNW	..	..	..	Pos.	40	..	30	..	3. 0
2	29·954	66·4	61·4	5·0	..	..	..	..	NNW	..	..	..	Pos.	40	..	30	..	5. 0
4	29·944	69·0	62·3	6·7	55·3	13·7	..	..	Calm	..	..	..	Pos.	35	..	40	..	1. 45
6	29·938	68·1	61·7	6·4	..	..	70·6 / 54·8	..	Calm	..	..	..	Pos.	35	..	30	..	3. 30
8	29·911	63·0	60·7	2·3	..	..	83·3 / 50·0	8·24 / 0·00	Calm	..	..	..	Pos.	40	..	35	..	5. 0
10	29·901	60·2	58·2	2·0	56·0	4·2	69·0 / 67·8	14·960	Calm	..	..	..	Pos.	20	..	10	..	..
12	29·885	58·5	57·2	1·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
14	29·851	56·6	55·8	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	29·809	55·0	54·7	0·3	55·0	0·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·763	56·7	56·5	0·2	..	..	..	..	Calm	..	SW	2·10	..	0	0	0	..	..
20	29·736	61·5	59·2	2·3	..	..	..	..	SSW	0 to 1/3	..	..	..	0	0	0	..	..
22	29·660	64·8	61·0	3·8	58·0	6·8	..	..	S by W	0 to 1/3	SSW	0·45	..	0	0	0	..	..
Aug. 13. 0	29·585	66·4	62·2	4·2	..	..	..	..	S by W	0 to 2	..	..	..	0	0	0	..	..
2	29·561	63·0	60·1	2·9	..	..	..	..	SSW	0 to 2	..	..	Neg.	5	..	5	..	..
4	29·498	64·5	62·4	2·1	61·0	3·5	..	..	SSW	1 to 3 1/4	..	..	Pos.	2	2	0	..	..
6	29·514	62·1	60·8	1·3	..	..	70·8 / 47·5	.. / 8·32	W	0 to 3/4	SW	2·30	Pos.	35	..	20	..	4. 0
8	29·569	61·2	56·9	4·3	..	..	85·0 / 40·5	0·12	W	..	..	..	Pos.	2	2	0	..	..
10	29·641	56·6	53·4	3·2	50·0	6·6	68·8 / 66·5	15·120	W by S	..	WNW	0·81	Pos.	2	2	0	..	..
12	29·660	54·1	51·2	2·9	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
14	29·697	52·0	49·7	2·3	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
16	29·715	50·0	47·7	2·3	45·0	5·0	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·756	48·0	47·7	0·3	..	..	..	..	Calm	..	..	..	Pos.	40	..	20	..	..
20	29·778	53·5	51·0	2·5	..	..	..	..	Calm	..	..	..	Pos.	40	..	25	..	..
22	29·791	61·6	54·9	6·7	50·0	11·6	..	..	NW	..	W	1·62	Pos.	5	..	5	..	..
Aug. 14. 0	29·806	63·6	56·2	7·4	..	..	..	..	Calm	..	..	..	Pos.	17	..	10	..	6. 0
2	29·811	68·0	57·2	10·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..

ELECTRICITY.

August 11d. 18h and 20h. There were sparks at the distance of 0in·02.

August 12d. 0h, 2h, 4h, and 6h. There were sparks at the distance of 0in·02.

GALVANOMETER.

August 11d. 18h and 20h. There were currents of 1° towards B.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	Overcast: thin rain has been constantly falling since the last observation: no meteors have yet been seen.	H B
10	..	,, ,, not a star has been visible during the night.	
10	..	Overcast: foggy: a uniform cirro-stratus cloud covers the sky.	H B
8	..	The greater portion of the sky is covered with cirro-stratus and thin scud: there are some considerable breaks in the N.W. horizon, through which a pale blue sky is seen: the clouds became broken at $21^h.40^m$, previously to which time a great gloom had prevailed.	T D
10	..	The sky is covered with a dense cirro-stratus, and has been so since $22^h.50^m$, at which time the breaks mentioned at the last observation disappeared.	
10	..	Overcast: cirro-stratus: the Sun is faintly visible at times through the clouds.	T D
5	..	The sky remained overcast until about $3^h.30^m$, when extensive breaks suddenly occurred; since that time the amount of cloud has been gradually decreasing, and it at present consists principally of cumulus, with cirro-stratus and haze near the horizon.	H B
4	..	Cirro-stratus and haze: a haze has been prevalent since the last observation, it appears to be more dense around the W. N. W. and W. S. W. horizon than in other directions.	
4	..	Detached portions of cirro-stratus above the N. horizon: soon after 6^h the sky became cloudless, and remained so until 7^h, when some fine specimens of cirrus cloud come up, and since that time some fine specimens of linear and cymoid cirri have been seen.	
3	..	Cirro-stratus and portions of scud in various parts of the sky, otherwise it is nearly cloudless: some flashes of lightning have been seen in the N. W.	H B
2	..	Light portions of cirri around the Moon, and haze in the N. horizon: no meteors have been seen.	T D
5	..	Cirro-stratus in the N. horizon: detached portions of cirro-stratus and fleecy clouds in various directions: no meteors have been seen.	
2	..	Cloudless, with the exception of a bank of cirro-stratus in the N.	
7	Transit	Cirro-stratus, fleecy clouds, and light scud.	
10	..	Overcast: cirro-stratus: the Sun is faintly visible at times.	T D
10	..	,, cirro-stratus and scud: the Sun is faintly visible at times: scud is continually passing over from the S. W.	H B
7	..	The sky is nearly covered with cirro-strati, cumuli, and light scud: the upper clouds are cirri and a few cirro-cumuli.	
10	..	Overcast: cirro-stratus and scud: the scud is moving with great rapidity from the S. S. W.: the wind is blowing in gusts to 1.	H B
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to $1\frac{3}{4}$: at $2^h.21^m$ a shower of rain fell.	T D
8	..	The sky is nearly covered with cirro-stratus and scud: at $5^h.10^m$ a heavy shower of rain fell, which continued until $5^h.50^m$.	
7	..	Cirro-stratus in the horizon, extending from the E. N. E. to the S. W.: detached portions of feathery-shaped cirri are scattered about the zenith, and N. W. of it: cumuli in the N.	
4	..	Cirro-stratus around the N. horizon: detached portions of cirri are scattered in various parts of the sky: only one small meteor has been seen in the W. N. W., which disappeared instantaneously at $9^h.50^m$.	T D
9	3rd Qr.	The sky is nearly covered with scud: the clouds began to collect about 11^h: one meteor was seen at $11^h.40^m$; it passed from α Ursæ Majoris to δ Ursæ Majoris.	G
1	..	Since the last observation the sky has been covered with lines of cloud, with clear spaces between them: within the last half-hour the sky has been nearly cloudless, as it is at present.	
1	..	The sky is nearly cloudless.	
0	Transit	Cloudless.	
0	..	,, hazy.	G
6	..	Cumuli, cirri, and a few cirro-cumuli, the latter of which are chiefly to the N. of the zenith.	H B
8	..	Cirro-stratus nearly covers the sky: a few cumuli are shewn in the S. W.: the portion of the sky that is clear is N. E. of the zenith.	T D
9	..	Cirro-stratus nearly covers the sky: a few cumuli are shewn in the S. S. E. and S.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of: Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 14. 4	29·815	70·5	58·4	12·1	49·0	21·5	..	..	Calm	..	..	..	Pos.	..	..	10	..	..
6	29·801	68·2	59·2	9·0	..	..	..	..	Calm	..	..	..	Pos.	..	..	5	..	..
8	29·791	61·6	56·9	4·7	..	..	71·4	..	Calm	..	..	..	..	0	0	0	..	..
10	29·790	58·6	55·7	2·9	53·0	5·6	53·8	8·32	Calm	..	..	..	..	0	0	0	..	..
12	29·754	55·6	53·7	1·9	..	..	94·0	0·00	Calm	..	..	..	..	0	0	0	..	..
14	29·725	54·5	52·4	2·1	..	..	..	15·120	SE	..	..	..	..	0	0	0	..	..
16	29·695	54·6	52·8	2·8	50·0	4·6	69·5	..	Calm	..	..	..	..	0	0	0	..	..
							66·5											
18	29·668	54·6	53·2	1·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·639	62·0	57·9	4·1	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
22	29·619	68·5	61·7	6·8	59·0	9·5	..	..	S by E	..	S	1·42	Pos.	2	2	0	..	..
Aug. 15. 0	29·599	74·6	64·1	10·5	..	..	..	..	S	0 to 1	..	..	Pos.	2	2	5	..	..
2	29·578	74·0	63·8	10·2	..	..	..	..	S by W	0 to ½	..	..	..	0	0	0	..	..
4	29·567	69·5	63·5	6·0	59·0	10·5	..	..	S by W	..	..	..	Pos.	20	..	10	..	12. 0
6	29·564	62·7	61·2	1·5	..	..	77·2	..	SSW	..	..	..	Neg.	20	10	10	..	..
8	29·562	62·1	61·7	0·4	..	..	52·7	8·44	Calm	..	SSW	1·74	Neg.	2	2	0	..	..
10	29·581	59·6	58·8	0·8	58·3	1·3	98·5	0·14	Calm	..	..	..	..	0	0	0	..	..
12	29·599	57·5	57·4	0·1	..	..	49·4	15·285	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	68·8	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	67·0	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·682	65·0	59·7	5·3	..	..	..	..	SW	..	WSW	2·08	..	0	0	0	..	..
Aug. 16. 0	29·688	65·5	60·0	5·5	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
2	29·693	68·7	61·0	7·7	..	..	..	..	Calm	..	..	..	Pos.	20	10	10	..	..
4	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
6	29·705	68·3	60·0	8·3	..	..	70·1	..	Calm	..	..	..	Pos.	2	2	0	..	..
8	29·713	63·2	59·2	4·0	..	..	52·4	8·44	Calm	..	..	..	Pos.	2	2	0	..	..
10	..	..	..	..	..	..	91·3	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	48·0	15·285	Calm	..	..	..	..	..	..	..	..	..
14	29·738	56·7	55·6	1·1	..	..	68·0	..	Calm	..	..	..	..	0	0	0	..	..
16	29·734	54·0	53·6	0·4	53·0	1·0	66·5	..	Calm	..	..	..	..	0	0	0	..	..
18	29·733	52·7	52·4	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·745	58·7	56·7	2·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·743	65·1	58·7	6·4	53·5	11·6	..	..	Calm	..	SW	1·63	Pos.	20	12	10	..	..
Aug. 17. 0	29·733	66·8	59·7	7·1	..	..	..	..	SSW	..	..	..	Pos.	3	..	3	..	10. 0
2	29·718	68·1	60·5	7·6	..	..	..	..	SSW	..	..	..	Pos.	10	8	10	..	..

RADIATION MINIMUM THERMOMETER.

August 14d. 22h. The reading was omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless.	G
0	..	,,	
½	..	Cloudless, with the exception of a low bank of cloud near the N. W. horizon.	
8	..	Overcast, with the exception of a small portion of clear sky N. of the zenith: no meteors have been seen.	G
8	..	The sky is nearly covered with cirro-stratus of variable density: flashes of lightning have been seen in the N. horizon.	H B
3	..	A considerable mass of light fleecy clouds in the E., which have increased rapidly within the last few minutes.	
5	..	Soon after the last observation fleecy clouds nearly covered the whole sky, the Moon being the only object visible (a coloured corona of 3° in diameter being occasionally seen round her): the clouds became broken before this observation, clearing off from the W.	
5	..	The prevailing clouds now distributed are cirro-strati, cumuli, and large masses of scud.	
0	Transit	Cloudless.	H B
0	..	,,	T D
4	..	The greater portion of the S. horizon is covered with cirro-stratus and large masses of finely-formed cumuli.	
8	..	The sky is nearly covered with cirro-stratus and fleecy clouds.	T D
9½	..	Overcast, with the exception of small portions of blue sky near the zenith.	H B
10	..	Overcast: at $5^h.\ 50^m$ a heavy shower of rain commenced falling, and has continued to the present time.	
10	..	,, rain still falling.	
10	..	,, cirro-stratus and scud: a thin drizzling rain has fallen almost continuously since the last observation.	H B
3	..	At $11^h.\ 20^m$ the clouds became broken in several directions, and the rain ceased; from the above time to the present they have gradually diminished, and now, with the exception of some portions of cirro-stratus in the S. and and S. S. W., the sky is cloudless.	T D
..	..		
..	..		
..	..		
..	Transit		
9	..	During the last half-hour large masses of white scud and cirro-stratus have continually passed over the sky: cumuli around the horizon in every direction.	H B
9½	Greatest declination N.	The clouds were extensively broken at $22^h.\ 30^m$, but since that time they have again collected: the cirro-stratus appears denser than at the last observation.	
10	..	Overcast: cirro-stratus and scud.	
..	..		
10	..	,, ,,	
9	..	The clouds are now slightly broken in several places around the zenith, shewing small patches of blue sky: cirro-stratus and scud around the horizon.	H B
..	..		
..	..		
7	..	Cirro-stratus all around the horizon, at a considerable elevation; detached portions also scattered about the zenith.	T D
4	..	Cirro-stratus in the E., extending to the S. S. E.: light portions W. of the zenith; every other part of the sky is free from cloud.	
8	..	Cirro-stratus, fleecy clouds, and scud cover the sky, with the exception of that portion E. N. E. of the zenith.	
9	..	The sky became covered with cirro-stratus and scud at $18^h.\ 25^m$, and continued so till $19^h.\ 25^m$, when large breaks appeared in every direction: at present the prevailing clouds are cirro-stratus, light scud, and fleecy clouds, through which the Sun is occasionally visible.	T D
9½	Transit	Cirro-stratus, fleecy clouds, and scud: several cumuli are visible along the N. horizon: the clouds are slightly broken around the zenith, and to the N. E. of it.	H B
9	..	Cirro-stratus, fleecy clouds, and scud cover the greater portion of the sky: cumuli and cumulo-strati along the N. horizon.	
10	..	Overcast: cumulo-strati to the S., and also to the N.W.; cirro-stratus and scud in every other direction.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 17. 4	29·688	68·0	59·8	8·2	54·8	13·2	..	..	SSW	..	SSW	1·43	Pos.	20	..	12	15	6. 0
6	29·660	66·3	59·9	6·4	..	..	..	..	S by W	..	..	..	Pos.	12	..	7	10	5. 0
8	29·641	61·5	57·2	4·3	..	..	70·8 / 55·5 / 93·8 / 50·0 / 67·8 / 66·2	..	Calm	..	..	..	Pos.	2	2	0	..	..
10	29·626	56·5	54·8	1·7	54·0	2·5		8·63 / 0·27 / 15·540	Calm	..	..	..	Pos.	2	2	0	..	..
12	29·591	57·2	55·2	2·0	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
14	29·531	58·8	55·9	2·9	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
16	29·459	60·2	56·7	3·5	55·0	5·2		..	SSE	..	S	1·50	Pos.	2	2	0	..	..
18	29·421	60·0	59·7	0·3	..	..		..	S	0 to ½	SSW	0·25	..	0	0	0	..	..
20	29·462	57·8	55·4	2·4	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
22	29·475	62·5	57·6	4·9	53·0	9·5	..	..	SSW	..	SW	0·72	..	0	0	0	..	..
Aug. 18. 0	29·477	65·7	57·9	7·8	..	..	..	..	SSW	0 to ½	..	..	Pos.	2	2	0	..	..
2	29·464	66·5	58·2	8·3	..	..	..	..	SSW	½ to 2½	..	..	Pos.	5	..	5	..	10. 0
4	29·454	64·6	57·7	6·9	..	..	..	..	SSW	½ to 3½	..	..	Pos.	2	2	0	..	..
6	29·452	59·4	57·4	2·0	..	..	69·8 / 55·2 / 88·0 / 49·5 / 67·8 / 65·8	8·73 / 0·14 / 15·700	SSW	½ to 1	..	..	..	0	0	0	..	..
8	29·439	57·5	56·2	1·3	..	..			S by W	½ to 1½	SSW	3·00	..	0	0	0	..	..
10	29·427	57·6	56·2	1·4	55·0	2·6			S by W	..	..	..	..	..	0	0	..	..
12	29·399	57·1	56·4	0·7	..	..			S by W	..	..	..	..	..	0	0	..	..
14	29·387	56·0	54·0	2·0	..	..		..	S by W	..	..	..	..	..	0	0	..	..
16	29·383	56·4	54·7	1·7	53·0	3·4	..	..	SSW	..	..	..	..	..	0	0	..	..
18	29·408	56·3	55·7	0·6	..	..	..	..	SSW	0 to ¼	SW	2·20	..	..	0	0	..	..
20	29·445	58·5	55·4	3·1	..	..	..	..	WSW	0 to 1	..	..	..	..	0	0	..	..
22	29·575	60·6	57·2	3·4	55·0	5·6	..	..	WSW	0 to 1	WSW	1·90	..	..	0	0	..	..
Aug. 19. 0	29·495	63·6	58·2	5·4	..	..	..	..	WSW	0 to ¼	..	..	..	..	0	0	..	..
2	29·503	62·5	58·7	3·8	..	..	..	..	W	¼ steady	..	..	Neg.	40	..	30	40	1. 30
4	29·536	62·2	57·0	5·2	53·0	9·2	69·3 / 54·0 / 82·0 / 52·8 / 66·8 / 65·0	.. / 8·73 / 0·01 / 15·735	NNW	¼ steady	..	..	Pos.	40	..	20	20	1. 45
6	29·562	62·7	59·1	3·6	..	..			NNW	¼ steady	..	..	Pos.	30	..	15	10	Did not recover
8	29·596	62·5	57·7	4·8	..	..		..	NNW	..	..	..	Pos.	12	..	5	8	20. 0
10	29·633	60·2	56·9	3·3	53·0	7·2	..	..	W by N	..	..	..	Pos.	2	2	0	..	..
12	29·650	60·3	57·4	2·9	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
14	29·658	58·5	56·5	2·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..

BAROMETER.

August 18d. 22h. The reading was 0in·130 higher than that at 20h.

ELECTRICITY.

August 19d. 2h. There was a spark at the distance of 0in·03.

DEW POINT THERMOMETER.

August 18d. 4h. The observation was inadvertently omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	T D
9	..	Cirro-stratus and scud prevail in the N., extending from the horizon to the zenith: some portions of cumuli, with light cirri and fleecy clouds, nearly cover the remaining portion of the sky.	
4	..	In the N. horizon cirro-stratus prevails to a considerable height: cirri and thin fleecy clouds are scattered in various parts of the sky.	
1	..	A bank of cirro-stratus, at about 40° from the horizon in the S., is the only cloud that prevails: the stars are shining with great brightness.	T D
10	..	At 11^h clouds began to collect, and by $11^h.30^m$ the sky was wholly covered, and it continues so: occasional airs from the S.	G
10	..	Overcast: the night is very dark.	
10	..	,, cirro-stratus and scud.	
10	..	,, ,, rain falling: at 17^h the wind began to blow with the pressure of 1 lb. from the S.W.	
1	..	Rain continued falling until $18^h.35^m$: at $18^h.40^m$ a considerable portion of the N.W. sky was cloudless, and the remaining portion continues clear.	G
5	Transit	The sky remained nearly cloudless till after 21^h, when cirro-stratus and fleecy clouds collected, and have covered a considerable portion of the sky since that time: occasional gusts of wind to 1.	H B
8	..	Cirro-stratus and brownish-coloured scud cover the greater portion of the sky: rocky cumuli near the horizon: since the last observation cirro-strati, cumuli, fleecy clouds, and scud have been prevalent.	
4	..	Fleecy clouds principally to the N. of the zenith: rocky cumuli in large masses around the N. and N.W. horizon, and in detached portions in the S.W. horizon: the wind is blowing in frequent gusts to $1\frac{1}{2}$, and occasionally to 2.	H B
9	..	The sky is nearly covered by large masses of scud, the upper cloud being cirro-stratus: the wind is blowing in gusts to 2.	G
10	..	Overcast: at $5^h.40^m$ rain began to fall, and is still falling in showers: the wind is blowing in gusts to 2.	
10	..	,, there have been occasional showers since 6^h, at times descending rather heavily: the wind has been blowing in gusts to 2.	
10	..	Overcast: rain has fallen occasionally since 8^h: the night is very black.	G
3	..	Cirro-stratus and scud near the S. horizon: several showers of rain have fallen since the last observation, the last occurring at $11^h.25^m$.	H B
7	..	The stars are now shining dimly through a thin cirro-stratus, which prevails more or less in every direction: scud passes over frequently from the S.W.	
10	..	The sky became overcast at $14^h.10^m$, and has remained so to the present time.	
9	..	Cirro-stratus and scud: clear for a considerable distance along the S.E. horizon: the wind is blowing in occasional gusts to 1.	
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to 1.	H B
10	Transit	,, ,, the sun is occasionally visible.	T D
9	..	Cirro-stratus, cumulo-stratus, and scud cover the whole sky, with the exception of a solitary break W. of the zenith: at $23^h.45^m$ the clouds became considerably broken.	
8	..	Cumuli around the horizon: cirro-stratus and scud in the zenith: the Sun is faintly visible: at $1^h.30^m$ a shower of rain and hail fell and continued until $1^h.45^m$: at $3^h.30^m$ thunder was heard in the N.W.	T D
6	..	Cumulo-strati in the N. and S. horizon: fleecy clouds and cirro-stratus in various directions: a slight thunder-storm has just passed over, it commenced at $3^h.30^m$: at $3^h.35^m$ the wind suddenly changed from W. by N. to N.N.W.	H B
$9\frac{1}{2}$	..	Soon after the last observation cumulo-strati rapidly came over from the N., and in a very short time covered the sky: a few drops of rain fell at about $4^h.30^m$; at present the sky is covered with cirro-stratus and a few particles of scud: breaks of small extent around the zenith.	
10	..	The sky became overcast shortly after 6^h, and has remained so to the present time: the cirro-stratus and scud are more dense: at $7^h.15^m$ a shower of rain fell.	
10	..	Overcast: cirro-stratus: a shower of rain fell at 9^h: the wind has been blowing in gusts to 1.	H B
10	..	,, cirro-stratus and scud: very dark.	T D
10	..	,, ,,	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 19. 16	29·668	56·0	54·9	1·1	54·0	2·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·684	54·5	53·9	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·708	58·0	56·2	1·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·709	64·0	59·1	4·9	54·5	9·5	..	..	Calm	..	SW	4·05	Pos.	..	..	5	..	..
Aug. 20. 0	29·714	63·5	57·8	5·7	..	..	..	..	WSW	..	..	..	Pos.	..	..	10	..	..
2	29·702	61·5	59·4	2·1	..	..	..	..	Calm	..	..	..	Pos.	..	..	10	..	..
4	29·663	60·9	59·9	1·0	59·0	1·9	66·8	..	Calm	..	..	..	..	0	0	0	..	..
6	29·645	60·5	59·7	0·8	..	..	58·7	..	SW	..	..	..	Pos.	2	2	0	..	..
8	29·618	59·0	58·6	0·4	..	..		8·73	Calm	..	..	..	Pos.	2	2	0	..	..
10	29·600	58·8	58·7	0·1	58·5	0·3	82·2	0·28	Calm	..	..	..	Pos.	35	..	20	30	2. 0
12	29·560	59·0	58·5	0·5	..	..	57·2		Calm	..	..	..	Pos.	..	..	5	..	..
14	29·542	59·2	59·0	0·2	..	..		16·035	Calm	..	..	..	Pos.	..	..	5	..	..
16	29·543	60·0	59·7	0·3	59·5	0·5	66·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·564	59·8	59·6	0·2	..	..	64·8	..	N by E	..	..	..	..	0	0	0	..	..
20	29·613	60·4	59·8	0·6	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
22	29·647	61·6	59·7	1·9	57·8	3·8	..	..	N by E	..	N	0·70	Pos.	3	..	3	..	..
Aug. 21. 0	29·661	65·9	61·9	4·0	..	..	..	..	N by W	0 to ¼	..	..	Pos.	2	2	0	..	..
2	29·688	67·0	62·3	4·7	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
4	29·702	67·6	60·7	6·9	56·5	11·1	70·4	..	N by W	½ steady	..	..	..	0	0	0	..	..
6	29·735	66·0	60·2	5·8	..	..	56·0	..	N	0 to ½	..	..	Pos.	..	..	10	..	..
8	29·795	61·2	58·7	2·5	..	..		8·73	N by E	..	..	..	..	0	0	0	..	..
10	29·823	58·0	57·2	0·8	56·0	2·0	86·0		N by E	..	..	..	..	0	0	0	..	..
12	29·835	57·8	57·2	0·6	..	..	51·5	0·00	N by E	..	..	..	Pos.	8	..	5	5	10. 0
14	29·851	58·2	57·2	1·0	..	..		16·035	N by E	..	..	..	Pos.	30	..	12	10	4. 0
16	29·848	57·0	55·9	1·1	54·0	3·0	66·5	..	N by W	..	..	..	Pos.	2	2	0	..	..
18	29·852	56·5	55·4	1·1	..	..	64·5	..	N	..	..	..	Pos.	2	2	0	..	..
20	29·867	58·5	57·3	1·2	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
22	29·883	64·0	60·7	3·3	58·7	5·3	..	..	N	..	N	2·95	Pos.	2	2	0	..	..
Aug. 22. 0	29·887	68·0	63·0	5·0	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
2	29·896	67·0	60·7	6·3	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
4	29·892	66·3	60·7	5·6	56·0	10·3	71·3	..	N	..	..	..	Pos.	5	..	3	..	..
6	29·899	67·2	60·3	6·9	..	..	56·0	8·73	N by E	..	..	..	Pos.	2	2	0	..	..
8	29·913	60·7	57·7	3·0	..	..	92·0	0·00	NNE	..	..	..	Pos.	2	2	0	..	..
10	29·941	56·7	55·7	1·0	54·0	2·7	44·4		Calm	..	..	..	Pos.	2	2	0	..	..
12	29·947	55·0	53·7	1·3	..	..	66·5	16·035	Calm	..	..	..	Pos.	2	2	0	..	..
14	..	..	..	..	..	..	64·2	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..

ELECTRICITY.
August 20d. 10h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
9	..	With the exception of a slight break S.E. of the zenith, the sky is covered with cirro-stratus and scud.	T D
9	..	Cirro-stratus, fleecy clouds, and scud are scattered over the sky; some small breaks between them, through which a dull blue sky is seen: the Sun shines through the clouds, which are less dense in the E. and S.E. than in any other direction.	
10	..	Overcast: cirro-stratus, cumulo-stratus, and scud.	T D
9	..	The sky is almost wholly covered with white cumulo-strati and dark scud; occasionally there are faint gleams of sunshine.	G
10	Transit	Overcast: cirro-stratus: the clouds have been gradually increasing in density since 22^h.	
10	..	,, ,, a few drops of rain are falling.	G
10	..	,, ,, rain falling heavily; it commenced at $3^h.\ 10^m$.	T D
10	..	,, ,, the rain has continued falling since the last observation.	
10	..	,, cirro-stratus and scud: the rain ceased at $6^h.\ 50^m$, and again commenced falling at $7^h.\ 48^m$, and continues at this time.	
10	..	Overcast: cirro-stratus and scud: the rain has continued falling since the last observation.	T D
10	..	,, cirro-stratus: the clouds low; very dark: the rain ceased at 11^h.	G
10	..	,, ,, ,,	
10	..	,, ,, ,, a thin rain is falling: occasional gentle airs from the N.W.	
10	..	,, ,, no rain is falling.	
10	..	,, cirro-stratus; but the clouds are less dense everywhere, and in some places are very thin.	G
10	Apogee	,, cirro-stratus and dense scud, the latter in slow motion from the N.	H B
10	Transit	Overcast: cirro-stratus and dense scud: the clouds were extensively broken about $22^h.\ 40^m$, and several cumuli were then visible; the sky, however, became overcast at $23^h.\ 25^m$, and has remained so to the present time.	
10	..	Overcast: cirro-stratus and dense scud: a few cumuli are seen near the S. horizon.	H B
5	..	The zenith and the parts around it are clear: near the horizon ill-formed cumuli prevail.	G
2	..	Since 4^h the sky has been nearly free from cloud: at present there are only a few loose cumuli near the horizon.	
0	..	Cloudless.	
0	..	,,	G
$9\frac{1}{2}$	New	The sky remained cloudless until $11^h.\ 8^m$, when it suddenly became obscured; it cleared off in a short time, and remained nearly cloudless to $11^h.\ 35^m$, when a thin cirro-stratus suddenly came over.	H B
10	..	Overcast: cirro-stratus.	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,, at 19^h the sky was about one-half covered with cirro-stratus, a few cirri, and fleecy clouds; it became overcast at $19^h.\ 40^m$.	H B
10	..	Overcast: cirro-stratus.	T D
9	Transit	Cirro-stratus, cumulo-stratus, and fleecy clouds: there are a few breaks in the clouds N. E. of the zenith.	
10	..	Overcast: cirro-stratus and scud.	T D
8	..	Cumuli and cumulo-strati extensively distributed in every direction: the upper clouds are cirro-cumuli, of which there are some fine specimens of a light-blue colour around the zenith: fragments of cirro-stratus are occasionally seen.	H B
5	..	Cumulo-stratus S. of the zenith: cumuli near the horizon, and in other directions.	
1	..	In the N., and extending to the N. N.W., there are some beautiful specimens of the cirro-cumulus cloud, which are slightly tinged with red: cirro-stratus and vapour near the horizon, especially to the S.	
0	..	Cloudless, but very hazy near the horizon.	H B
0	..	Cloudless.	T D
..	..		
..	..		
..	..		
..	..		

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 22. 22	29·963	64·4	60·7	3·7	..	..	..	..	Calm	..	N	1·93	..	0	0	0	..	..
Aug. 23. 0	..	..	..	..	..	..	..	..	N by E	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	N by E	..	..	..	..	..	..	..	..	..
4	29·973	66·4	62·2	4·2	..	..	71·2	..	NNE	..	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	58·7	8·73	NNE	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			N by E	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	89·8	0·00	NE	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	52·7		NE	..	..	..	..	..	..	..	..	..
14	30·005	59·5	58·7	0·8	..	..		16·040	N by E	..	..	..	..	0	0	0	..	..
16	29·992	59·4	59·1	0·3	58·0	1·4	66·0		N by E	..	..	..	..	0	0	0	..	..
18	29·997	59·5	59·1	0·4	..	..	64·2	..	NNE	..	..	..	..	0	0	0	..	..
20	30·013	60·4	58·8	1·6	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	30·022	64·5	60·9	3·6	58·5	6·0	..	..	NNE	..	NNE	1·89	..	0	0	0	..	..
Aug. 24. 0	30·045	68·5	62·9	5·6	..	..	..	..	NNE	..	..	..	Pos.	3	3	0	..	..
2	30·047	69·0	63·3	5·7	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
4	30·044	66·0	61·5	4·5	58·0	8·0	..	..	N	..	..	..	..	0	0	0	..	..
6	30·047	64·5	59·7	4·8	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
8	30·063	60·5	57·7	2·8	..	..	70·0	..	NNE	..	..	..	..	0	0	0	..	..
10	30·092	58·3	55·7	2·6	53·5	4·8	48·5	8·73	NNE	..	..	..	..	0	0	0	..	..
12	30·109	55·7	53·2	2·5	..	..			NNE	..	..	..	..	0	0	0	..	..
14	30·104	50·8	49·8	1·0	..	..	82·6	0·00	NNE	..	..	..	..	0	0	0	..	..
16	30·100	49·2	48·9	0·3	49·0	0·2	41·0		N by E	..	..	..	..	0	0	0	..	..
18	30·094	52·3	52·0	0·3	..	..	66·2	16·040	N by E	..	..	..	..	0	0	0	..	..
20	30·093	56·2	54·2	2·0	..	..	64·0	..	N by E	..	..	..	..	0	0	0	..	..
22	30·101	63·3	56·7	6·6	53·5	9·8	..	..	N by E	..	NNE	3·23	Pos.	20	..	5	8	..
Aug. 25. 0	30·093	66·7	58·7	8·0	..	..	..	..	N by E	..	..	..	Pos.	5	..	3	..	..
2	30·090	65·0	57·7	7·3	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
4	30·082	65·0	58·7	6·3	54·0	11·0	..	..	NE	..	..	..	..	0	0	0	..	..
6	30·081	63·5	57·9	5·6	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
8	30·088	59·0	55·9	3·1	..	..	69·0	..	NNE	..	..	..	..	0	0	0	..	..
10	30·087	57·4	56·2	1·2	54·0	3·4	53·2	8·73	NNE	..	..	..	..	0	0	0	..	..
12	30·071	57·0	54·8	2·2	..	..			NNE	..	..	..	..	0	0	0	..	..
14	30·071	55·5	54·3	1·2	..	..	85·5	0·00	NNE	..	..	..	..	0	0	0	..	..
16	30·043	55·0	54·0	1·0	53·0	2·0	41·0		NNE	..	..	..	..	0	0	0	..	..
18	30·023	53·5	53·2	0·3	..	..	65·8	16·040	NNE	..	..	..	..	0	0	0	..	..
20	30·022	57·5	56·1	1·4	..	..	63·8	..	NNE	..	..	..	..	0	0	0	..	..
22	30·020	62·3	58·7	3·6	56·0	6·3	..	..	NE	..	NNE	3·00	..	0	0	0	..	..
Aug. 26. 0	30·009	65·0	60·7	4·3	..	..	..	..	NE	..	..	..	..	0	0	0	..	..

MINIMUM FREE THERMOMETER.

August 22d. 22h. The reading was higher than that of the Dry Thermometer at 12h.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: thin cirro-stratus: the sky was overcast with dark cirro-stratus till $21^h.10^m$, when the clouds became less dense, the Sun being visible through them.	T D
..	..		
..	Transit		
10	..	Overcast: cirro-stratus and scud: at $2^h.30^m$ a few drops of rain fell, and the day up to this time has been very	
..	..	gloomy.	
..	..		
..	..		
..	..		
10	In Equator	Overcast: cirro-stratus and scud.	
10	..	,, ,, a thick misty rain falling, it commenced at $14^h.50^m$.	
10	..	,, ,, the rain has ceased.	
10	..	,, ,,	T D
10	..	,, ,,	H B
$9\frac{3}{4}$	..	The clouds are now slightly broken around the zenith, and in some places the cirro-stratus is less dense than at the previous observation.	
10	Transit	Overcast: cirro-stratus and scud.	H B
10	..	,, ,,	T D
10	..	,, ,,	
9	..	Cirro-stratus, fleecy clouds, and scud nearly cover the sky: the sky remained overcast till $7^h.30^m$.	
10	..	Overcast: cirro-stratus and scud.	T D
7	..	The appearance of the sky since the last observation has been very variable: at present no part is free from cloud, yet many stars are visible in various places.	G
0	..	Cloudless.	
2	..	The sky had been nearly free from cloud since 14^h; at $15^h.45^m$ a few dark clouds appeared in the N. and S., and appear to be increasing.	
10	..	The sky has been overcast since $16^h.5^m$: cirro-stratus and scud.	
9	..	Overcast till $17^h.15^m$, when the dark clouds became of a light colour, with numerous breaks, through which a deep blue sky was seen: at present the clouds are of a dull white, of no particular formation.	G
9	..	At 21^h an extensive portion of the sky was free from cloud; at present it is nearly covered with cirro-strati, cirro-cumuli, cumuli, and fleecy clouds.	H B
$9\frac{3}{4}$	..	The sky has been generally covered with cloud since the last observation: at present cumulo-strati prevail around the S.W. horizon, and detached cumuli in various other directions.	
10	..	Overcast: cirro-stratus and dark scud.	H B
10	Transit	,, ,,	T D
$9\frac{1}{2}$	..	With the exception of a few small breaks in various parts of the sky, it is nearly overcast with cumuli and cumulo-strati.	G
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, a slight shower of rain fell at $8^h.25^m$.	G
10	..	,, ,,	H B
10	..	,, ,,	
9	..	The sky remained overcast till $15^h.50^m$, when several stars were visible in the zenith; they are now gradually disappearing as the scud and vapour advance.	
6	..	Soon after the last observation the clouds became less dense in and about the zenith, and have remained so to the present time, cirro-stratus and scud being plentifully distributed.	
10	..	At $18^h.3^m$ a dense cirro-stratus came up from the S. E., and obscured the sky; since that time the sky has been overcast with cirro-stratus and scud.	H B
10	..	Overcast: cirro-stratus and scud.	T D
10	..	Overcast: cirro-stratus and scud.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 26. 2	29·989	68·0	62·8	5·2	..	..	..	..	NE	..	..	..		0	0	0	..	..
4	29·955	67·4	61·8	5·6	57·5	9·9	..	..	NE	..	..	..	..	0	0	0	..	..
6	29·940	66·8	62·3	4·5	..	..	70·5 / 56·6	..	NE	..	..	..	..	0	0	0	..	..
								8·73										
8	29·935	61·5	59·2	2·3	..	..	88·7	0·00	NE	..	..	..	..	0	0	0	..	..
10	29·951	60·1	58·5	1·6	56·5	3·6	51·5		NE	..	..	..	..	0	0	0	..	..
12	29·944	57·5	57·2	0·3	..	..		16·040	NE	..	..	..	..	0	0	0	..	..
14	29·910	58·6	57·9	0·7	..	..	65·8		NE	..	..	..	..	0	0	0	..	..
16	29·901	59·5	58·8	0·7	58·0	1·5	63·8	..	NE	..	..	..	..	0	0	0	..	..
18	29·876	60·4	59·8	0·6	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
20	29·877	62·7	61·2	1·5	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
22	29·873	71·8	66·9	4·9	62·5	9·3	..	..	NE	..	NE	2·18	..	0	0	0	..	..
Aug. 27. 0	29·862	73·5	65·0	8·5	..	..	..	..	NE	0 to ½	..	..	Pos.	2	2	0	..	..
2	29·842	74·5	62·3	12·2	..	..	..	..	ENE	0 to ½	..	..	Pos.	3	..	2	..	..
4	29·819	75·5	63·2	12·3	56·0	19·5	..	..	NE	0 to ½	..	..	..	0	0	0	..	..
6	29·810	70·1	62·0	8·1	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
8	29·824	62·7	60·2	2·5	..	..	79·1 / ~~61·5~~	8·73	Calm	..	..	..	..	0	0	0	..	..
10	29·835	60·3	58·7	1·6	58·0	2·3			Calm	..	..	..	..	0	0	0	..	..
12	29·836	58·9	57·7	1·2	..	..	101·5	0·00	Calm	..	..	..	..	0	0	0	..	..
							52·0											
14	29·818	58·9	58·4	0·5	..	..		16·040	Calm	..	..	..	..	0	0	0	..	..
							66·0 / 64·0											
16	29·835	59·4	59·0	0·4	58·5	0·9	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·826	58·5	58·5	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·831	62·6	61·4	1·2	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	29·831	71·0	65·5	5·5	62·0	9·0	..	..	NE	..	NE	3·04	..	0	0	0	..	..
Aug. 28. 0	29·825	76·0	62·5	13·5	..	..	..	..	NE	0 to ½	..	..	Pos.	2	2	0	..	..
2	29·812	76·9	62·7	14·2	..	..	..	..	ENE	..	..	..	..	0	0	0	..	..
4	29·793	76·8	64·0	12·8	55·5	21·3	79·8 / 57·2	..	NE	..	..	..	..	0	0	0	..	..
								8·73										
6	29·795	68·4	60·3	8·1	..	..			ENE	..	..	..	Pos.	2	2	0	..	..
							102·0	0·00										
8	29·816	61·0	57·2	3·8	..	..	49·0		Calm	..	..	..	..	0	0	0	..	..
10	29·825	57·2	55·2	2·0	54·0	3·2		16·040	Calm	..	..	..	..	0	0	0	..	..
12	29·822	58·2	57·9	0·3	..	..	66·5		Calm	..	..	..	..	0	0	0	..	..
14	29·811	59·3	58·7	0·6	..	..	64·5	..	NNE	..	NE	2·28	..	0	0	0	..	..
16	29·798	59·4	58·7	0·7	57·5	1·9	..	..	NNE	..	..	..	..	0	0	0	..	..
18	29·800	57·8	57·7	0·1	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud: since the last observation a thin rain has fallen at intervals.	T D
10	Transit	,, ,,	H B
8	..	The clouds are now extensively broken in the northern portion of the sky: cumuli and cirro-strati are the prevailing clouds, with a low scud passing rapidly over from the E.: the clouds became broken soon after the last observation.	
4	..	Cirro-stratus and scud to the N., the latter moving from the E.N.E.: at $7^h.\ 40^m$ the sky was nearly cloudless.	
10	..	Overcast: cirro-stratus and scud: the sky became suddenly overcast at $9^h.\ 10^m$.	H B
7	..	Cirro-stratus and haze prevail all around the horizon.	T D
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	T D
8	..	Cumulo-strati around the W. and N. W. horizon: cumuli, cirro-strati, and white scud in other directions: the clouds became broken at about 21^h; and since that time a considerable portion of the sky has been clear.	H B
7	..	Cumulo-strati, cumuli, and cirro-strati are still the prevailing clouds: fleecy clouds are continually passing over from the E.N.E.	
5	..	Detached cumuli, principally S. of the zenith and near the S.W. horizon: a large cumulo-stratus in the N. E., and others of smaller extent in various directions.	H B
4	Transit	Detached cumuli and cirri in the S. and N.: portions of light cumuli and scud continually passing over the sky.	T D
3	..	Detached cumuli, light cirri, and fleecy clouds scattered in various directions.	
2	..	Light cirri and fleecy clouds in the N. N. E.; otherwise the sky is cloudless.	
5	..	Cirro-stratus in the N. horizon to a considerable altitude: detached fragments of cirri continually passing over.	T D
4	..	The greatest part of the sky has been cloudless since 10^h: several black masses of cloud of a threatening appearance scattered about the sky.	G
8	..	At times since 12^h the sky has been nearly cloudless, and at other times it has been overcast with black scud; it has been principally in the latter state during the last hour: at present a portion of the sky N. of the zenith, and a few smaller portions to the S., are clear.	
10	..	Overcast: cirro-stratus: gentle airs from the N. E.	
10	..	,, ,, gentle airs from the N. N. E.	
5	..	Between 18^h and 19^h a large quantity of scud passed at intervals from the E., exhibiting at times a broken upper cloud: at present there is a great deal of comoid cirri, with a little scud, passing near the earth.	G
6	..	Cirri, fleecy clouds, and light scud in various parts of the sky: the portion of the sky most free from cloud is in the N. E.	T D
5	..	Cirro-stratus and scud in every direction: a fine blue sky in the N. E.: at $22^h.\ 50^m$ an arc of a solar halo was visible, too faint for measurement.	
8	..	Cumuli, cumulo-strati, and scud scattered about in various directions: at $6^h.\ 5^m$ the halo was still visible, being most beautifully tinted with the following colours, red, orange, a light green, and an azure blue: the vertical radius from several measurements was $23\frac{1}{4}°$.	T D
4	..	Cirri, imperfectly-formed cumuli, and light scud: the cumuli are very black to the W. of the zenith: the halo continued visible till $2^h.\ 30^m$.	C T
6	Transit	Cirro-stratus and scud extending from the N. to the N.W., at a considerable altitude above the horizon: cirri in and about the zenith: the eastern portion of the sky is generally clear.	C T
4	..	Light cirri in various directions: cirro-stratus in the S. S.W.: the zenith, and for some distance around it, is clear.	T D
1	..	A few strati near the horizon; otherwise cloudless.	G
0	..	Cloudless.	G
8	..	Since the last observation cirro-stratus has come up, obscuring the greater portion of the sky; at present every part is covered, except the N. and a small portion in the S. S.W. horizon.	T D
10	..	Overcast: cirro-stratus and scud.	H B
7	..	Cirro-cumuli are distributed over the sky, with cirro-stratus around the horizon: the clouds became broken about half-an-hour since.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Aug. 28. 20	29·807	62·2	60·6	1·6	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	29·829	66·1	62·0	4·1	..	..	..	..	N by E	0 to ½	N	0·95	..	0	0	0	..	..
Aug. 29. 0	29·810	69·0	63·6	5·4	..	..	..	..	N	0 to ½	..	..	..	0	0	0	..	..
2	29·807	72·4	64·6	7·8	..	..	..	..	N	0 to 1	..	..	..	0	0	0	..	..
4	29·810	64·5	63·2	1·3	61·5	3·0	..	..	N to NE	0 to ½	..	..	Neg.	40	..	20	20	0. 18
6	29·835	63·6	61·9	1·7	..	..	73·5 / 55·7	.. / 8·96	NNE	..	..	..	..	0	0	0	..	..
8	29·861	61·0	58·7	2·3	..	..	93·0	0·00	NNE	..	..	..	..	0	0	0	..	..
10	29·894	58·7	57·8	0·9	57·0	1·7	48·0	16·360	Calm	..	..	..	Pos.	2	2	0	..	..
12	29·903	56·8	56·7	0·1	..	..	66·5 / 64·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
14	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	30·010	61·6	58·9	2·7	..	..	..	..	Calm	..	N	2·40	..	0	0	0	..	..
Aug. 30. 0	30·008	61·8	58·6	3·2	..	..	..	..	N	..	..	..	..	0	0	0	..	..
2	..	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
8	30·031	62·2	60·0	2·2	..	..	~~77·2~~	..	Calm	..	..	..	..	0	0	0	..	..
10	..	..	..	..	..	..	51·3	8·96	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
14	30·051	54·2	53·9	0·3	..	..	93·5	0·00	Calm	..	..	..	..	0	0	0	..	..
16	30·042	53·1	52·6	0·5	52·3	0·8	45·8	16·360	Calm	..	..	..	..	0	0	0	..	..
18	30·050	53·0	52·9	0·1	..	..	66·0 / 64·8	..	Calm	..	..	..	..	0	0	0	..	..
20	30·059	54·5	53·9	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·063	64·6	60·2	4·4	58·8	5·8	..	..	Calm	..	N	0·30	..	0	0	0	..	..
Aug. 31. 0	30·050	73·6	62·7	10·9	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
2	30·026	75·8	62·8	13·0	..	..	..	..	W by S	..	..	..	..	0	0	0	..	..
4	30·010	76·5	65·2	11·3	57·5	19·0	..	..	Variable	..	..	..	..	0	0	0	..	..
6	30·011	69·6	60·4	9·2	..	..	77·5	..	NW	..	NW	1·08	Pos.	2	2	0	..	..
8	30·033	65·1	59·3	5·8	..	..	56·3	.. / 8·96	NNW	..	..	..	Pos.	2	2	0	..	..
10	30·049	62·6	58·2	4·4	55·0	7·6	100·5 / 54·5	0·00	NNW	..	..	..	..	0	0	0	..	..
12	30·063	60·3	58·2	2·1	..	..	66·0	16·360	N	..	NNW	0·52	..	0	0	0	..	..
14	30·075	58·0	55·8	2·2	..	..	65·0	..	N	..	..	..	..	0	0	0	..	..
16	30·071	57·0	55·9	1·1	55·5	1·5	..	..	N by E	..	..	..	..	0	0	0	..	..
18	30·067	57·0	56·2	0·8	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
20	30·090	56·5	55·2	1·3	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
22	30·113	58·6	56·4	2·2	54·5	4·1	..	..	N by E	..	N	1·38	..	0	0	0	..	..

ELECTRICITY.

August 29d. 4h. There was a spark at the distance of 0in·02.

RAIN.

August 31d. 12h. The amount collected during the month of August in the rain-gauge No. 4 was 4in·00; and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the months of July and August was 5in·87.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus, and scud.	C T
10	..	The sky is covered with a white cloud of no definite modification, in addition to which near the horizon in the N. are ill-formed cumuli, and to the S. there is much scud.	G
8	..	Cumuli, cumulo-strati, cirro-strati, and scud in every direction: clear breaks of some extent N. E. of the zenith: some fine cumuli S. of the zenith.	T D
8	..	Cumuli, cirro-strati, and scud, the former chiefly in the N.: several extensive breaks in every direction.	C T
8	..	Heavy cumulo-strati S. of the zenith, covering nearly the whole southern portion of the sky: frequent showers of rain have fallen since the last observation.	H B
8	Transit	Dense cumuli in the N. to a considerable altitude; cirro-stratus, light fleecy clouds, and scud elsewhere: the rain ceased soon after the last observation.	C T
8	..	Cumulo-stratus, cirro-stratus, and scud: some large breaks in the S. W. and N.	T D
3	1st Qr.	The appearance of the sky is constantly varying, scud of a dark colour passing quickly over: the Moon has been frequently visible.	G
9	..	At present a thin cirro-stratus covers every part of the sky, but several of the brighter stars are seen through it:	H B
..	..	the amount of cloud is exceedingly variable, sometimes the sky being nearly free from cloud, and in a few	
..	..	minutes afterwards overcast.	
..	..		
..	..		
10	..	Overcast: cirro-stratus: the morning has been cloudy throughout.	G
10	..	Overcast: cirro-stratus.	G
..	..		
..	..		
..	..		
1	Transit	At $0^h.\ 10^m$ the clouds became broken, and soon after large portions in the N. and W. became clear: the afternoon	
..	..	has been generally clear, cirri and cirro-cumuli occasionally prevailing: at present comoid cirri are scattered	
..	..	about the zenith.	G
2	..	Cirro-strati in fragments around the horizon: the stars appear dim as if shining through a thin cirro-stratus.	H B
8	Greatest declination S.	The sky became nearly clear in all directions soon after the last observation, with the exception of cirro-stratus around the horizon; it remained so for a short time only: about 15^h cirro-stratus and vapour rapidly extended, and have covered the greater part of the sky since that time.	
7	..	The sky is now covered principally with cirro-strati, cirro-cumuli, and light fleecy clouds of no definite modification: the sky has been one-half covered with cloud since the last observation.	
5	..	Cirro-stratus extending from the E. to the S. S. E., with scud beneath; in other directions a very small amount of cloud prevails.	H B
3	..	Cirro-stratus prevails at a low elevation in the S. horizon: some beautiful specimens of fleecy clouds S. E of the [zenith: a haze prevails.	T D
0	..	Cloudless.	
0	..	,, hazy.	T D
5	..	Cumuli and fleecy clouds: a haze prevails in every direction.	H B
4	..	Cirro-stratus along the W. horizon to a considerable altitude: cumuli and cirro-strati in the S. E., also near the horizon; the latter cloud is distributed near the horizon in every direction.	
8	Transit	Cirro-strati and scud distributed in every direction: since the last observation three-fourths of the sky have been generally covered.	
9	..	Cirro-strati and scud are everywhere distributed: the sky has been, with few exceptions, nearly overcast since the last observation.	H B
10	..	Overcast: cirro-stratus: the sky became overcast at $10^h.\ 50^m$.	T D
10	..	,, cirro-stratus and scud: the sky has remained overcast since the last observation.	
10	..	,, ,, the sky has remained overcast: rain is falling.	
10	..	,, ,, a few drops of rain are occasionally falling.	
10	..	,, ,, no break in the clouds has been observed during the night.	T D
10	..	,, ,,	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 1. 0	30·119	61·8	58·4	3·4	..	..	..	..	N by W	..	..	..	..	0	0	0	..	..
2	30·114	63·5	59·0	4·5	..	..	..	..	N by W	..	..	..	Pos.	2	2	0	..	..
4	30·105	66·7	59·7	7·0	54·5	12·2	..	..	N by E	..	..	..	..	0	0	0	..	..
6	30·127	63·0	58·5	4·5	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
8	30·150	60·0	56·4	3·6	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
10	30·157	56·5	54·1	2·4	52·0	4·5	65·0 / 53·1	8·96	NNE	..	..	..	..	0	0	0	..	..
12	30·163	53·6	52·6	1·0	..	..	86·2 / 45·0	0·00	NNE	..	..	..	..	0	0	0	..	..
14	30·161	55·2	53·3	1·9	..	..	66·2 / 64·8	16·360	N	..	..	..	..	0	0	0	..	..
16	30·159	55·5	53·7	1·8	51·5	4·0	..	..	N by E	..	..	..	..	0	0	0	..	..
18	30·167	53·7	52·2	1·5	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
20	30·176	55·5	53·4	2·1	..	..	..	..	N	..	..	..	..	0	0	0	..	..
22	30·182	65·7	59·7	6·0	55·5	10·2	..	..	NNE	..	NNE	3·40	..	0	0	0	..	..
Sep. 2. 0	30·168	72·1	62·6	9·5	..	..	..	..	NNE	..	..	..	Pos.	2	2	0	..	..
2	30·159	75·0	62·7	12·3	..	..	..	..	NNE	..	..	..	Pos.	2	2	0	..	..
4	30·154	74·4	61·0	13·4	51·5	22·9	74·4 / 44·3	..	NE	..	..	..	Pos.	2	2	0	..	..
6	30·136	68·7	59·7	9·0	..	..		8·96	Calm	..	..	..	..	0	0	0	..	..
8	30·152	60·5	58·4	2·1	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
10	30·171	55·7	54·7	1·0	55·0	0·7	100·0 / 36·8	0·00	Calm	..	..	..	Pos.	2	2	0	..	..
12	30·163	51·3	51·7	−0·4	..	..			Calm	..	..	..	..	0	0	0	..	..
14	30·157	48·5	49·4	−0·9	..	..		16·360	Calm	..	..	..	..	0	0	0	..	..
16	30·160	48·2	48·7	−0·5	..	..	66·0 / 64·5	..	Calm	..	..	..	..	0	0	0	..	..
18	30·162	45·8	46·2	−0·4	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	30·168	52·2	51·0	1·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·170	64·0	59·6	4·4	54·8	9·2	..	..	N	..	NNE	1·00	..	0	0	0	..	..
Sep. 3. 0	30·160	70·7	62·2	8·5	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
2	30·141	74·5	63·9	10·6	..	..	..	..	NNE	..	..	..	Pos.	1	1	0	..	..
4	30·115	73·8	63·6	10·2	54·0	19·8	73·6 / 46·4	..	NNE	..	..	..	..	0	0	0	..	..
6	30·100	69·5	62·1	7·4	..	..		8·96	NNE	..	..	..	Pos.	2	2	0	..	..
8	30·116	60·6	58·1	2·5	..	..			Calm	..	..	..	..	0	0	0	..	..
10	30·118	56·8	55·3	1·5	54·0	2·8	96·3 / 39·0	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·126	53·7	53·7	0·0	..	..			Calm	..	..	..	..	0	0	0	..	..
14	30·122	51·5	51·2	0·3	..	..		16·360	Calm	..	..	..	..	0	0	0	..	..
16	30·115	49·2	49·2	0·0	49·0	0·2	66·0 / 64·5	..	Calm	..	..	..	..	0	0	0	..	..
18	30·111	48·0	48·2	−0·2	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	30·123	50·7	50·7	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·125	60·6	58·7	1·9	57·0	3·6	..	..	Calm	..	NNE	0·73	..	0	0	0	..	..
Sep. 4. 0	30·102	70·0	62·5	7·5	..	..	..	..	NE	..	..	..	.	0	0	0	..	..
2	30·075	76·2	65·4	10·8	..	..	..	..	ENE	..	..	..	Pos.	2	2	0	..	..
4	30·058	73·0	63·7	9·3	56·0	17·0	..	..	ENE	..	..	..	Pos.	2	2	0	..	..
6	30·049	66·6	60·8	5·8	..	..	..	..	E by N	..	..	..	Pos.	2	2	0	..	..

DRY THERMOMETER.

September 2d. 12h, 14h, 16h, and 18h. The readings were lower than those of the Wet Thermometer.

September 3d and 4d. The readings were lower than those of the Wet Thermometer at 18h.

DEW POINT THERMOMETER.

September 2d. 16h. The observation was not taken.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud.	H B
10	..	,, ,,	H B
10	..	,, ,,	T D
10	..	,, ,, some portions of cirro-cumuli are exhibited in the S. and S.S.W.	
10	..	Overcast: cirro-stratus and scud: at $6^h.\ 55^m$ the clouds in the W. became broken, through which the Sun shone faintly for a few minutes: the clouds from the N. to W.S.W. were tinged with a fine gold colour.	
3	Transit	Considerable breaks in the clouds are in every direction except the S. part, where there are cirro-stratus and cumulo-stratus to an altitude of 45°. At $9^h.\ 45^m$ a corona was visible round the Moon, but the colours were not bright.	T D
3	..	The sky has been generally cloudless since 10^h, with scud passing at intervals: there has been a tendency to an upper cloud, as the Moon has frequently been surrounded by light thin clouds, which have much increased, particularly in the eastern hemisphere.	G
10	..	Within ten minutes after the last observation the sky was wholly covered by a dark cirro-stratus cloud, and since that time the night has been very dark.	
10	..	No change whatever has taken place since the last observation.	
10	..	,,	
10	..	At about ten minutes after the last observation the whole mass of cloud became much lighter, and there are at present many indications of the clouds becoming broken.	G
1	..	A few fleecy clouds and cumuli are scattered over the sky: the sky at $21^h.\ 40^m$ was perfectly cloudless.	H B
0	..	Cloudless since $22^h.\ 40^m$.	H B
$1\frac{1}{2}$	..	Cloudless, with the exception of some clouds of the cirro-stratus and cumulo-stratus character in the S. horizon, at a low elevation.	T D
0	..	Cloudless.	G
0	..	,,	
0	..	Cloudless, excepting a few clouds to no numerical extent near the N. horizon.	
0	Transit	Cloudless.	G
0	..	Cloudless, but very hazy: lines of cirro-stratus are near the N. horizon, but to no numerical amount.	H B
0	..	,, a fog is prevalent.	
0	..	Cloudless: there is a great deposition of moisture.	
0	..	,,	
0	..	Cloudless, but hazy near the horizon.	H B
0	..	Cloudless.	T D
0	..	Cloudless.	
0	..	,,	T D
0	..	,, hazy.	H B
0	..	,, ,,	
$\frac{1}{2}$	..	Cloudless, with the exception of cirro-stratus and vapour near the horizon.	
0	..	Cloudless: hazy.	H B
0	Transit	,, ,,	T D
0	..	,, a fog is prevalent.	
0	..	,, ,,	
0	..	,, a dense fog: it has gradually increased in density since $16^h.\ 50^m$.	
0	..	,, ,, within the last ten minutes the fog has become much less dense.	T D
2	..	Light scud and vapour near the N. horizon, and also in the S. E.: the fog has cleared off considerably since the last observation.	H B
5	..	Cumuli and scud are in various parts of the sky: at $22^h.\ 40^m$ the sky became nearly covered with cirro-stratus and light scud, since which time the clouds have been extensively broken: cloudless in the N.	
7	..	Cumuli, cirro-strati, and white scud nearly cover the sky; at $0^h.\ 55^m$ they suddenly increased in amount.	H B
2	..	Cumuli, cirro-strati, and detached portions of white scud are scattered N. E. of the zenith; the remainder of the sky is clear: the clouds began to decrease in amount soon after the last observation.	T D
0	..	Cloudless, excepting small portions of white scud scattered in various parts of the sky.	

Day and Hour Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	°	°	in.		in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 4. 8	30·059	60·2	57·4	2·8	..	..	..	..	..	..		..	E by S	..	ESE	1·03	Pos.	2	2	0	..	..
10	30·060	56·2	55·7	0·5	55·0	1·2	..	..	..	..		..	Calm	..	..	..	Pos.	2	2	0	..	..
12	30·068	54·4	54·4	0·0	..	..	..	..	..	..		..	Calm	..	..	..	Pos.	2	2	0	..	..
14	30·054	54·7	54·7	0·0	..	..	73·2	54·2		8·96			Calm	..	..	..	Pos.	2	2	0	..	..
								98·5			0·00											
								46·8														
16	30·038	56·5	56·4	0·1	56·5	0·0				16·360			Calm	..	..	..	Pos.	2	2	0	..	..
18	30·035	56·5	56·6	−0·1	..	..		66·0					Calm	..	..	..	Pos.	2	2	0	..	..
20	30·042	60·0	59·5	0·5	..	..		64·2		..			Calm	..	..	..	Pos.	2	2	0	..	..
22	30·024	69·7	65·4	4·3	62·5	7·2	..			..			ENE	..	ENE	0·30	..	0	0	0	..	..
Sep. 5. 0	29·999	76·9	67·1	9·8	..	..	..	..	..	..		..	ENE	..	..	..	Pos.	2	2	0	..	..
2	29·979	78·1	67·3	10·8	..	..	..	..	..	..		..	E by N	..	..	..	Pos.	2	..	3	..	..
4	29·968	75·6	65·9	9·7	60·5	15·1	79·3	58·0		8·96			E	..	..	..	Pos.	30	..	5	..	..
6	29·938	70·2	63·2	7·0	..	..							ENE	..	..	..	Pos.	30	..	7	..	..
8	29·956	63·6	60·8	2·8	..	..		99·3			0·00		E by N	..	..	..	Pos.	30	..	5	..	..
10	29·944	60·5	59·9	0·6	59·0	1·5		47·0					Calm	..	..	..	Pos.	20	..	4	..	..
12	29·912	61·2	60·7	0·5	..	..				16·360			Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..		66·2					Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		64·5		..			Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..			..			Calm	..	..	..	..	..	..	..	..	..
20	29·850	64·0	63·2	0·8	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
22	29·836	71·8	67·7	4·1	..	..	..			..			Calm	..	ENE	2·19	..	0	0	0	..	..
Sep. 6. 0	29·809	80·9	70·1	10·8	..	..	..			..			ENE	..	..	..	..	0	0	0	..	..
2	..	..	..	..	..	..	..			..			SW	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..			..			..	..	..	..	..	..	..	..	..	..
6	29·782	70·5	65·7	4·8	..	..	..			..			Calm	..	..	..	Pos.	2	2	0	..	..
8	..	..	..	..	..	..	86·4			..			Calm	..	..	..	..	..	..	..	..	..
10	29·792	62·5	62·1	0·4	..	..	53·5			..			Calm	..	..	..	..	0	0	0	..	..
12	..	..	..	..	..	..				8·96			Calm	..	..	..	..	..	..	..	..	..
14	29·773	57·5	57·4	0·1	..	..					0·00		Calm	..	..	..	..	0	0	0	..	..
							114·5															
16	29·790	55·0	55·2	−0·2	..	..	48·5						Calm	..	..	..	..	0	0	0	..	..
										16·380												
							66·8															
							65·0															
18	29·791	54·5	54·7	−0·2	..	..				..			Calm	..	..	..	..	0	0	0	..	..
20	29·790	58·2	57·3	0·9	..	..	..			..			Calm	..	..	..	Pos.	2	2	0	..	..
22	29·802	68·5	65·5	3·0	63·0	5·5	..			..			Calm	..	S	0·40	Pos.	40	..	5	..	..
Sep. 7. 0	29·791	75·8	67·4	8·4	..	..	..			..			Calm	..	..	..	Pos.	20	..	2	..	..
2	29·761	77·2	69·4	7·8	..	..	..			..			Calm	..	..	..	Pos.	2	2	0	..	..
4	29·739	73·5	65·4	8·1	59·0	14·5	..			..			Calm	..	..	..	Pos.	5	..	5	..	2. 0

DRY THERMOMETER.
September 6d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

DEW POINT THERMOMETER.
September 6d. 16h. The observation was inadvertently omitted.

OSLER'S ANEMOMETER.
September 6d. 4h. The direction-pencil was found off the rack-work, and had been so since September 6d. 2h. 10m.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless.	T D
0	..	,,	T D
0	Transit Perigee	A few clouds have collected near the horizon in the S. within the last twenty minutes, but as yet to no numerical amount.	G
9	..	The sky continued covered by quickly-moving scud till $13^h.20^m$, at which time the Moon was occasionally visible; and at present, $13^h.58^m$, about one-half of the sky is cloudy: at 14^h the whole of the sky was again covered, except a small portion near the N. horizon: the clouds, chiefly scud, move quickly from the S. E.: there are occasional gentle airs from the N. E.	
10	..	Overcast: a large quantity of scud has passed from the S. E.	
10	..	,, the scud is of a less dense nature, and in some parts it has the appearance of breaking.	
0	..	Soon after 18^h the clouds became broken, and they gradually dispersed till nearly 19^h, at which time the sky was nearly cloudless, and of a whitish blue; it has continued so till the present time, except a few clouds near the N. horizon.	G
5	..	Cirro-stratus and scud cover the whole sky.	H B
$1\frac{1}{2}$	..	Cumuli near the N. horizon, and fragments of light scud in other directions: the Sun has been occasionally visible through the clouds.	
0	Full	Cloudless: with the exception of a few fragments of light scud occasionally passing from the E. N. E., the sky has been generally cloudless since 0^h.	H B
0	..	Cloudless.	G
0	..	,, a few small clouds have been occasionally visible since 6^h.	
0	..	,, a few small clouds have been occasionally visible in various parts of the sky.	
0	..	,, ,,	G
9	Transit	Cirro-stratus and scud nearly cover the sky: at $12^h.40^m$ the clouds suddenly cleared off.	H B
..	..	Foggy.	
..	..		
..	In Equator		
10	..	A thick fog, through which the Sun occasionally shines.	T D
4	..	Cirro-stratus in the N. horizon: detached cumuli and fleecy clouds S.W. of the zenith.	
7	..	Cirro-stratus in the N.; also closely-packed and massive cumuli in the S.: the clouds have an electrical	
..	..	appearance.	
..	..		
8	..	The greater portion of the sky is covered by a cirro-stratus cloud: clear in the S.W.	
..	..		
4	..	Cirro-stratus in the W. and S.W.: cirri and light fleecy clouds in the zenith: a ground fog prevails.	T D
..	..		
2	Transit	The sky has been nearly free from cloud during the last two hours, but a low fog is now passing from the N., obscuring the Moon and a portion of the sky to the S. of the zenith.	H B
0	..	Soon after the last observation the sky became wholly covered with fog, and objects on the earth at a short distance could not be seen; it remained in this state for about half an hour, during which time several uncoloured coronæ were visible round the Moon: the sky is gradually becoming clear, but the stars are still dim.	
1	..	Cloudless, with the exception of fragments of cirro-stratus near the S. horizon.: the sky has been generally cloudless since the last observation.	
3	..	Cirro-strati and light fleecy clouds, of no definite modification, are distributed to the S. of the zenith: a dense fog.	H B
3	..	Thin cirro-stratus towards the S. horizon, with a few light clouds scattered about the zenith: a slight fog.	L
5	..	Cirro-strati and fleecy clouds are scattered in various parts of the sky: cirri about the zenith, and cumuli in the N. horizon.	
10	..	Cirro-strati and fleecy clouds cover the sky, except a few very small breaks to no numerical amount about the zenith.	
10	..	Overcast: cumulo-strati, cirro-strati, and scud: thunder has been occasionally heard since the last observation: at $3^h.20^m$ a few drops of rain fell: the cumulo-strati are very dark, and are to the North.	L

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volts 1.	Straws of Volts 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 7. 6	29·727	70·5	63·9	6·6	..	..	..	..	Calm	..	..	..	Pos.	8	..	5	5	3. 0
8	29·736	63·4	61·2	2·2	..	..	80·9	..	Calm	..	..	..	Pos.	5	..	5	..	3. 0
							59·0											
10	29·737	63·4	61·3	2·1	60·0	3·4		8·96	Calm	..	..	..	Pos.	8	..	5	5	6. 0
							106·5											
12	29·735	61·7	60·5	1·2	..	..	54·0	0·00	Calm	..	..	..	..	0	0	0	..	..
								16·380										
14	29·736	61·8	60·2	1·6	..	..	66·8		Calm	..	..	..	..	0	0	0	..	..
16	29·739	61·0	59·9	1·1	59·0	2·0	65·2	..	Calm	..	..	..	..	0	0	0	..	..
18	29·751	59·0	58·2	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·790	60·8	58·2	2·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·799	63·6	59·7	3·9	56·0	7·6	..	..	Calm	..	WSW	1·10	..	0	0	0	..	..
Sep. 8. 0	29·798	71·2	63·3	7·9	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
2	29·810	72·0	63·7	8·3	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
4	29·823	71·0	64·2	6·8	59·0	12·0	~~68·8~~	..	WSW	..	..	..	..	0	0	0	..	..
6	29·836	67·8	63·0	4·8	..	..	53·3	8·96	Calm	..	..	..	..	0	0	0	..	..
8	29·857	63·0	61·0	2·0	..	..	91·7	0·00	Calm	..	..	..	..	0	0	0	..	..
10	29·879	59·3	58·5	0·8	58·0	1·3	..	16·385	Calm	..	..	..	..	0	0	0	..	..
12	29·871	58·2	57·7	0·5	..	..	67·0		Calm	..	..	..	..	0	0	0	..	..
14	29·874	56·5	56·5	0·0	..	..	65·2	..	Calm	..	..	..	..	0	0	0	..	..
16	29·870	56·0	56·2	−0·2	55·6	0·4			Calm	..	..	..	..	0	0	0	..	..
18	29·869	53·7	54·1	−0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·881	57·3	57·2	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·910	65·2	63·4	1·8	61·5	3·7	..	..	Calm	..	SW	1·75	Pos.	5	..	3	..	..
Sep. 9. 0	29·904	74·8	67·7	7·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·910	72·2	65·4	6·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	29·905	76·6	67·2	9·4	62·0	14·6	..	..	Calm	..	..	..	..	0	0	0	..	..
6	29·943	67·7	63·6	4·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
8	29·967	63·0	61·6	1·4	..	..	76·7	..	Calm	..	..	..	..	0	0	0	..	..
							58·0	8·96										
10	30·002	61·5	60·9	0·6	60·5	1·0			Calm	..	..	..	..	0	0	0	..	..
12	30·038	59·8	59·4	0·4	..	..	96·5	0·00	Calm	..	..	..	..	0	0	0	..	..
							52·5											
14	30·057	58·4	58·4	0·0	..	..		16·385	Calm	..	..	..	..	0	0	0	..	..
							67·2											
16	30·073	58·8	58·7	0·1	58·5	0·3	65·8	..	NNE	..	..	..	..	0	0	0	..	..
18	30·100	59·3	59·2	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	30·137	62·6	61·6	1·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·160	65·8	63·2	2·6	61·0	4·8	..	..	NE	..	NNE	0·70	..	0	0	0	..	..
Sep. 10. 0	30·178	68·7	65·0	3·7	..	..	..	..	N by W	..	..	..	..	0	0	0	..	..
2	30·177	70·5	65·5	5·0	..	..	..	..	N	..	..	..	..	0	0	0	..	..
4	30·180	70·0	65·0	5·0	61·8	8·2	..	..	N by E	..	..	..	Pos.	2	2	0	..	..
6	30·178	67·0	64·0	3·0	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..

DRY THERMOMETER.
September 8d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

RADIATION MINIMUM THERMOMETER.
September 8d. 22h. The reading was omitted.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS	Observer.
5	..	Detached cumuli, cirro-strati, and scud, are scattered over the sky: soon after the last observation the sky to the S. of the zenith became nearly free from cloud.	H B
2	..	Clouds, principally to the N.W. and along the N. horizon: cirro-stratus extends from the N. N. E. to the S.W., at an altitude of 10° above the horizon.	
10	..	Between 8^h and 9^h many very bright flashes of lightning were seen, chiefly in the N.: at $8^h.35^m$ the sky became nearly obscured; cumulo-strati were also seen: the Moon is occasionally visible through the clouds.	H B
10	..	At $11^h.10^m$ the sky was nearly cloudless, but soon after that time light scud came up from the S. and covered the sky in three minutes: it is now overcast, with cirro-stratus and quick moving scud.	L
10	Transit	Overcast: cirro-stratus.	
10	..	,, ,,	
8	..	The clouds became broken soon after the last observation: cirro-strati and fleecy clouds are in every part of the sky, with a few small breaks in various directions.	
10	..	Overcast: cirro-stratus.	L
9	..	Cirro-stratus and scud: at $21^h.55^m$ the clouds became broken in and to the N. E. of the zenith, since which time they have considerably increased: the Sun is shining through the clouds.	T D
7	..	Cumuli, cumulo-strati, cirro-strati, and scud, are scattered over every part of the sky: the Sun is frequently obscured by the clouds.	
10	..	At $1^h.10^m$ the sky became covered with a thin cirro-stratus cloud, through which the Sun is shining: several detached portions of scud are scattered in different directions.	T D
10	..	Overcast: thin cirro-stratus.	L
7	..	Thin cirro-stratus, fleecy clouds, and scud: small breaks are in every part of the sky.	
1	..	Cirro-strati and a few light clouds are towards the N. horizon; the other parts of the sky are cloudless.	
0	..	Cloudless.	L
0	..	,,	T D
0	..	,, a thick haze is prevalent.	
10	Transit	The haze mentioned above gradually increased into a dense fog: at $15^h.40^m$ the sky became covered with a thin cirro-stratus, through which the Moon is visible: scud is passing quickly over the Moon.	
7	..	At $17^h.10^m$ the clouds became broken in every part of the sky: the fog has become less dense.	
0	..	The fog increased in density soon after the last observation, but the sky is now free from cloud.	T D
2	..	Cirro-stratus near the N. and S. horizon: the fog still continues, but not so dense as at the previous observation: hazy.	H B
3	..	Cumuli and cirro-stratus towards the S., and light clouds in other directions.	L
9	..	Cirro-stratus, cumulo-strati, and scud cover the greater part of the sky: small breaks are about the zenith.	
8	..	Cirro-stratus, cumulo-strati, fleecy clouds, and scud: small breaks are about the zenith.	L
10	..	Cirro-stratus, cumulo-strati, fleecy clouds, and scud cover the sky.	T D
8	..	Cirro-stratus and portions of scud cover the sky, except a large clear break in the zenith, through which the stars are visible: frequent flashes of lightning have been seen in the S. S.W. and in the E.	
10	..	Overcast: cirro-stratus: lightning is frequent.	T D
10	..	Cirro-stratus and scud cover the sky: the Moon is visible, but is occasionally obscured by scud, which is passing from the N. N.W.	H B
10	..	Cirro-stratus and scud: the clouds appear less dense than at the previous observation: the Moon's place is visible.	
10	Transit	Overcast: cirro-stratus and scud: the clouds are more dense than at the last observation: the Moon is not visible.	
10	..	,, ,,	
$9\frac{3}{4}$	..	There are a few breaks in the clouds round the zenith, and the cirro-stratus in every direction appears less dense.	H B
10	..	Overcast: cirro-stratus, scud, and fleecy clouds.	L
10	..	Overcast: cirro-stratus, scud, and fleecy clouds.	
8	..	Cirro-stratus and scud cover the sky: the Sun is occasionally shining through the clouds.	L
10	..	Cirro-stratus and scud of various densities cover the sky.	H B
4	..	Cirro-stratus and scud in the S. E. and W. S.W., at a considerable altitude above the horizon: cloudless in the N. of the zenith, with the exception of a few linear cirri.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 10. 8	30·201	63·7	62·6	1·1	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
10	30·229	61·4	60·9	0·5	60·3	1·1	72·5 / 60·4	8·96	NNE	..	..	..	..	0	0	0	..	..
12	30·238	62·3	61·2	1·1	..	..	95·0	0·00	NNE	..	..	..	..	0	0	0	..	..
14	30·235	61·8	60·8	1·0	..	..	54·2		Calm	..	..	..	..	0	0	0	..	..
16	30·228	61·3	60·5	0·8	60·0	1·3		16·385	Calm	..	..	..	..	0	0	0	..	..
18	30·234	61·5	60·2	1·3	..	..	67·5		Calm	..	..	..	..	0	0	0	..	..
20	30·259	63·0	61·7	1·3	..	..	66·0	..	NNE	..	..	..	..	0	0	0	..	..
22	30·260	69·4	65·7	3·7	63·8	5·6	..	..	NE	..	N	1·52	..	0	0	0	..	..
Sep. 11. 0	30·259	70·0	66·1	3·9	..	..	..	..	ENE	..	..	..	..	0	0	0	..	..
2	30·252	72·6	66·6	6·0	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
4	30·232	73·8	67·8	6·0	65·0	8·8	76·3	..	NE	..	..	..	..	0	0	0	..	..
6	30·223	66·8	64·8	2·0	..	..	55·7	8·96	E	..	..	..	..	0	0	0	..	..
8	30·239	63·0	62·4	0·6	..	..			Calm	..	..	..	..	0	0	0	..	..
10	30·258	60·7	60·9	−0·2	61·0	−0·3	86·3	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·260	58·6	58·6	0·0	..	..	49·6		Calm	..	..	..	..	0	0	0	..	..
14	30·260	58·5	58·4	0·1	..	..		16·390	Calm	..	..	..	..	0	0	0	..	..
16	30·251	58·0	58·2	−0·2	57·7	0·3	67·5		Calm	..	..	..	..	0	0	0	..	..
18	30·250	58·2	58·2	0·0	..	..	66·0	..	Calm	..	..	..	..	0	0	0	..	..
20	30·274	58·1	57·7	0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·289	68·5	62·5	6·0	56·0	12·5	..	..	NE	..	NE	0·48	..	0	0	0	..	..
Sep. 12. 0	30·283	75·0	65·4	9·6	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
2	30·264	74·8	67·7	7·1	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
4	30·262	73·7	67·4	6·3	64·0	9·7	81·0 / 51·0	.. / 8·96	NNE	..	..	..	Pos.	..	..	5	..	..
6	30·256	70·0	65·7	4·3	..	..	101·4	0·00	NNE	..	..	..	Pos.	..	..	3	..	..
8	30·262	64·5	61·7	2·8	..	..			NNE	..	..	..	Pos.	2	2	0	..	..
10	30·289	63·1	62·2	0·9	61·0	2·1	..	16·390	NNE	0 to 1	..	..	Pos.	2	2	0	..	..
12	30·275	59·6	58·7	0·9	..	..			NNE	½ to 1	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	67·5	..	NNE	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	65·8	..	NNE	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..
22	30·245	63·4	57·9	5·5	..	..	..	..	NNE	¼ to ½	N	3·65	..	0	0	0	..	..
Sep. 13. 0	..	..	..	..	..	..	75·0		NE	0 to ½	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	56·0	8·96	NNE	0 to 2	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..			NNE	½ to 1	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	94·5	0·000	NE	0 to ½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	49·5		NE	..	..	..	..	..	..	..	..	..
10	30·174	58·6	55·0	3·6	..	..		16·390	NE	..	..	..	..	0	0	0	..	..
12	..	..	..	..	..	..	67·0		ENE	..	..	..	..	..	..	..	..	..
14	30·143	57·7	55·7	2·0	..	..	65·2		NNE	..	..	..	..	0	0	0	..	..
16	30·132	57·0	55·3	1·7	53·5	3·5	..		NNE	..	..	..	..	0	0	0	..	..

DRY THERMOMETER.
September 11d. 10h and 16h. The readings were lower than those of the Wet Thermometer.

DEW POINT THERMOMETER.
September 11d. 10h. The reading was higher than that of the Dry Thermometer.

RADIATION MINIMUM THERMOMETER.
September 12d. 22h. The lid of the box had not been removed on the preceding evening.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
3	..	Cirro-strati, fleecy clouds, and scud to the S. of the zenith: cirri and cirro-stratus round the horizon: a thin fog: at $6^h.\ 50^m$ dark scud and cirro-stratus suddenly came up from the S. E.	H B
10	..	The amount of cloud has been very variable, the sky being alternately clear and cloudy: foggy. At $9^h.\ 5^m$ a meteor was observed passing to the S. of the square of Pegasus: the sky is now overcast with cirro-stratus.	H B
10	..	Overcast: cirro-stratus and scud.	L
10	..	,, ,,	
10	..	,, ,,	
10	Transit	,, cirro-stratus, scud, and fleecy clouds: the Moon is occasionally visible through the clouds.	
10	..	,, cirro-stratus and scud.	L
10	..	,, ,, the Sun is occasionally visible through the clouds.	T D
10	..	Overcast: cirro-stratus and scud: there is a small break in the clouds to the N. N. E. of the zenith.	
9	..	Cirro-stratus and scud: the clouds are slightly broken in and to the S.W. of the zenith, the Sun being visible through them.	T D
9	..	Overcast: cirro-stratus, scud, and fleecy clouds: there are small breaks in the clouds in every part of the sky.	L
1	..	Cloudless, with the exception of a bank of cirro-stratus towards the N. horizon.	
0	..	Cloudless.	
0	..	,,	L
0	..	,, hazy in the N. horizon.	T D
10	..	Since the last observation the sky has been covered with cirro-stratus: a thin haze.	
10	..	Overcast: cirro-stratus: hazy.	
10	Transit	,, ,, a dense fog. The Observatory is not visible from the Magnetic House: a great deposition of moisture.	
3	..	Cirro-stratus in the S. and S.W. horizon, and light clouds in the N.: at $19^h.\ 20^m$ the fog began to clear off.	T D
9	..	Cirro-stratus, fleecy clouds, and scud: cirro-stratus and cirro-cumuli near the N. horizon: the sky is now nearly covered with clouds, which suddenly came up from the N. E.: clear near the S. horizon.	H B
9	3rd Qr.	The amount of cloud has been very variable since the last observation: at $22^h.\ 35^m$ cirro-strati, cirro-cumuli, cirri, and light scud covered about one-third of the sky, since which time the clouds have increased, and cirro-strati, fleecy clouds, and scud are in every direction.	
$9\frac{1}{2}$	..	The sky in the E. S. E. and N. is now covered with cirro-strati, cumulo-strati, and scud: the cirro-strati near the N. horizon appear very threatening.	H B
10	..	Overcast: cirro-stratus, with stratus and large dark masses of scud: a few drops of rain have occasionally fallen.	L
10	Greatest declination N.	Overcast: cirro-stratus, with a large quantity of scud, a stratus cloud being above it.	L
0	..	A few cirri and light fleecy clouds in and about the zenith, with stratus at a very low elevation in the W.	C T
10	..	Heavy masses of dark scud are in every part of the sky: there is very little upper cloud.	L
9	..	Cirro-stratus and dark masses of scud: a few minutes previous to this observation a few stars in Cassiopeia, and also to the S. of the zenith, were visible: the wind is blowing in gusts to 1.	H B
..	..		
..	..		
..	..		
..	Transit		
10	..	Cirro-stratus, fleecy clouds, and scud: the clouds are slightly broken occasionally.	L
..	..		
..	..		
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus and scud: a few stars are occasionally visible in the zenith: the clouds were much broken	
..	..	at about noon, and from 2^h to 6^h it was nearly cloudless; after that the clouds again collected.	L
10	..	Overcast: cirro-stratus.	H B
10	..	,, cirro-stratus and scud.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 13. 18	30·136	56·5	54·4	2·1	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
20	30·141	58·3	56·7	1·6	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	30·157	62·0	58·9	3·1	56·0	6·0	..	..	NE	..	N	2·35	..	0	0	0	..	..
Sep. 14. 0	30·152	66·2	61·4	4·8	..	..	..	..	N	..	..	..	..	0	0	0	..	..
2	30·145	69·4	62·4	7·0	..	..	..	..	N by E	..	..	..	..	0	0	0	..	..
4	30·108	68·3	61·7	6·6	57·0	11·3	..	..	NNE	..	..	..	..	0	0	0	..	..
6	30·104	66·5	60·9	5·6	..	..	72·5 / 51·7	..	N by E	..	..	..	..	0	0	0	..	..
								8·96										
8	30·120	63·2	59·5	3·7	..	..	93·5 / 43·8	0·00	Calm	..	..	..	..	0	0	0	..	..
10	30·125	56·5	55·4	1·1	54·5	2·0		16·390	Calm	..	..	..	..	0	0	0	..	..
12	30·137	54·2	53·5	0·7	..	..	66·8		Calm	..	..	..	..	0	0	0	..	..
14	30·140	52·2	52·2	0·0	..	..	65·0	..	Calm	..	..	..	..	0	0	0	..	..
16	30·135	52·5	52·2	0·3	52·0	0·5	..	..	Calm	..	N	1·02	..	0	0	0	..	..
18	30·128	53·6	53·0	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	30·130	55·5	54·7	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·143	61·3	58·2	3·1	55·5	5·8	..	..	Calm	..	W	0·23	Pos.	2	2	0	..	..
Sep. 15. 0	30·124	69·3	62·3	7·0	..	..	71·2 / 52·7	..	Calm	..	..	..	Pos.	3	..	3	..	5. 0
								8·96										
2	30·107	73·1	64·6	8·5	..	..	90·5 / 43·5	0·00	Calm	..	..	..	..	0	0	0	..	..
4	30·095	71·0	63·6	7·4	58·0	13·0			Calm	..	..	..	..	0	0	0	..	..
6	30·083	68·2	62·9	5·3	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
8	30·089	62·9	59·9	3·0	..	..	66·5	16·390	Calm	..	..	..	..	0	0	0	..	..
10	30·094	59·8	58·2	1·6	56·5	3·3	65·0	..	Calm	..	..	..	..	0	0	0	..	..
12	30·099	57·0	55·9	1·1	..	..		..	Calm	..	..	..	..	0	0	0	..	..
14	30·088	55·2	54·9	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	30·090	54·0	53·9	0·1	54·0	0·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	30·086	53·8	53·5	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	30·104	58·8	56·9	1·9	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·107	64·2	61·0	3·2	58·0	6·2	..	..	Calm	..	W	1·25	..	0	0	0	..	..
Sep. 16. 0	30·097	72·8	64·2	8·6	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
2	30·069	75·8	64·7	11·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	30·047	74·7	65·0	9·7	60·0	14·7		..	Calm	..	..	..	..	0	0	0	..	..
6	30·032	70·3	63·7	6·6	..	..	78·5 / 50·5	..	Calm	..	..	..	..	0	0	0	..	..
8	30·034	64·8	60·9	3·9	..	..		8·96	Calm	..	..	..	..	0	0	0	..	..
10	30·034	61·5	58·5	3·0	56·0	5·5	95·7		Calm	..	..	..	..	0	0	0	..	..
12	30·016	58·0	56·2	1·8	..	..	42·7	0·00	Calm	..	..	..	..	0	0	0	..	..
14	29·997	56·1	54·7	1·4	..	..			Calm	..	..	..	..	0	0	0	..	..
16	29·973	53·3	52·8	0·5	52·0	1·3	66·5	16·390	Calm	..	..	..	..	0	0	0	..	..
18	29·955	51·5	51·4	0·1	..	..	65·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·935	54·0	53·2	0·8	..	..		..	Calm	..	..	..	..	0	0	0	..	..
22	29·922	67·0	61·1	5·9	56·5	10·5	..	..	Calm	..	SW	2·05	..	0	0	0	..	..

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud.	H B
10	Transit	,, cirro-stratus and scud, the latter moving rapidly from the N.	H B
10	..	,, cirro-stratus and scud.	L
10	..	Overcast: cirro-stratus and scud.	
10	..	,, cirro-stratus, scud, and fleecy clouds, with occasionally a few breaks in the clouds.	L
9	..	Cirro-strati, fleecy clouds, cumuli, and scud cover the sky; small breaks are in every direction: there is a break in the S. E. to some extent.	H B
9	..	About one-third of the sky has been covered with cumuli, cirro-strati, and fleecy clouds since the last observation: at present there are large cumulo-strati in the S. E. with scud passing beneath: cirro-strati and fleecy clouds in various directions: breaks mostly N. of the zenith.	
9½	..	The sky became covered with cloud soon after the last observation: the cirro-stratus and scud are more dense than at the previous observation: the clouds at sunset were beautifully tinged with red.	
0	..	At $8^h.25^m$ the sky became suddenly free from cloud, and still remains so: hazy.	H B
0	..	Cloudless: hazy.	G
9	..	The sky continued cloudless, with haze, the latter principally to the N., till about ten minutes since, at which time a few clouds appeared; and at the present time the sky is nearly wholly covered by a dark scud: a small portion of the sky near the horizon all round is at present cloudless but hazy: a star or two is visible through the clouds near the zenith: it would seem that the whole mass of cloud was formed from the condensation of vapour, as it increased on all sides without apparent motion.	
10	..	The sky has been covered with cloud since 14^h: at present a few very slight breaks appear S. of the zenith.	
10	..	Overcast.	
10	Transit	,,	G
6	..	Cirro-strati, fleecy clouds, and haze: the sky N. of the zenith is clear.	L
6	..	At $22^h.40^m$ a thin cirro-stratus covered the greater part of the sky; the Sun at that time was surrounded with a very small corona, but no halo was visible: at present cirro-stratus is to the S. of the zenith, and along the N. horizon.	H B
6	..	Cirro-stratus: a few fleecy clouds, and haze in every portion of the sky.	H B
3	..	,, a few fleecy clouds, and haze in various directions.	L
2	..	Cirro-stratus in the horizon: very hazy.	C T
4	..	Cirro-stratus in N. and N.W. to a considerable altitude: light clouds in every direction: very hazy.	
0	..	Cloudless: the haze has nearly disappeared.	C T
3	..	Cloudy towards the N. and S. horizon; clear, but hazy in other directions: the stars appear dim and watery.	L
0	..	Cloudless: the haze has nearly cleared off.	
0	..	,,	
6	..	Cirro-stratus and fleecy clouds N. of the zenith, and cirro-stratus towards the S. horizon.	
9	..	Cirro-stratus, fleecy clouds, and haze cover the greater part of the sky: small breaks about the zenith.	
10	Transit	Overcast: cirro-stratus and haze: a thin fog.	L
6	..	Cirro-stratus, fleecy clouds, and haze: small breaks in various parts of the sky: clear for about 30° around the zenith, but very hazy.	H B
7	..	Cirro-stratus, haze, and vapour: a great haze has prevailed during the morning.	H B
2	..	Cumuli, fleecy clouds, and haze towards the N. horizon; clear in the other parts of the sky.	L
1	..	Cirro-stratus and haze towards the N. horizon; clear in the other parts of the sky.	
3	..	Cirro-stratus towards the N., and light clouds in various other directions: hazy.	
0	..	Cloudless: hazy.	L
1	..	Cirro-stratus round the N. horizon: the stars shine dimly.	H B
0	..	Cloudless: hazy.	
0	..	,,	
2	..	Cirro-stratus around the N. and W. horizon, cirro-cumuli in the N. E., and light clouds S. of the zenith.	
6	..	Cirri, cirro-cumuli, and fleecy clouds; these clouds began to collect immediately after the last observation.	H B
3	Transit	Cirro-stratus and haze in the horizon, with cirri and light clouds in every other direction.	C T

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 17. 0	29·905	73·4	64·0	9·4	..	..	..	..	WSW	..	..	..	..	..	0	0	..	..
2	29·861	76·3	66·3	10·0	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
4	29·828	75·5	65·8	9·7	60·0	15·5	..	..	Calm	..	..	..	Pos.	3	..	3	..	..
6	29·792	71·3	64·8	6·5	..	..	..	..	Calm	..	..	..	Pos.	8	..	5	..	10. 0
8	29·790	62·5	59·8	2·7	..	..	78·5	..	Calm	..	..	..	Pos.	2	2	0	..	..
							51·0	8·96										
10	29·792	61·7	58·2	3·5	56·0	5·7			Calm	..	..	..	Pos.	40	..	20	20	1. 5
12	29·792	57·2	56·4	0·8	..	..	97·0	0·00	Calm	..	..	..	..	..	0	0	..	..
14	29·784	55·0	54·9	0·1	..	..	44·6		Calm	..	..	..	..	..	0	0	..	..
								16·390										
16	29·763	54·6	54·7	−0·1	54·8	−0·2	66·2		Calm	..	..	..	..	..	0	0	..	..
							65·0											
18	29·763	51·7	51·9	−0·2	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
20	29·773	53·0	52·8	0·2	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
22	29·784	64·0	59·7	4·3	57·0	7·0	..	..	Calm	..	NE	0·35	..	..	0	0	..	..
Sep. 18. 0	29·779	64·7	58·0	6·7	..	..	..	..	NE	..	..	..	..	..	0	0	..	..
2	29·765	65·5	58·5	7·0	..	..	67·3	..	ENE	..	..	..	..	..	0	0	..	..
4	29·744	64·6	57·4	7·2	51·0	13·6	41·9	8·96	ESE	..	NE	0·28	..	..	0	0	..	..
6	29·749	61·2	54·0	7·2	..	..	85·6	0·00	Calm	..	..	..	Pos.	20	..	7	..	..
8	29·759	54·9	52·2	2·7	..	..	33·3		Calm	..	..	..	Pos.	2	2	0	..	..
10	29·759	51·0	49·6	1·4	50·0	1·0		16·390	Calm	..	..	..	Pos.	20	..	5	..	..
12	29·749	48·3	47·0	1·3	..	..	66·0		Calm	..	..	..	Pos.	2	2	0	..	..
14	29·733	45·0	44·2	0·8	..	..	64·0	..	Calm	..	..	..	..	..	0	0	..	..
16	29·713	43·5	43·2	0·3	43·0	0·5	..	..	Calm	..	..	..	..	..	0	0	..	..
18	29·692	43·0	42·6	0·4	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
20	29·683	48·0	47·0	1·0	..	..	..	..	Calm	..	..	..	..	..	0	0	..	..
22	29·641	60·2	56·4	3·8	51·5	8·7	..	..	Calm	..	ESE	0·65	Pos.	2	..	2	..	..
Sep. 19. 0	29·622	65·6	56·8	8·8	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
2	29·582	66·8	58·3	8·5	..	..	..	..	SSE	..	..	..	Pos.	2	2	0	..	..
4	29·538	67·5	58·0	9·5	52·0	15·5	70·5	..	Calm	..	..	..	..	0	0	0	..	..
6	29·524	60·8	55·0	5·8	..	..	43·4	8·96	Calm	..	..	..	..	0	0	0	..	..
8	29·514	55·0	50·8	4·2	..	..	92·0	0·00	Calm	..	..	..	..	0	0	0	..	..
10	29·500	51·0	48·5	2·5	46·0	5·0	35·5		Calm	..	..	..	..	0	0	0	..	..
12	29·470	48·3	47·7	0·6	..	..		16·390	Calm	..	SE	0·73	Pos.	8	..	5	5	0. 2
14	..	..	..	..	..	..	64·0		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	63·2	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·378	64·6	59·5	5·1	..	..	..	..	Calm	..	E	0·22	..	0	0	0	..	..

DRY THERMOMETER.
September 17d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

DEW POINT THERMOMETER.
September 17d. 16h. The reading was lower than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Cirro-stratus and haze in the N. and W. horizon, and cirri and light clouds in various parts of the sky.	C T
7	..	Ill-defined cumuli, cirro-stratus, and haze in the horizon, the latter more especially in the N.; cirri and cirro-cumuli cover the remainder of the sky.	C T
7	Apogee	Cumuli, cirro-strati, cirro-cumuli, and fleecy clouds. There is a part of a solar halo visible, but so faint that its distance from the Sun cannot be measured: hazy.	H B
$9\frac{3}{4}$	..	Cirro-strati, cirro-cumuli, and large masses of scud moving slowly from the W. now cover the sky: gloomy: the greater part of the sky has been cloudy since 6^h.	
2	..	At 7^h several cirri and cirro-cumuli were in various parts of the sky: at present cirro-stratus and fragments of scud are scattered around the horizon in every direction.	
$9\frac{3}{4}$	..	Cirro-stratus and vapour cover nearly the whole sky: at $9^h.\ 20^m$ lightning was seen near the W. horizon.	H B
9	..	Cirro-stratus and vapour: a few stars are dimly seen in the zenith: very dark.	C T
0	..	At $12^h.\ 45^m$ the clouds dispersed, and the sky soon became cloudless; but vapour is very prevalent, and the stars shine but dimly.	
0	..	Cloudless: vapour still prevails in the horizon: at 15^h some dark scud came up from the E., but soon disappeared: the stars are much brighter than at 14^h.	
6	..	At $16^h.\ 35^m$ a meteor was observed a little N. of Orion, which passed southward a little to the W. of Orion; it was visible about one second: shortly after this time several meteors was visible; one at $16^h.\ 45^m$ being very brilliant; it passed from β Tauri northwards: at 18^h cirro-stratus formed in and all around the horizon: cirri and light clouds in every direction.	
5	..	Cirro-stratus in the horizon, especially to the N.; cirri, cirro-cumuli, and light clouds are in every other part of the sky.	C T
9	Transit	Cirro-stratus, fleecy clouds, and scud nearly cover the sky: a few breaks are about the zenith.	L
10	..	Cirro-stratus and scud.	
10	..	Overcast: cirro-stratus and scud.	L
2	..	Cirro-stratus in the horizon to the N. and W., and light clouds in other parts of the sky: the clouds gradually dispersed soon after the last observation.	C T
0	..	Cloudless.	
0	..	,,	
0	..	,,	C T
0	..	,, several small meteors have been observed during the last half-hour; they all seem to pass from N. to S.	L
0	..	,,	
0	..	,,	
0	..	,,	
10	..	A thin cirro-stratus covers the sky. At $19^h.\ 33^m$ the upper arc of a solar halo was visible, whose radius, by two measurements, was 23°; at $19^h.\ 50^m$ it was still faintly visible.	L
$9\frac{1}{2}$	..	At $20^h.\ 10^m$ the halo could scarcely be discerned: at 22^h a thin cirro-stratus covered the sky. A faint solar halo is now visible, but the upper part is the only one which can be measured; its radius is $23\frac{1}{2}°$.	H B
10	Transit	A dense cirro-stratus covers the sky. The halo is still faintly visible, its vertical semidiameter being 23°.	
7	..	The halo disappeared soon after the last observation, the clouds changing from cirro-strati to fleecy clouds and cumuli, which now cover the sky: cirro-cumuli in the S. E.	H B
1	..	Cirro-cumuli about the zenith, and cumuli and light clouds towards the N. horizon.	L
7	..	Cirro-cumuli and light clouds in various directions: thin reticulated cirri are spread over a great portion of the sky, shewing the blue sky above: cirro-stratus towards the N. horizon.	
0	..	Cloudless.	
0	..	,,	L
0	..	Cloudless, with the exception of a few lines of cirro-stratus near the N. horizon.	H B
..	..		
..	..		
..	..		
..	In Equator.		
0	..	With the exception of a single fragment of scud passing over the sky from the E. S. E., it is cloudless.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	°	°	in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 20. 0	29·377	66·8	58·8	8·0	..	..	..	..	..	..			E	0 to ½	..	..	..	0	0	0	..	..
2	..	..	..	..	..	..	..	..	..	..			ENE	0 to ½	..	..	..	..	..	..	..	..
4	29·353	68·5	57·9	10·6	..	..	..	..	..	..			ENE	½ steady	..	..	Pos.	2	2	0	..	..
6	29·360	62·4	55·7	6·7	..	..	73·0	..	..	..			ENE	0 to ½	E	1·55	Pos.	25	..	10	10	6. 0
8	..	..	..	..	..	..	51·2	..	..	8·96			ENE	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..		..	..				Calm	..	..	..	..	..	..	..	..	..
12	29·378	53·6	52·6	..	..	..	90·5	..	..	0·00			Calm	..	..	..	Pos.	2	2	0	..	..
14	29·384	52·0	51·5	0·5	..	..	45·5	..	..	16·390			Calm	..	..	..	Pos.	2	2	0	..	..
16	29·388	53·5	52·7	0·8	..	..	62·0	..	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
18	29·390	54·3	53·0	1·3	..	..	62·2	..	..	..			Calm	..	..	..	..	0	0	0	..	..
20	29·424	57·0	55·0	2·0	..	..	..	..	..	..			Calm	..	..	..	..	0	0	0	..	..
22	29·457	62·0	57·9	4·1	54·0	8·0	..	..	..	..			ENE	½ to ¾	ENE	1·25	..	0	0	0	..	..
Sep. 21. 0	29·462	64·2	58·2	6·0	..	..	..	..	..	..			E by N	½ to 2½	..	..	Pos.	2	2	0	..	..
2	29·478	62·5	56·7	5·8	..	..	..	..	..	..			E	..	..	..	..	..	0	0	..	..
4	29·475	63·8	57·8	6·0	53·0	10·8	..	..	..	..			E by S	0 to ½	..	..	Pos.	8	..	3	5	..
6	29·484	60·0	56·6	3·4	..	..	67·0	..	..	..			E by N	..	..	..	Pos.	2	2	0	..	..
8	29·488	58·2	55·0	3·2	..	..	53·4	..	..	8·96			Calm	..	..	..	Pos.	5	..	5	5	..
10	29·502	56·6	54·7	1·9	52·0	4·6		..	..				Calm	..	..	..	Pos.	2	2	0	..	..
12	29·515	56·5	54·2	2·3	..	..	78·0	..	..	0·00			Calm	..	E	1·55	..	..	0	0	..	..
14	29·512	55·9	54·2	1·7	..	..	48·2	..	..	16·400			Calm	..	ENE	0·14	..	..	0	0	..	..
16	29·510	55·5	53·9	1·6	53·5	2·0	62·0	..	..	..			Calm	..	..	..	..	..	0	0	..	..
18	29·515	54·0	53·7	0·3	..	..	60·5	..	..	..			Calm	..	..	..	..	..	0	0	..	..
20	29·530	58·1	57·0	1·1	..	..	..	..	..	..			Calm	..	ESE	0·36	..	..	0	0	..	
22	29·544	67·4	61·5	5·9	56·5	10·9	..	..	..	..			ESE	..	E	0·15	..	..	0	0	..	..
Sep. 22. 0	29·548	68·8	60·9	7·9	..	..	..	..	..	..			E by N	0 to 1	..	..	Pos.	2	2	0	..	..
2	29·549	69·5	61·3	8·2	..	..	..	..	..	..			E	..	..	..	..	..	0	0	..	..
4	29·533	67·0	60·6	6·4	57·0	10·0	..	..	..	..			ENE	..	E	1·00	Pos.	2	2	0	..	..
6	29·504	61·2	58·6	2·6	..	..	74·7	..	..	..			E	..	..	..	..	..	0	0	..	..
8	29·516	57·5	54·6	2·9	..	..	56·5	..	..	8·98			ESE	..	..	..	..	..	0	0	..	..
10	29·487	57·6	56·6	1·0	56·5	1·1		..	..				ESE	..	ESE	1·13	..	..	0	0	..	..
12	29·452	57·7	57·2	0·5	..	..	90·3	..	..	0·35			ESE	..	..	..	..	..	0	0	..	..
14	29·396	59·2	58·2	1·0	..	..	51·8	..	..	16·715			SSE	..	SE	0·19	..	..	0	0	..	..
16	29·356	60·5	60·2	0·3	60·0	0·5	..	..	..	..			S by E	..	..	..	..	..	0	0	..	..
18	29·348	60·0	59·5	0·5	..	..	62·0	..	..	..			Calm	..	..	..	..	..	0	0	..	..
20	29·352	60·2	59·4	0·8	..	..	..	..	..	..			Calm	..	..	..	..	..	0	0	..	..
22	29·352	58·4	57·3	1·1	56·5	1·9	..	..	..	..			SSW	..	SSW	1·18	Pos.	..	0	10	10	..
Sep. 23. 0	29·336	67·5	62·9	4·6	..	..	..	..	..	..			SSW	..	..	..	..	..	0	0	..	..
2	29·315	65·8	61·3	4·5	..	..	..	..	..	..			S by W	..	..	..	Neg.	..	..	8	10	..

DEW POINT THERMOMETER.
September 20d. 16h. The observation was not taken.

MAXIMUM THERMOMETER IN WATER OF THE THAMES.
September 22d. 22h. The instrument was sent to be repaired.

OSLER'S ANEMOMETER.
September 22d. 22h. The pressure-pencil was found off the rack-work, and had been so since 21h. 40m.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
½	Transit	A few cumuli and fleecy clouds in the N. and S.W. horizon.	H B
..	..		
0	New	Cloudless: gusts of wind to ¾.	
0	..	,, gusts of wind to 1.	
..	..		
..	..		
7	..	A thin cirro-stratus covers the greater part of the sky: the clouds came up from the S. about 11h. 45m, previous to which time it was cloudless. Several bright meteors have been seen during the evening.	
3	..	Cirro-stratus and fragments of scud S. of the zenith obscuring Jupiter: the cirro-stratus mentioned at 12h cleared off soon after 12h. 15m.	
7	..	Cirro-stratus and dark scud nearly cover the sky: several stars are visible in the S. E.	
10	..	Overcast: cirro-stratus and scud: the sky became nearly overcast at 16h. 40m.	
9¾	..	Cirro-stratus and scud passing from the E., the upper clouds are detached cumuli.	H B
10	..	Cirro-stratus and large masses of scud cover the sky.	L
10	..	Cirro-stratus and scud, the latter passing rapidly over the sky: the clouds in the zenith are much thinner than in other directions.	C T
10	Transit	Cirro-stratus and scud.	C T
10	..	Cirro-stratus and scud, the latter moving rapidly over the sky.	H B
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to ¾: a few drops of rain are falling.	
10	..	,, ,,	
9	..	,, ,, a few stars have been occasionally visible. The reflexion of the London lights is high.	H B
10	..	Overcast: cirro-stratus.	C T
8	..	,, ,, the clouds in the zenith are much broken, where a few stars are visible.	
10	..	,, cirro-stratus and scud.	
7	..	At 16h. 30m the clouds in and around the zenith were much broken, but the sky again became overcast at about 17h: at present a thin cirro-stratus covers the greater part of the sky.	
8	..	Cirro-stratus in and all round the horizon to a considerable altitude; with cirri, cirro-cumuli, and light clouds profusely scattered over the remaining portion of the sky.	C T
6	..	Cumuli and fleecy clouds around the horizon: loose scud scattered in various parts of the sky: the wind is blowing in gusts to ½.	L
6	..	Cumuli, cirro-stratus, fleecy clouds, and scud occasionally obscuring the Sun: the cirro-stratus clouds near the S. horizon are very dark; the fleecy clouds move from the E. S. E.: the wind is blowing in gusts to 1.	H B
5	Transit	Cumuli, cirro-stratus, and cirro-cumuli are scattered in various parts of the sky.	H B
5	,,	Ill-defined cumuli, cirro-strati, and light fleecy clouds.	C T
3	..	Ill-defined cumuli and light clouds are in every part of the sky.	C T
3	..	A few cirro-strati around the horizon.	G
8	..	Cirro-stratus, scud, and vapour: stars are visible in and around the zenith, but shine dimly: within a few minutes after 8h the amount of cloud was 7.	C T
7	..	The sky is covered with cirro-stratus, except in the zenith which is clear: occasional flashes of lightning have been visible.	L
3	..	Cirro-stratus towards the horizon in the N. and S.; clear elsewhere: occasional flashes of lightning have been visible.	
10	..	Overcast: cirro-stratus: slight rain is falling: at 15h a very heavy shower of rain fell, which lasted about ten minutes.	
10	..	Overcast: cirro-stratus and scud: rain has been falling almost continually since the last observation.	
10	..	,, ,, a few drops of rain are falling occasionally: the wind is blowing in gusts to ½.	L
10	..	,, rain is falling slightly: heavy showers of rain have fallen during the last hour.	H B
7	..	The clouds became extensively broken soon after the last observation, and the rain ceased falling: at present the clouds have again collected, cirro-stratus and dense scud being prevalent.	
10	Transit	Overcast: cirro-stratus and scud: rain is falling heavily.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 23. 4	29·290	66·9	60·6	6·3	58·0	8·9	..			..			S by W	..	..	..	..	0	0	0	..	..
6	29·280	62·8	59·2	3·6	..	..	69·2						S by W	..	..	..	..	0	0	0	..	..
8	29·269	59·3	57·7	1·6	..	..	54·0			..			Calm	..	..	..	..	0	0	0	..	..
10	29·253	54·5	53·9	0 6	54·0	0·5	82·2			9·80			Calm	..	S	1·15	..	0	0	0	..	..
12	29·216	55·5	54·9	0·6	..	..	48·2			1·18			S by W	..	..	..	Neg.	..	..	20	..	..
14	29·170	56·7	56·7	0·0	..	..							NNE	..	..	..	..	0	0	0	..	..
16	29·168	56·2	56·2	0·0	56·0	0·2				17·915			N	..	NNW	0·65	Neg.	..	..	5	5	..
18	29·210	56·0	55·7	0·3	..	..	..			..			WNW	..	..	..	..	0	0	0	..	..
20	29·262	55·8	55·2	0·6	..	..	62·0						W	..	..	..	..	0	0	0	..	..
22	29·316	58·5	57·6	0·9	56·5	2·0	..			..			WSW	..	W	1·76	..	0	0	0	..	..
Sep. 24. 0	29·341	64·8	60·0	4·8	..	..	..			..			WSW	0 to 1½	..	..	..	0	0	0	..	..
2	29·360	63·0	58·5	4·5	..	..	..			..			WSW	..	..	..	Pos.	..	..	40	..	..
4	29·380	65·6	59·0	6·6	55·5	10·1	..			..			WSW	½ to 1	..	..	..	0	0	0	..	..
6	29·408	61·0	57·0	4·0	..	..	69·4						WSW	..	..	..	..	0	0	0	..	..
8	29·456	58·0	55·8	2·2	..	..	52·2			9·80			Calm	..	..	..	..	0	0	0	..	..
10	29·481	57·5	55·9	1·6	55·0	2·5	83·5			0·00			Calm	..	..	..	..	0	0	0	..	..
12	29·511	57·1	55·6	1·5	..	..	46·2			17·915			Calm	..	..	..	..	0	0	0	..	..
14	29·525	56·6	54·6	2·0	..	..	..			..			WSW	..	..	..	..	0	0	0	..	..
16	29·551	52·9	51·7	1·2	50·5	2·4	61·5			..			WSW	..	..	..	..	0	0	0	..	..
18	29·567	53·4	52·3	1·1	..	..	..			..			WSW	..	..	..	..	0	0	0	..	..
20	29·599	55·3	54·1	1·2	..	..	..			..			WSW	..	..	..	..	0	0	0	..	..
22	29·628	60·4	56·5	3·9	53·0	7·4	..			..			WSW	..	WSW	5·64	..	0	0	0	..	..
Sep. 25. 0	29·645	62·7	57·9	4·8	..	..	..			..			WSW	¼ steady	..	..	..	0	0	0	..	..
2	29·648	64·7	59·2	5·5	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
4	29·649	62·2	57·9	4·3	55·5	6·7	..			..			Calm	..	..	..	..	0	0	0	..	..
6	29·661	61·0	57·3	3·7	..	..	..			..			Calm	..	..	..	Neg.	..	..	15	20	10. 0
8	29·687	58·4	55·9	2·5	..	..	..			..			Calm	..	..	..	Pos.	..	..	5	5	5. 0
10	29·703	54·7	53·7	1·0	53·0	1·7	66·7			..			Calm	..	..	..	Pos.	2	2	0	..	..
12	29·696	52·0	51·7	0·3	..	..	51·5			9·80			Calm	..	..	..	..	0	0	0	..	..
14	29·694	52·2	52·1	0·1	..	..	83·5			0·00			Calm	..	..	..	..	0	0	0	..	..
16	29·664	52·5	51·9	0·6	52·0	0·5	45·5			17·915			Calm	..	..	..	..	0	0	0	..	..
18	29·642	53·4	52·5	0·9	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
20	29·636	56·5	54·9	1·6	..	..	61·5			..			Calm	..	..	..	..	0	0	0	..	..
22	29·636	60·2	57·4	2·8	55·0	5·2	..			..			SSW	..	SSW	2·00	..	0	0	0	..	..

OSLER'S ANEMOMETER.
September 23d. 22h. The pressure-pencil was found off the rack-work, and had been so from 22d. 22h. 40m.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
4	..	At $2^h.10^m$ the rain ceased falling, and a large portion of the sky in the S. E. became cloudless: at present cumuli and masses of scud are prevalent, the latter passing from the S.: the wind is blowing in frequent gusts to $1\frac{1}{2}$.	H B
4	..	Cumuli, cirro-stratus, and scud: the wind is blowing in gusts to $\frac{3}{4}$.	L
5	..	The sky S. of the zenith is covered with cirro-stratus and scud of a thin kind; the N. of the zenith is clear.	L
4	..	Scud covers half of the S. part of the sky and a small portion in the N., the other part is clear: about half an hour since a few drops of rain fell from passing scud.	G
10	..	Overcast: rain is falling steadily.	G
10	..	,, cirro-stratus: rain is falling steadily.	L
10	..	,, ,, rain is falling in torrents.	H B
$9\frac{3}{4}$	..	Nearly overcast: cirro-stratus and scud: the clouds are broken near the S. horizon: Jupiter has been occasionally visible.	H B
9	..	A thin cirro-stratus covers nearly the whole sky, the zenith and its neighbourhood being clear: hazy.	C T
10	..	Overcast: cirro-stratus.	G
10	..	Cumuli, cirro-stratus, fleecy clouds, and scud.	L
9	..	Imperfectly formed cumuli in the horizon: dark cirro-stratus and scud in every part of the sky: extensive breaks in the clouds N. of the zenith: a few drops of rain have fallen occasionally from a black cloud in the zenith.	C T
4	Transit	Soon after the last observation the sky became overcast, with cirro-stratus and scud, which remained but for a short time; since then the amount of cloud has been variable: at present cumuli and scud are distributed over the sky: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	H B
8	..	Cumuli, cirro-strati, and scud in the horizon to a considerable altitude all around; cirri and light clouds in and around the zenith.	C T
10	..	Overcast: cirro-stratus.	L
10	..	,, ,,	G
10	..	Overcast: cirro-stratus: the wind is blowing in gusts to $\frac{3}{4}$.	H B
9	..	A thin cirro-stratus covers nearly every part of the sky: several stars are dimly visible in the W.	
0	..	Cloudless.	
10	..	Overcast: cirro-stratus and scud: breaks in the clouds in various parts of the sky, but of small extent.	
9	..	Cirri, cirro-strati, a few cumuli, and a low scud passing rapidly from the W. S. W.	H B
4	..	Detached cumuli, cirro-stratus, and masses of white scud.	L
9	..	Cirro-stratus and large masses of scud: small breaks N. of the zenith.	L
10	..	Cirro-stratus and scud nearly cover the sky, with a few cumulo-strati in the N. horizon.	C T
5	Transit	The cirro-stratus and scud mentioned at the previous observation have gradually cleared off from the N.: at present cirro-stratus and scud prevail in the S. and S. W., with cirro-cumuli and light clouds in other directions.	H B
$9\frac{1}{2}$	..	Detached cumuli, cirro-stratus, and portions of brown scud are near the S. W. horizon, moving from the N. W.: the clouds suddenly collected from the N. soon after the last observation.	
10	..	Cirro-stratus and scud: a few stars are visible in the zenith.	
2	..	Cirro-stratus and scud near the S. W. and N. horizon.	H B
0	..	Cloudless, except a few clouds in the E: at $10^h.20^m$ a brilliant meteor was seen passing from Polaris through η Ursæ Majoris, where it became invisible; at $10^h.22^m$ another meteor was observed, passing from the Pleiades to the horizon in an oblique direction; and at $10^h.25^m$ a most splendid one was visible passing from the zenith through Ursa Major, leaving a very strong light and a beautifully coloured train, the upper part being red and the lower orange, emitting a light so intense as to illuminate the whole Park; in a few seconds it burst into several directions and disappeared.	C T
0	..	Cloudless: at 13^h vapour was so prevalent as to obscure the stars, but it has now entirely disappeared.	
0	..	,, vapour is very prevalent; the stars are shining dimly.	
10	..	Overcast: cirro-stratus and scud: the clouds began to collect at about 17^h, and gradually spread themselves over the whole sky.	
10	..	Thin cirro-stratus and loose masses of scud cover the sky: a few breaks are in different directions, but to no numerical amount.	C T
10	..	Cirro-stratus and large masses of scud cover the sky.	L

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 26. 0	29·616	64·0	58·2	5·8	..	..	..	..	SSW	0 to 1	..	..	..	0	0	0	..	..
2	29·597	63·0	58·0	5·0	..	..	..	..	SSW	0 to 1½	..	..	..	0	0	0	..	..
4	29·575	60·0	58·2	1·8	57·0	3·0	..	..	SSW	..	..	..	Neg.	..	..	10	..	..
6	29·573	60·0	58·4	1·6	..	..	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
8	29·588	58·0	56·7	1·3	..	..	64·8 / 54·2	9·81	SSW	..	..	..	Pos.	2	2	0	..	..
10	29·599	57·4	56·1	1·3	56·0	1·4	74·0 / 49·0	0·01	SSW	..	..	..	..	0	0	0	..	..
12	29·595	56·4	55·5	0·9	..	..	..	17·955	SSW	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	61·0	..	SSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	SSW	¼ steady	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SW	¼ steady	..	..	..	..	..	..	..	..
22	29·670	61·8	55·4	6·4	..	..	..	..	WSW	½ to 1	..	0·00	..	0	0	0	..	..
Sep. 27. 0	..	..	..	..	..	..	..	..	SW	0 to ½	..	..	..	..	..	..	..	..
2	29·660	63·7	55·9	7·8	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
4	..	..	..	..	..	..	66·5 / 50·3	9·94	SSW	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..			S	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	81·8 / 44·8	0·19	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..			Calm	..	..	..	..	..	..	..	..	..
14	29·540	51·7	51·9	−0·2	..	..	..	18·120	SSE	..	..	..	Neg.	40	..	..	30	1. 0
16	29·487	51·5	51·3	0·2	51·0	0·5	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·458	51·2	50·8	0·4	..	..	60·8	..	Calm	..	..	..	..	0	0	0	..	..
20	29·432	53·2	52·2	1·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·430	54·5	53·9	0·6	53·3	1·2	..	..	Calm	..	..	0·00	..	0	0	0	..	..
Sep. 28. 0	29·435	56·5	54·3	2·2	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
2	29·407	59·1	54·7	4·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	29·398	57·7	54·2	3·5	52·0	5·7	..	..	Calm	..	..	..	..	0	0	0	..	..
6	29·398	54·8	51·4	3·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
8	29·392	51·4	49·9	1·5	..	..	60·3 / 42·6	9·94	Calm	..	..	..	..	0	0	0	..	..
10	29·402	48·2	47·4	0·8	47·0	1·2	72·0 / 37·2	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·381	46·1	45·2	0·9	..	..	..	18·140	Calm	..	..	..	..	0	0	0	..	..
14	29·372	45·4	44·3	1·1	..	..	60·2	..	Calm	..	..	..	..	0	0	0	..	..
16	29·361	45·0	43·7	1·3	42·0	3·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·344	43·8	42·7	1·1	..	..	..	..	S	..	..	..	..	0	0	0	..	..
20	29·330	47·6	46·0	1·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·324	56·4	51·7	4·7	48·0	8·4	..	..	Calm	..	SSW	3·55	..	0	0	0	..	..
Sep. 29. 0	29·302	57·5	52·0	5·5	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
2	29·290	60·0	52·4	7·6	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
4	29·281	57·6	52·4	5·2	47·0	10·6	..	..	SSW	..	..	..	..	0	0	0	..	..

DRY THERMOMETER.

September 27d. 14h The reading was lower than that of the Wet Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus, detached cumuli, and masses of white scud: the wind is blowing in gusts to 1.	L
10	..	,, cirro-stratus and scud: the wind is blowing in gusts to 1.	H B
10	..	,, cirro-stratus: a thin rain is falling.	C T
8	Transit	Cumuli, cumulo-strati, and cirro-strati: clear to the N. of the zenith: small portions of cirri are visible in various directions.	
3	..	Cirro-stratus in the N. and W. horizon to a considerable altitude, above which a few light clouds are visible in different directions: vapour is very prevalent.	
9	..	The amount of cloud has been very variable since the last observation: at 9^h the sky was nearly cloudless, since which time the clouds have gradually collected from the W.: vapour is very prevalent.	C T
9	..	The quantity of cloud is continually varying; at present the sky is almost overcast with thin cirro-stratus: the stars look dim and watery.	L
..	..		
..	..		
..	..		
..	..		
2	Greatest declination S.	Scud passing quickly from the W.: cirri about the zenith, and cumuli in the horizon; all in small quantities.	G
..	..		
10	..	A thin cirro-stratus covers the whole sky: shortly after the last observation the sky became nearly covered with	
..	..	cumuli and scud, through which the Sun frequently shone, but was generally so obscured as to cast but a faint	
..	Transit	shadow.	G
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus: rain is falling steadily.	L
10	..	,, ,, the rain ceased falling about 15^h.	
10	..	,, cirro-stratus and fleecy clouds.	
10	1st Qr.	,, cirro-stratus and scud: rain has occasionally fallen since the last observation.	L
10	..	,, rain is falling slightly; it has been falling heavily during the last hour.	H B
10	..	Overcast: cirro-stratus and scud: showers of rain have fallen occasionally since the last observation.	
10	..	,, ,, no change since 0^h.	H B
10	..	,, cirro-stratus.	L
10	Transit	,, ,,	
10	..	,, cirro-stratus and fleecy clouds: soon after the last observation the sky became about one-half covered with fleecy clouds and cirro-stratus; it however soon became overcast again: the Moon's place is visible through the clouds.	
2	..	Cirro-stratus and fleecy clouds about the place of the Moon and towards the W.; clear elsewhere: the sky has been about one-half covered with cloud for the last half-hour.	L
0	..	A few minutes since a few particles of scud were distributed round Jupiter and the stars near him, but at present they have altogether disappeared: the sky is very clear round the zenith and to the W. of it.	H B
0	..	Cloudless: several small meteors have been visible since the last observation.	
0	..	,,	
0	..	,,	
1	..	Cirro-stratus and fleecy clouds round the place of the Sun, and cumuli in the S.W.: cirri in various parts of the sky.	H B
2	..	Light portions of cirri are scattered in the S. S.W. horizon; the sky is otherwise clear.	T D
9	..	Cirro-stratus, cumulo-stratus, and scud cover the sky, except a break in the E.: the clouds in the N. look very dark and threatening: the clouds began to gather soon after the last observation.	
8	..	Cumuli, cirro-stratus, and scud are scattered over the sky in every direction; large patches of blue sky chiefly in the S. and S. S. E.: a slight shower of rain has just fallen, it lasted about ten minutes.	T D
6	..	Massive cumuli near the horizon, with cirro-stratus and fleecy clouds in other directions: the amount of cloud has considerably increased since $3^h.\ 55^m$, at which time a few cumuli near the horizon were the only clouds visible.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Sep. 29. 6	29·299	56·0	51·0	5·0	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
8	29·317	49·7	47·9	1·8	..	..	63·4 / 39·2	9·94	Calm	..	..	..	Pos.	2	2	0	..	..
10	29·344	47·2	46·4	0·8	44·5	2·7	80·2 / 33·0	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·370	45·5	45·1	0·4	..	..		18·140	Calm	..	..	..	..	0	0	0	..	..
14	29·397	42·7	42·7	0·0	..	..	..		Calm	..	..	..	..	0	0	0	..	..
16	29·421	42·3	42·5	−0·2	42·5	−0·2	59·5	..	Calm	..	..	..	..	0	0	0	..	..
18	29·454	40·3	40·2	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·487	42·0	41·8	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·520	47·8	47·2	0·6	46·0	1·8	..	..	Calm	..	SW	3·42	Pos.	2	2	0	..	..
Sep. 30. 0	29·553	56·0	52·7	3·3	..	..	..	..	Calm	..	..	..	Pos.	3	..	3	..	..
2	29·574	58·8	54·7	4·1	..	..	..	..	Calm	..	WSW	0·05	Pos.	3	..	5	..	3. 0
4	29·605	57 0	53·2	3·8	50·7	6·3	..	..	Calm	..	..	..	..	0	0	0	..	..
6	29·635	55·5	52·6	2·9	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
8	29·671	55·5	52·6	2·9	..	..	60·7 / 42·6	.. / 9·94	Calm	..	..	..	..	0	0	0	..	..
10	29·712	51·3	50·6	0·7	50·0	1·3	71·6	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·737	47·4	47·6	−0·2	..	..	35·5		Calm	..	..	..	Pos.	2	0	0	..	..
14	29·739	45·5	45·7	−0·2	..	..		18·150	Calm	..	..	..	..	0	0	0	..	..
16	29·755	44·5	44·7	−0·2	44·0	0·5	..		Calm	..	..	..	..	0	0	0	..	..
18	29·778	43·5	43·7	−0·2	..	..	59·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·804	45·5	45·7	−0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·820	53·1	51·3	1·8	50·0	3·1	..	..	Calm	..	SW	1·58	..	0	0	0	..	..
Oct. 1. 0	29·819	63·3	56·5	6.8	..	..	..	..	SW	..	..	..	Pos.	5	..	8	..	..
2	29·811	65·8	57·3	8·5	..	..	..	..	Calm	..	..	..	Pos.	10	..	15	..	10. 0
4	29·805	62·0	53·7	8·3	47·5	14·5	67·0 / 51·2	.. / 9·94	Calm	..	..	..	Pos.	2	2	0	..	..
6	29·796	59·5	54·5	5·0	..	..			Calm	..	..	..	Pos.	15	..	8	..	..
8	29·801	57·0	53·2	3·8	..	..	86·5	0·00	Calm	..	..	..	..	0	0	0	..	..
10	29·806	55·6	53·4	2·2	52·0	3·4	47·0		Calm	..	..	..	..	0	0	0	..	..
12	29·791	55·4	53·5	1·9	..	..		18·150	Calm	..	..	..	..	0	0	0	..	..
14	29·768	54·6	53·7	0·9	..	..	..		Calm	..	..	..	..	0	0	0	..	..
16	29·748	54·4	54·2	0·2	54·0	0·4	58·8	..	Calm	..	..	..	..	0	0	0	..	..
18	29·729	53·6	53·4	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·718	55·0	54·4	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·704	59·5	58·1	1·4	56·6	2·9	..	..	S	..	WSW	2·22	..	0	0	0	..	..
Oct. 2. 0	29·669	62·0	59·7	2·3	..	..	..	..	S	..	..	..	..	0	0	0	..	..
2	29·631	60·5	59·4	1·1	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
4	29·588	62·0	60·9	1·1	60·0	2·0	..	..	Calm	..	..	..	Pos.	2	2	0	..	..

DRY THERMOMETER.

September 29d. 16h and 30d. 12h, 14h, 16h, 18h, and 20h. The readings were lower than those of the Wet Thermometer.

October 1d. 0h. The reading was 10°·2 higher than at the previous observation.

DEW POINT THERMOMETER.

September 29d. 16h. The reading was higher than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	The clouds increased rapidly immediately after the last observation, and nearly covered the sky: at $4^h.30^m$ only a small portion of the sky was covered with cloud, which at that time consisted principally of a few cumuli, detached portions of cirro-stratus, and scud: at the present time the clouds are cirro-stratus and scud, covering about three-fourths of the sky.	H B
0	Transit	Cloudless: hazy in the S.W.: at $6^h.40^m$ the sky was about one-third covered with cirro-stratus and scud; soon after which the sky became cloudless, except a few lines of cirro-stratus along the horizon.	
0	..	Cloudless: hazy: at $8^h.30^m$ a few light clouds passed over the sky from the S.: at $8^h.45^m$ a meteor was faintly visible, passing from Ursa Minor to the horizon.	H B
0	..	Cloudless, with the exception of a slight haze in the N.	T D
0	..	Cloudless.	
0	..	Cloudless, but the stars are much obscured by haze.	
7	..	Immediately after the last observation clouds began to gather in the S. horizon, and in a short time covered the sky: at present the only portion of sky free from cloud is the E.: a thick fog.	
10	..	Cirro-stratus and light fleecy clouds, through which the Sun is visible: at $19^h.50^m$ the fog mentioned in the last observation suddenly cleared off in some degree; at present it is less dense, the sky being visible.	T D
6	..	Fleecy clouds are in every part of the sky, with cirro-stratus round the Sun's place: a slight fog.	H B
10	..	Overcast: cirro-stratus and scud: the clouds are not so dense in the W. as in other directions: foggy.	
$9\frac{3}{4}$	..	Dense cirro-stratus to the S. of the zenith: a low scud is passing from the N.W., occasionally obscuring the Sun.	H B
10	..	Cirro-stratus and scud: the sky became covered at $2^h.55^m$.	T D
10	..	Cirro-stratus, cumulo-stratus, and scud: there are a few breaks in the clouds to the N. of the zenith, but of no numerical amount.	
10	Transit	Cirro-stratus and scud cover the sky: a thin haze.	
7	..	Cirro-stratus and light scud: at $9^h.45^m$ the clouds became broken in the S.W. and in other directions: at present these portions of the sky most free from cloud are the N. and S. E. of the zenith: hazy.	T D
0	..	Cloudless: hazy.	C T
0	..	There are a few light clouds in the W., to no numerical extent: hazy.	
0	..	The same as at the last observation.	
8	..	Thin cirro-stratus and light clouds cover nearly the whole sky, except in the E., where a few faintly-coloured cirri prevail: the clouds are very thin, blue sky being seen through them in many places.	
8	..	Cirro-cumuli cover the greater part of the sky: cirro-stratus and haze in the horizon: there is no upper-cloud, as the blue sky is visible through the clouds.	C T
8	..	Cirro-cumuli are still distributed over the sky; to the N. of the zenith they are more closely packed than to the S. of it: a fog has been prevalent all the morning.	H B
3	..	Fleecy clouds and a few cumuli are now distributed over the sky: along the W. horizon there is a bank of cirro-stratus, with a few cirro-cumuli: the fog has nearly disappeared.	
7	..	Cirri and cirro-cumuli are the principal clouds at present distributed over the sky; there are also a great quantity of undefined clouds in every direction.	H B
8	..	Cirro-stratus, light fleecy clouds, and scud; clear in the E.	C T
9	..	Cirro-stratus and haze in the horizon; fleecy clouds nearly cover the remainder of the sky.	
10	..	Cirro-stratus and fleecy clouds: the Moon is frequently visible.	C T
10	Transit	Overcast: cirro-stratus.	H B
10	..	,, cirro-stratus and scud: the air is nearly calm.	
10	..	,, ,, ,,	
10	..	,, ,, ,,	
10	..	,, ,, ,,	
10	..	,, ,, ,,	H B
10	..	,, ,, ,,	T D
10	..	Overcast: cirro-stratus and scud: no break since the last observation: a few drops of rain occasionally fall.	
10	..	,, ,, steady rain commenced falling at 1^h, and still continues.	T D
10	..	,, ,, the rain has ceased; it was falling a short time before this observation.	H B

RAIN.

September $30^d.12^h$. The amount collected during the month of September in the rain-gauge No. 4 was $1^{in}.79$; and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period was $1^{in}.73$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of: Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 2. 6	29·562	59·7	58·7	1·0	..	..	63·9	..	Calm	.. ..	SW	1·95	..	0	0	0	..	..
8	29·552	57·9	57·3	0·6	..	..	55·7	10·18	Calm	..	..	..	..	0	0	0	..	..
10	29·533	57·6	57·4	0·2	57·3	0·3	——		Calm	..	..	..	..	0	0	0	..	..
12	29·499	56·6	56·4	0·2	..	..	69·5	0·51	Calm	..	..	..	..	0	0	0	..	..
							51·7											
14	29·467	57·0	56·9	0·1	..	..	——	18·640	Calm	..	..	..	..	0	0	0	..	..
16	29·447	58·0	57·9	0·1	58·0	0·0	..		Calm	..	..	..	..	0	0	0	..	..
18	29·463	56·5	56·7	−0·2	..	..	58·8	..	NNW	..	..	..	..	0	0	0	..	..
20	29·508	56·0	55·5	0·5	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
22	29·547	58·8	55·8	3·0	53·0	5·8	..	..	NNW	..	NNW	0·80	..	0	0	0	..	..
Oct. 3. 0	29·573	61·8	57·0	4·8	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
2	29·591	60·0	55·8	4·2	..	..	..	..	NNW	..	..	..	Pos.	15	..	8	..	..
4	29·611	59·0	54·1	4·9	50·8	8·2	65·3	..	NNW	..	..	..	..	0	0	0	..	..
6	29·643	55·0	50·7	4·3	..	..	37·8	10·18	NW	..	..	..	..	0	0	0	..	..
8	29·670	49·0	47·7	1·3	..	..	——		Calm	..	..	..	..	0	0	0	..	..
10	29·677	46·0	45·2	0·8	44·0	2·0	75·5	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·679	43·6	43·6	0·0	..	..	32·0		Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	——	18·645	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	58·0	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	SE	..	..	..	..	..	..	..	..	..
22	29·585	58·6	55·7	2·9	..	..	..	..	SSE	..	SSE	1·75	..	0	0	0	..	..
Oct. 4. 0	..	..	..	..	..	..	..	..	SSE	..	..	..	..	..	..	..	..	..
2	29·506	61·9	55·8	6·1	..	..	..	..	SSE	0 to ¼	..	..	..	0	0	0	..	..
4	..	..	..	..	..	..	67·7	..	SE	0 to ¾	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	54·2		SE	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——	10·19	SE	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	79·0		SE	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	47·5	0·06	ESE	..	ESE	2·02	..	..	..	..	..	..
14	29·307	54·8	54·0	0·8	..	..	——		E by N	..	E	1·18	..	0	0	0	..	..
16	29·310	55·2	54·7	0·5	54·0	1·2	..	18·735	SE	..	..	..	..	0	0	0	..	..
18	29·303	56·5	56·2	0·3	..	..	58·0	..	ESE	..	ESE	0·53	..	0	0	0	..	..
20	29·322	57·0	56·9	0·1	..	..	..	..	SE	..	..	..	..	0	0	0	..	..
22	29·315	60·4	57·6	2·8	56·0	4·4	..	..	S	..	SSE	0·62	..	0	0	0	..	..
																		..
Oct. 5. 0	29·310	61·1	57·0	4·1	..	..	..	..	S by E	½ to 1	..	..	..	0	0	0	..	
2	29·295	62·5	57·7	4·8	..	..	65·0	..	S by E	½ to ¾	..	..	..	0	0	0	..	..
4	29·275	62·1	57·7	4·4	55·0	7·1	54·7	10·19	SSE	0 to ½	..	..	..	0	0	0	..	..
6	29·254	58·8	57·4	1·4	..	..	——		S by E	0 to ½	..	..	..	0	0	0	..	..
							71·5	0·09										..
8	29·246	58·5	55·8	2·7	..	..	..		S by E	0 to 1½	..	..	..	0	0	0	..	
10	29·229	58·5	55·7	2·8	54·5	4·0	——	18·865	SSE	½ to 2	SSE	5·25	..	0	0	0	..	..
							..											..
							58·0											
12	29·210	58·0	56·5	1·5	..	..	..	..	SSE	..	..	..	..	0	0	0	..	

DRY THERMOMETER.
October 2d. 18h. The reading was lower than that of the Wet Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud: rain is falling.	H B
10	..	,, ,, showers of rain since the last observation.	
10	Transit	,, ,, a thick rain has been falling for some time, and still continues.	H B
10	..	,, ,, a heavy rain falling; it increased in force at $11^h.50^m$, previous to which time there was a constant misty rain from the last observation.	T D
10	..	Overcast: cirro-stratus and scud: rain falling heavily since the last observation.	
10	..	,, ,, ,,	
10	..	,, ,, rain falling very heavily: the direction of the wind changed shortly before this observation, from S. S.W. (nearly calm) to N. N.W.	
10	Perigee	Overcast: cirro-stratus and scud: the rain ceased at 19^h.	T D
4	..	Cumuli and masses of white scud.	H B
4	..	Massive cumuli towards the N. horizon: cirro-stratus, masses of white scud, and haze in several directions.	L
6	..	Massive cumuli in the N. horizon: cirro-stratus and scud, with haze, in various directions.	T
10	..	Cirro-stratus, cumulo-stratus, and scud in every direction: some large clear breaks have been exhibited since 2^h.	T D
5	In Equator	Detached portions of cumulo-strati and cirro-stratus scattered over the sky, particularly in the W. S.W: the part of the sky that is free from cloud is much obscured by haze.	
0	..	Cloudless: a thin fog prevails.	
0	..	,, hazy.	T D
0	Transit	,, ,,	T
..	..		
..	..		
..	..		
..	..		
7	..	Cumuli, cumulo-strati, cirro-stratus, and scud in every direction, with the exception of the E., where a large portion of clear blue sky is exhibited.	T D
..	..		
8	..	Cumulo-stratus, thin cirro-stratus, and portions of light cirri in every direction.	T D
..	..		
..	..		
..	..		
..	Full		
..	Transit		
10	..	Overcast: cirro-stratus.	L
10	..	,, ,,	
10	..	,, ,,	
10	..	,, a slight rain is falling.	L
4	..	A brownish scud is passing from the S.: cirri are plentifully distributed in the E.: soon after the rain ceased the clouds became broken in every direction: at 21^h a thin cirro-stratus was generally prevalent.	H B
10	..	The sky became overcast with cirro-stratus and dense scud before $22^h.35^m$, and has continued so to the present time: the wind is blowing in occasional gusts to $1\frac{1}{2}$.	
10	..	Cirro-stratus and dense scud: breaks of small extent frequently appear: occasional gusts of wind to $1\frac{1}{2}$.	
10	..	Cirro-stratus and scud, the latter in large masses: occasional gusts of wind to 1.	H B
8	..	Cirro-stratus and masses of flying scud: clear blue sky in the S. horizon: at $5^h.45^m$ a heavy shower of rain, which continued till $5^h.56^m$. At $5^h.50^m$ the perfect arc of a finely-coloured rainbow was visible.	T D
1	..	A few light clouds in the E., but haze and vapour are so prevalent that only a few of the stars are visible.	C T
8	..	The appearance of the sky has been continually varying since the last observation; soon after which clouds came up from the W: at present cirro-strati and wild-looking masses of scud are passing quickly from the S.W. An imperfectly-formed lunar halo has been occasionally visible since 8^h.	C T
$9\frac{3}{4}$	..	The amount of cloud has been exceedingly variable during the last hour: scud is constantly passing with great rapidity, and rain is falling at intervals: a shower of rain fell at $11^h.35^m$, and at present a few drops of rain are falling: gusts of wind occasionally occur to 1.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 5. 14	29·189	56·8	55·8	1·0	..	..	..	..	S	..	..	..	..	0	0	0	..	..
16	29·183	57·6	56·7	0·9	55·5	2·1	65·0 / 54·7	10·19	SSW	0 to 1	..	..	..	0	0	0	..	..
18	29·261	56·0	55·3	0·7	..	..	71·5 / ..	0·09	SW	½ to 3½	..	..	..	0	0	0	..	..
20	29·325	55·2	52·4	2·8	..	..	.. / 58·0	18·865	SSW	½ to 1½	..	..	..	0	0	0	..	..
22	29·325	58·5	56·2	2·3	54·8	3·7	..	..	SSW	..	SW	2·25	..	0	0	0	..	.
Oct. 6. 0	29·307	58·4	57·4	1·0	..	..	..	..	SSW	1 to 4	..	..	..	0	0	0	..	..
2	29·291	60·0	59·1	0·9	..	..	..	..	SW	½ to 2	..	..	Neg.	20	..	20	..	..
4	29·354	55·4	54·0	1·4	52·0	3·4	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
6	29·398	54·8	53·2	1·6	..	..	..	..	SSW	..	SSW	1·42	..	0	0	0	..	..
8	29·430	54·5	53·2	1·3	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
10	29·440	54·0	52·2	1·8	51·0	3·0	61·3 / 52·2 / 65·5 / 46·8 / .. / 57·5	10·24 / 0·10	S	..	..	..	..	0	0	0	..	..
12	29·434	53·9	51·7	2·2	..	..		19·025	S by W	..	WSW	0·67	..	0	0	0	..	..
14	29·421	53·4	52·4	1·0	..	..		..	S by W	..	..	..	..	0	0	0	..	..
16	29·382	54·5	52·7	1·8	51·0	3·5	..	..	S by W	..	..	..	..	0	0	0	..	..
18	29·371	53·5	51·9	1·6	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
20	29·362	53·7	52·2	1·5	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
22	29·342	56·3	54·5	1·8	53·0	3·3	..	..	SSW	..	SSW	3·73	..	0	0	0	..	..
Oct. 7. 0	29·333	58·3	53·4	4·9	..	..	..	..	SSW	0 to 1½	..	..	..	0	0	0	..	..
2	29·311	59·5	53·6	5·9	..	..	..	..	SSW	½ to 2½	..	..	..	0	0	0	..	..
4	29·298	58·5	51·7	6·8	46·0	12·5	63·8 / 50·7 / 73·5 / 44·5 / .. / 56·8	10·25 / 0·02 / 19·075	SSW	½ to 3	..	..	Pos.	2	0	0	..	..
6	29·285	55·4	51·2	4·2	..	..			SSW	½ to 2½	..	..	..	0	0	0	..	..
8	29·265	54·4	51·4	3·0	..	..			SSW	½ to 1½	..	..	..	0	0	0	..	..
10	29·257	55·8	52·5	3·3	50·4	5·4	..	..	SSW	1 to 4	..	..	..	0	0	0	..	..
12	29·233	56·2	53·0	3·2	..	..	..	..	SSW	½ to 2½	..	..	..	0	0	0	..	..
14	29·237	56·0	53·7	2·3	..	..	..	..	SSW	½ to 2½	..	..	..	0	0	0	..	..

OSLER'S ANEMOMETER.

October 5d. 16h. 10m, 18h. 20m, and 19h. There were gusts of 3½ lbs., 4½ lbs., and 4 lbs. pressure on the square foot respectively recorded.

October 7d. 8h. 10m. A gust of 4½ lbs. pressure on the square foot was recorded.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	The sky remains in the same state as at the last observation: a heavy shower of rain fell at $12^h.50^m$.	H B
10	..	At the present time every portion of the sky is covered with cirro-stratus and dense scud, the latter is moving very quickly from the S.W.: since the last observation a thin rain has been falling: the wind is blowing in frequent gusts to 2.	
10	..	Soon after the last observation the wind commenced to blow in frequent gusts to 2 + and occasionally to $2\frac{1}{2}$ +: rain has been generally falling since the last observation: from $17^h.20^m$ to $17^h.30^m$ various heavy gusts of wind to $2\frac{1}{2}$ + occurred: at $17^h.30^m$ heavy rain fell, after which time the wind subsided considerably.	
7	..	The clouds at present visible are principally cirri and cirro-cumuli, the former are prevalent in every direction: since the last observation the gusts of wind have seldom exceeded $1\frac{1}{2}$ and 2; at present there are frequent gusts to $1\frac{1}{2}$.	H B
10	..	Overcast: dense cirro-stratus and scud.	T D
10	..	Overcast: dense cirro-stratus: rain falling heavily in squalls; it commenced falling at $22^h.50^m$: the wind is blowing in gusts to $2\frac{1}{2}$.	T D
10	..	Overcast: dense cirro-stratus: rain falling: gusts of wind to 2.	C T
10	..	,, cirro-stratus and scud.	H B
6	..	Within the last ten minutes the clouds have become broken, and a large portion of the sky principally to the S. of the zenith is pretty free from cloud. (Soon after this several cirro-cumuli were seen to the N. of the zenith, but the appearance of the sky was wholly changed at $6^h.10^m$, every part being overcast with cirro-stratus and scud.)	
10	..	Overcast: cirro-stratus and scud: the clouds are apparently of less density around the zenith: gusts of wind to $\frac{3}{4}$.	
10	..	,, ,, the Moon and a few stars are occasionally visible: at $8^h.40^m$ a small space of the sky S. of the zenith was free from cloud, with this exception the sky has been generally covered with cirro-stratus: the wind is blowing in frequent gusts to $\frac{3}{4}$. About the time of this observation a halo was visible around the Moon, but it disappeared before any measures could be taken: its vertical semidiameter was estimated at $22\frac{1}{2}°$ or 23°.	H B
9	..	Cirro-stratus and masses of scud: at $11^h.50^m$ the clouds became slightly broken, at which time the Moon and a few stars became visible.	T D
10	Transit	Overcast, with dense cirro-stratus: heavy rain was falling from $13^h.10^m$ to $13^h.30^m$.	
10	..	Overcast, with dense cirro-stratus and scud.	
10	..	,,	
3	..	Cirro-stratus and portions of light scud principally in the S. and S.W. horizon; the remainder of the sky is clear: at $19^h.30^m$ a heavy shower of rain fell: at $19^h.25^m$ a finely-coloured perfect double rainbow was visible: at $19^h.30^m$ the rainbow disappeared.	T D
$9\frac{3}{4}$	..	Cirro-stratus and scud: the clouds are slightly broken near the N. horizon: rain has been falling in frequent showers during the last hour: the wind is blowing in gusts to $\frac{3}{4}$.	H B
7	..	At $23^h.0^m$ the sky was wholly free from cloud: at $23^h.5^m$ cumuli and fleecy clouds began to appear along the S. and N. horizon, and in fifteen minutes they had extended considerably; since that time the amount of cloud has been gradually becoming greater: the wind is blowing in gusts to $1\frac{1}{2}$.	
9	..	Cirri passing into cirro-strati, with large masses of dark scud, and cumuli near the N. horizon: the amount of cloud has been variable since the last observation: at times several cirri have been seen: the wind is blowing in gusts to 1.	H B
8	..	The appearance of the sky is continually changing; at present cirro-stratus and scud, passing quickly from the W., cover nearly the whole sky, except in the E., where cirri and light clouds prevail.	C T
10	..	The appearance of the sky is very variable: ten minutes previous to this observation the greater portion was free from cloud, but at present it is covered with cirro-stratus and masses of scud flying rapidly.	T D
9	..	The greater portion of the sky is covered with cirro-stratus of variable density, the clouds in some directions being so thin that the stars are visible: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	
10	..	Cirro-stratus and masses of dark scud cover the sky, the Moon and a few stars being occasionally visible through the clouds: the wind is blowing in gusts to 2.	T D
9	..	Cirro-stratus and scud: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	C T
10	..	,, the wind is blowing in gusts to 2.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 7. 16	29·247	53·5	51·7	1·8	50·5	3·0	..	..	SW	½ to 1	SW	5·63	..	0	0	0	..	..
18	29·284	51·5	50·2	1·3	..	..	..	..	SSW	¼ steady	..	..	..	0	0	0	..	..
20	29·321	52·0	50·2	1·8	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
22	29·369	57·6	53·7	3·9	49·5	8·1	..	..	SW	½ to 1½	WSW	2·75	..	0	0	0	..	..
Oct. 8. 0	29·403	56·9	54·7	2·2	..	..	..	..	WSW	0 to ½	..	..	Pos.	2	2	0	..	..
2	29·416	56·5	53·9	2·6	..	..	..	..	WSW	½ to 2½	..	..	..	0	0	0	..	..
4	29·436	58·0	52·0	6·0	48·5	9·5	..	..	WSW	0 to 2½	..	..	Pos.	2	2	0	..	..
6	29·470	53·0	49·2	3·8	..	..	63·8 / 47·2	..	WSW	½ to 3	..	..	..	0	0	0	..	..
8	29·502	50·5	48·1	2·4	..	..		10·28	SW	0 to ½	..	..	..	0	0	0	..	..
							75·7 / 40·3	0·06										
10	29·516	49·0	47·1	1·9	45·0	4·0			SW	¼ steady	..	..	..	0	0	0	..	..
12	29·550	48·2	46·5	1·7	..	..		19·285	SW	¼ steady	..	..	Pos.	2	2	0	..	..
14	29·565	47·6	46·4	1·2	..	..	.. / 56·5	..	SW	..	..	..	Pos.	2	2	0	..	..
16	29·553	50·4	48·2	2·2	45·0	5·4	..	..	SSW	..	..		Pos.	5	..	5	..	..
18	29·568	50·4	48·8	1·6	..	..	..	..	SSW	..	..	..	Pos.	3	..	0	..	..
20	29·570	52·0	51·6	0·4	..	..	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
22	29·556	56·2	55·1	1·1	54·0	2·2	..	..	SSW	0 to ¼	SW	7·35	Pos.	2	2	0	..	..
Oct. 9. 0	29·530	59·0	56·4	2·6	..	..	..	..	SSW	1 to 3	..	..	..	0	0	0	..	..
2	29·511	59·1	56·5	2·6	..	..	..	..	SSW	¾ to 2½	..	..	..	0	0	0	..	..
4	29·460	60·4	56·8	3·6	54·0	6·4	..	..	SSW	1½ to 5	..	..	Pos.	2	2	0	..	..
6	29·415	60·5	56·9	3·6	..	..	66·4 / 54·5	..	SSW	2½ to 7	..	..	Pos.	2	2	0	..	..
8	29·402	60·5	57·2	3·3	..	..		..	SSW	2 to 5½	..	..	Pos.	2	2	0	..	..
								10·28										
10	29·396	59·2	56·8	2·4	55·0	4·2			SSW	2 to 4½	..	..	..	0	0	0	..	..
12	29·359	57·3	56·4	0·9	..	..	67·5 / 51·0	0·20	SSW	1½ to 3	..	..	..	0	0	0	..	..
14	29·334	57·5	55·8	1·7	..	..		19·450	SSW	1 to 3½	..	..	..	0	0	0	..	..
16	29·315	58·6	55·7	2·9	54·0	4·6	.. / 56·2	..	SSW	1½ to 4	SSW	7·80	..	0	0	0	..	..
18	29·318	57·2	54·3	2·9	..	..	..	..	SSW	1 to 3	..	..	..	0	0	0	..	..
20	29·336	57·5	54·7	2·8	..	..	..	..	SSW	1½ to 4	..	..	..	0	0	0	..	..
22	29·389	60·4	56·2	4·2	54·0	6·4	..	..	SW	3 to 4	SW	1·85	..	0	0	0	..	..
Oct. 10. 0	29·419	63·0	57·0	6·0	..	..	..	..	SW	2½ to 8	..	..	..	0	0	0	..	..
2	29·462	61·7	57·0	4·7	..	..	..	..	SW	2½ to 3½	..	..	..	0	0	0	..	..
4	29·494	60·4	57·7	2·7	55·0	5·4	..	..	SW	2 to 6	..	..	..	0	0	0	..	..
6	29·539	57·5	54·5	3·0	..	..	..	..	SW	1½ to 3	..	..	..	0	0	0	..	..

OSLER'S ANEMOMETER.

October 8d. 1h. 20m and 3h. 5m. There were gusts of 3 lbs. and 8 lbs. pressure on the square foot respectively recorded.

October 9d. 11h, 12h. 40m, and 20h. 30m. There were gusts of 6 lbs., 7 lbs., and 7 lbs. pressure on the square foot respectively recorded.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Transit	Overcast: scud: the wind is blowing in gusts to $1\frac{1}{2}$ and 2: a heavy shower of rain fell at $14^h.30^m$; it lasted fifteen minutes.	C T
0	..	Cloudless: the clouds cleared off at 17^h, and the sky has continued cloudless, with few exceptions, till the present time.	
1	..	Cirri and light clouds in various directions.	C T
2	..	Light clouds passing rapidly from the W.S.W.: upper clouds, a few cirri, and cirro-cumuli: the amount of cloud has increased considerably in the last few minutes: the wind is blowing in frequent gusts to $1\frac{1}{2}$, and occasionally to 2.	H B
10	..	Cirro-stratus and scud cover the sky: at $23^h.45^m$ heavy rain commenced falling, and continued till $23^h.57^m$.	T D
8	..	Cirro-stratus and masses of flying scud passing rapidly over the sky: at $1^h.25^m$ a violent squall of rain and hail commenced, with gusts of wind to 3 and 4; it continued till $1^h.44^m$, and then suddenly ceased: the electrical instruments were affected.	T D
8	..	Cirro-stratus, scud, and light fleecy clouds.	C T
8	..	Cirro-stratus and scud: there have been several squalls of rain and frequent gusts of wind to $2\frac{1}{2}$ since the last observation.	
6	..	At 7^h it was nearly cloudless, and remained so till $7^h.55^m$, when cirro-stratus and scud came up from the S.W., and appeared to be gradually spreading themselves over the sky: at $8^h.10^m$ the clouds dispersed; and it is now nearly cloudless.	C T
0	..	Cloudless: the wind is blowing in gusts to $\frac{3}{4}$.	L
0	..	,, gusts of wind to 1.	H B
$\frac{1}{4}$	..	A few light clouds along the S. and S.W. horizon; otherwise the sky is cloudless: since the last observation several light clouds have been prevalent for a short time: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	
$9\frac{3}{4}$	Transit	Cirro-stratus, fleecy clouds, and scud nearly cover the sky: the clouds are more dense S. of the zenith than in any other direction, and are becoming more so: gusts of wind to $\frac{3}{4}$ and 1.	
10	..	Overcast: cirro-stratus. Around the Moon a very faint halo may be traced, but it is too faint for measurement.	
10	..	,, rain falling; it commenced at $18^h.30^m$.	H B
10	..	,, cirro-stratus and scud: at present no rain is falling.	T D
10	..	Overcast: cirro-stratus and scud: no change since the last observation.	
10	..	,, ,, with the exception of a thin rain that falls at intervals no change has taken place since the last observation.	T D
10	..	Overcast: cirro-stratus and scud: gusts of wind to 2.	H B
10	..	,, ,, frequent gusts of wind to $2\frac{1}{2}$.	
10	..	,, ,, ,, several gusts to $2\frac{1}{2}$ + have occurred since the last observation: slight drops of rain have fallen.	
10	..	Overcast: rain is falling: gusts of wind to $2\frac{1}{2}$ and 3: the wind has been blowing in gusts to $2\frac{1}{2}$ since 8^h.	H B
10	..	,, cirro-stratus and scud: rain falling heavily: gusts of wind to 3 +: a very wild and stormy night: rain commenced falling twelve minutes after the last observation.	T D
10	Greatest declination N.	Overcast: dense cirro-stratus and scud: no rain is falling at present: the wind is blowing in gusts to 2 +.	
8	..	Cirro-stratus, cumulo-stratus, and scud much broken in the N. and N.W., several stars being visible through the breaks; the Moon is also visible at intervals: the wind is blowing in gusts to 3.	
0	Transit	Cloudless: the clouds dispersed ten minutes after the last observation: the wind is blowing in gusts to 2 +.	
7	..	The appearance of the sky has been very variable since the last observation: at $18^h.55^m$ the sky was covered, and since that time masses of flying scud have passed rapidly over, occasionally exhibiting considerable breaks: at present the greater portion of the sky is covered with cirro-stratus and flying scud: the wind is blowing in gusts to 3.	T D
10	..	Cirro-stratus and large masses of scud moving quickly from the S.W.: occasional small breaks: the wind is blowing in gusts to 3 and 3 +.	L
10	..	Cirro-stratus and masses of scud: the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	
10	..	Overcast: cirro-stratus and masses of scud: the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	L
10	..	,, cirro-stratus and scud: a slight shower of rain has just fallen: the wind is blowing in gusts to $2\frac{1}{2}$.	T D
5	..	Cirro-stratus and masses of light scud passing rapidly over from the S.S.W.: several extensive breaks, through which clear sky is seen.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 10. 8	29·615	56·8	54·1	2·7	..	..	66·4	..	SW	½ to 2	SW	2·23	..	0	0	0	..	..
							49·5											
10	29·649	54·4	52·5	1·9	51·0	3·4		10·28	SW	0 to ¾	..	..	..	0	0	0	..	..
12	29·687	52·5	51·4	1·1	..	..	76·7		SSW	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	44·2	0·00	SSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..			SSW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	19·455	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	56·2	..	Calm	..	..	..	..	..	..	..	..	..
22	29·589	62·5	57·4	5·1	..	..		..	Calm	..	WSW	4·77	Pos.	2	2	0	..	..
Oct. 11. 0	..	..	..	..	..	..	..	..	S by E	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	S by E	..	..	..	..	..	..	..	..	..
4	29·475	57·5	55·7	1·8	..	..	62·8	..	S	..	..	..	Pos.	2	2	0	..	..
6	29·451	56·1	54·9	1·2	..	..	45·4	..	S	..	S	1·67	..	0	0	0	..	..
8	..	..	..	..	..	..		10·41	SSW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	74·7		SSW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	40·0	0·16	SSW	..	..	..	..	..	..	..	..	..
14	29·353	48·5	48·5	0·0	..	..			SSW	..	SW	1·08	..	0	0	0	..	..
16	29·330	47·8	47·7	0·1	48·0	−0·2	..	19·630	SSW	..	..	..	..	0	0	0	..	..
18	29·310	47·5	47·4	0·1	..	..	56·2	..	Calm	..	..	..	..	0	0	0	..	..
20	29·308	48·2	48·2	0·0	..	..		..	Calm	..	..	..	..	0	0	0	..	..
22	29·314	52·5	51·7	0·8	50·0	2·5	..	..	Calm	..	WSW	0·58	..	0	0	0	..	..
Oct. 12. 0	29·324	54·5	52·4	2·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·332	54·8	52·1	2·7	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
4	29·345	53·7	52·4	1·3	50·0	3·7	..	..	Calm	..	..	..	Pos.	25	..	0	10	2. 30
6	29·376	53·2	51·5	1·7	..	..	..	..	Calm	..	..	..	Pos.	4	..	0	..	..
8	29·400	48·5	48·2	0·3	..	..	58·4	..	Calm	..	..	..	Pos.	2	2	0	..	..
							46·2											
10	29·417	48·6	48·6	0·0	48·5	0·1		10·41	Calm	..	..	..	..	0	0	0	..	..
							68·5											
12	29·439	50·6	49·5	1·5	..	..	40·0	0·00	NNW	½ to 1½	..	..	..	0	0	0	..	..
								19·655										
14	29·466	48·5	48·2	0·3	..	..	..	..	NNW	1½ to 4½	..	..	..	0	0	0	..	..
							55·5	..										
16	29·514	47·9	47·2	0·7	45·0	2·9	..	..	NNW	1 to 4	..	..	..	0	0	0	..	..
18	29·568	48·0	47·7	0·3	..	..	..	..	NNW	1½ to 5	..	..	..	0	0	0	..	..
20	29·642	48·4	47·1	1·3	..	..	..	..	NNW	1½ to 4½	..	..	..	0	0	0	..	..
22	29·698	48·3	46·7	1·6	45·0	3·3	..	..	NNW	1 to 3½	NNW	5·02	..	0	0	0	..	..
Oct. 13. 0	29·721	51·0	47·2	3·8	..	..	55·2	..	NNW	0 to 5½	..	..	..	0	0	0	..	..
							37·0											
2	29·731	53·0	48·0	5·0	..	..		10·41	NNW	1½ to 6	..	..	..	0	0	0	..	..
4	29·749	51·3	46·9	4·4	41·5	9·8	65·5		NNW	0 to 2½	..	..	Pos.	12	10	8	10	0. 30
6	29·767	49·7	45·5	4·2	..	..	31·0	0·07	NNW	0 to 2½	..	..	Pos.	30	10	3	5	..
8	29·767	48·2	44·2	4·0	..	..			NNW	½ to 1	..	..	Pos.	8	5	2	..	..
10	29·773	46·0	42·7	3·3	39·5	6·5	..	19·695	Calm	..	NNW	3·78	Pos.	10	10	5	5	5. 0
12	29·736	41·2	39·8	1·4	..	..	54·5	..	Calm	..	..	..	Pos.	2	2	0	..	..

DEW POINT THERMOMETER.
October 11d. 16h. The reading was higher than that of the Dry Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
6	..	Detached lines of cirri in the S. horizon: portions of light scud and cirro-stratus scattered in large masses over the sky in every other direction: the wind is blowing in gusts to 2.	T D
0	..	Cloudless: the sky became nearly free from cloud at $8^h.\ 55^m$, when the wind lulled.	T D
0	..	,,	L
..	..		
.	..		
..	Transit		
..	..		
9	..	Cirro-stratus and masses of dark scud: the sky has been nearly overcast during the last hour: the wind is blowing in gusts to $\frac{3}{4}$ and 1.	L
..	..		
..	..		
10	..	Overcast: rain falling: the sky has been generally overcast during the last two hours.	H B
10	..	,, cirro-stratus and scud: rain fell about twenty minutes after the last observation: the evening was	
..	..	overcast, with rain falling frequently.	H B
..	..		
..	..		
6	..	Lines of cloud in every direction: the horizon all around is covered with cirro-stratus.	L
0	3rd Qr.	Cloudless.	
2	Transit	Light clouds in various directions.	
7	..	Cirro-stratus has come up within the last half-hour, and covered the greater part of the sky; the portion clear is towards the N. and W. horizon.	L
10	..	Overcast: cirro-stratus and dense scud: a few breaks have been seen in the clouds during the last hour.	H B
10	..	Overcast: cirro-stratus; no change since the last observation.	
10	..	Cirro-stratus and scud: the clouds appear of a different density around the place of the Sun, and there are a few light breaks to the E. of the zenith.	H B
8	..	Cumulo-strati, cirro-strati, scud, and haze: clear about the zenith.	L
7	..	Thin cirro-stratus, fleecy clouds, and haze: small breaks in every direction.	
2	..	Soon after the last observation the sky became clear, since which time the greater part of it has been free from cloud: at present there is cirro-stratus round the horizon: hazy.	
8	..	Cloudy round the horizon: the sky S. of the zenith is covered with cirro-stratus; the only part clear is the zenith and a little N. of it; a few stars are occasionally visible in the E.	L
10	..	Overcast: cirro-stratus and scud: a thin sleet or rain is falling: the wind is blowing in frequent gusts to 1, and occasionally to $1\frac{1}{2}$.	H B
10	..	Overcast: rain or sleet falling: the wind is blowing in frequent gusts to 2: several squalls, with gusts of wind to 2+, have taken place since the last observation.	
10	..	Overcast: a very thin rain is falling: the wind is blowing in gusts to 2 and $2\frac{1}{2}$: the night has been densely overcast, not a single object having been visible.	
10	..	Overcast: cirro-stratus and dark scud: frequent gusts of wind to 2 and 2+.	
10	Transit	,, cirro-stratus: the wind has been blowing in frequent gusts to 2+ since the last observation.	H B
10	..	,, cirro-stratus and scud: a thin rain has fallen at intervals since the previous observation.	T D
7	..	Cirro-stratus, cumulo-stratus, and masses of dark scud: there are several extensive breaks in the zenith and N. N. E.: the appearance of the sky has been very variable during the morning.	
7	..	Cirro-stratus and light scud: the appearance of the sky is much the same as at the last observation.	T D
10	..	Cirro-stratus and scud: gusts of wind to 1.	H B
10	..	,,	
10	..	,, the clouds were slighly broken soon after the last observation.	
0	..	Cloudless, but hazy in the horizon: the clouds dispersed about $9^h.\ 20^m$.	H B
3	..	Cirro-stratus: the clouds came up at $11^h.\ 50^m$ from the N., N. E. and S., previously to which time it was cloudless: a thin haze prevails.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 13. 14	29·693	41·7	40·7	1·0	..	..	..	..	..	..			SSW	..	..	..	Pos.	2	2	0	..	..
16	29·633	39·3	38·4	0·9	37·5	1·8	..	..	..	..			SSW	..	..	..	Pos.	2	2	0	..	..
18	29·538	41·8	39·7	2·1	..	..	..	..	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
20	29·437	45·3	43·2	2·1	..	..	..	..	..	..			Calm	..	..	..	..	0	0	0	..	..
22	29·330	48·8	47·9	0·9	47·0	1·8	..	..	..	..			S	..	S	0·47	..	0	0	0	..	..
Oct. 14. 0	29·181	49·0	48·4	0·6	..	..	..	..	..	..			S	2 to 3½	..	..	Neg.	0	..	30	50	..
2	29·051	51·2	50·8	0·4	..	..	..	..	..	..			S	1 to 4	..	..	..	0	0	0	..	..
4	28·961	53·5	53·2	0·3	52·5	1·0	..	..	..	..			S by W	½ to 2½	..	..	..	0	0	0	..	..
6	28·925	53·0	52·2	0·8	..	..	..	..	..	..			S by W	..	..	..	..	0	0	0	..	..
8	28·897	52·5	51·5	1·0	..	..	55·5 / 44·8	..	..	10·45			S by W	..	S	1·81	..	0	0	0	..	..
10	28·875	51·2	50·3	0·9	49·0	2·2	55·7	..	..	0·31			S by W	½ steady	..	..	..	0	0	0	..	..
12	28·863	48·6	48·2	0·4	..	..	41·8	..	..	20·090			S by W	..	..	..	..	0	0	0	..	..
14	28·846	49·5	48·7	0·8	..	..	..	..	..				S by W	..	..	..	..	0	0	0	..	..
16	28·833	48·7	48·0	0·7	47·0	1·7	.. / 54·0	..	..				S by W	..	..	..	..	0	0	0	..	..
18	28·826	48·2	47·4	0·8	..	..	..	..	..	..			S by W	..	..	..	..	0	0	0	..	..
20	28·835	49·6	48·7	0·9	..	..	..	..	..	..			S by W	..	..	..	..	0	0	0	..	..
22	28·836	49·8	49·2	0·6	49·0	0·8	..	..	..	..			SSW	½ steady	SSW	3·92	Neg.	40	..	15	..	0. 30
Oct. 15. 0	28·860	49·9	49·2	0·7	..	..	..	..	..	..			SSW	..	..	..	Neg.	40	..	30	..	0. 20
2	28·860	52·5	50·8	1·7	..	..	..	..	..	..			SSW	..	..	..	..	0	0	0	..	..
4	28·896	52·8	51·2	1·6	50·0	2·8	..	..	..	..			SSW	..	..	..	..	0	0	0	..	..
6	28·937	51·2	49·5	1·7	..	..	57·0 / 47·2	..	..	11·17			S	..	..	..	Pos.	35	..	20	30	2. 0
8	28·973	48·0	47·6	0·4	..	..	..	..	..	..			Calm	..	..	..	..	0	0	0	..	..
10	28·991	49·2	48·8	0·4	48·0	1·2	67·5 / 40·7	..	..	0·95			Calm	..	..	..	..	0	0	0	..	..
12	29·003	49·9	49·8	0·1	..	..	..	..	..	20·960			Calm	..	..	..	Neg.	40	..	10	10	0. 15
14	29·010	49·8	49·8	0·0	..	..	..	..	..				Calm	..	..	..	..	0	0	0	..	..
16	29·018	50·2	50·2	0·0	50·0	0·2	53·5	..	..	..			Calm	..	..	..	Neg.	40	..	20	20	0. 40
18	29·036	50·7	50·7	0·0	..	..	..	..	..	..			Calm	..	..	..	Neg.	40	..	30	30	..
20	29·060	50·3	50·2	0·1	..	..	..	..	..	..			Calm	..	..	..	..	0	0	0	0	..
22	29·080	56·6	54·7	1·9	53·0	3·6	..	..	..	..			SSE	..	SSW	2·55	..	0	0	0	0	..
Oct. 16. 0	29·110	58·8	55·6	3·2	..	..	..	..	..	..			S	..	..	..	Pos.	2	2	0	0	..
2	29·102	60·9	56·0	4·9	..	..	61·4 / 47·2	..	..	11·48			S	..	..	..	Pos.	2	2	0	0	..
4	29·111	57·7	54·2	3·5	51·0	6·7	72·0 / 39·0	..	..	0·42			S	..	..	..	Pos.	8	..	5	0	3. 0
6	29·137	53·8	52·2	1·6	..	..	..	..	..	21·345			Calm	..	..	..	Pos.	15	20	10	10	0. 50
8	29·148	50·4	49·7	0·7	..	..	52·5	..	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
10	29·155	48·8	48·8	0·0	48·5	0·3	..	..	..	..			Calm	..	..	..	Pos.	20	20	10	10	Recovered immediately

ELECTRICITY.
October 15d. 0h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
9	..	A thin cirro-stratus covers the sky, with the exception of a small portion in the E. S. E., where a few stars are visible: the clouds increased in density at $12^h.30$.	T D
10	..	A thin cirro-stratus covers the sky; the larger stars are visible through it.	
10	..	Overcast: cirro-stratus: the Moon's place is faintly visible.	
10	Transit	,, ,,	T D
10	..	,, cirro-stratus and scud: rain falling.	L
10	..	Overcast: cirro-stratus and scud: rain falling heavily: the wind is blowing in gusts to 1.	L
10	..	,, ,, a fine rain falling.	T D
10	..	,, dense cirro-stratus: a steady thick rain falling.	
8	..	Cirro-stratus and dense masses of scud: the sky S. and S.W. of the zenith is principally clear: at $4^h.50^m$ the rain ceased and the clouds became broken in the N., and the sky soon after became nearly free from cloud; at $5^h.40^m$ the clouds again collected in every direction.	
10	..	Overcast: dense cirro-stratus.	
3	..	Cirro-stratus in the horizon, at a low elevation: the appearance of the sky has been very variable since the previous observation, being at times nearly clear, and then again cloudy.	T D
2	..	Cirro-stratus in the horizon towards the E. and S.; clear elsewhere.	L
1	..	Cirro-stratus in the horizon towards the S.; clear elsewhere.	
7	..	Cirro-stratus: the clouds came up about half an hour since, and now cover the greater part of the sky: the N. and W. are still free from cloud.	
7	Apogee	Cirro-stratus: the western part of the sky is clear.	
7	Transit	Cirro-stratus and scud in every direction, except in the neighbourhood of the zenith: a shower of rain fell soon after the previous observation; it lasted fifteen minutes.	L
10	..	Overcast: rain falling; it commenced about $20^h.35^m$.	H B
10	..	Overcast: rain falling slightly; at $22^h.22^m$ it ceased, and the clouds became slightly broken in the zenith; it again commenced at $22^h.45^m$.	H B
9	..	Cirro-stratus and slate-coloured scud: the rain ceased at $1^h.30^m$, since which time there have been several breaks in the clouds, and the Sun occasionally shines through them.	H B
8	..	Cirro-stratus and masses of scud: rain has fallen in frequent showers since the last observation: at $3^h.10^m$ a finely-coloured rainbow was visible, and continued so for twenty minutes.	T D
1	..	Cirro-stratus in the horizon towards the N. and W., and a few light clouds in the S.; clear elsewhere.	L
1	..	Cirro-stratus in the horizon towards the N. and E.; clear elsewhere.	
7	.	Clear in the neighbourhood of the zenith, every other part of the sky is covered with a thin cirro-stratus: soon after the previous observation the sky became overcast; several showers of rain have also fallen.	L
10	..	Overcast: rain falling: several showers have fallen since the previous observation.	H B
10	..	,, cirro-stratus and scud.	
10	..	,, rain falling; it has fallen almost without intermission since $14^h.50^m$.	
10	..	,, heavy rain falling; it has fallen almost without intermission since the previous observation.	
2	..	Fragments of cirro-strati in several directions, and a few cirri in the S. horizon: the rain ceased at $19^h.10^m$, and the clouds suddenly disappeared, with the exception of those noted above.	H B
4	Transit	Portions of cirro-stratus and scud in every direction.	T D
9	..	Cirro-stratus and scud in every direction, except in the N., where some fine rocky cumuli prevail: frequent showers of rain have fallen since the last observation.	
5	..	Cirro-stratus in the horizon, from S. S. E. to S. S. W., at a low elevation, and massive cumuli in the N.: the zenith, and around it for a considerable distance, is clear: at $1^h.10^m$ a heavy shower of rain fell.	T D
7	..	Massive cumuli in the S. and S. E. horizon, and fragments of cirro-strati and scud in various directions; a few lines of cirri are also visible.	H B
8	..	A thin cirro-stratus in every direction; in the S. S. E. and W. it is deeply tinged with red: the cumuli disappeared soon after the previous observation.	
1	..	Cirro-stratus near the horizon; clear elsewhere: the clouds began to disperse at 7^h.	
$9\frac{3}{4}$	..	Cirro-stratus: the clouds collected at 9^h, and the only part clear at present is the N.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. — of Free Therm. — of Rad. Therm. — of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 16. 12	29·143	48·0	47·9	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
14	29·124	48·7	48·7	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	29·072	50·0	50·2	−0·2	50·0	0·0	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
18	29·078	51·4	51·2	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·120	50·5	50·7	−0·2	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·159	57·2	54·5	2·7	53·0	4·2	..	..	SSW	0 to ½	S	1·70	..	0	0	0	..	..
Oct. 17. 0	29·182	58·7	55·9	2·8	..	..	..	..	SSE	..	..	..	Pos.	2	2	0	..	..
2	29·235	57·4	54·0	3·4	..	..	..	..	SSW	..	..	..	Pos.	5	..	5	..	..
4	29·261	60·5	55·2	5·3	51·0	9·5	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
6	29·322	54·0	51·7	2·3	..	..	63·0 / 46·0	11·73	Calm	..	..	..	..	0	0	0	..	..
8	29·368	49·0	48·7	0·3	..	..	74·0	0·39	Calm	..	..	..	..	0	0	0	..	..
10	29·378	48·0	47·9	0·1	47·0	1·0	40·0		Calm	..	..	..	..	0	0	0	..	..
12	29·396	47·3	47·3	0·0	..	..		21·740	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	52·5	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·339	52·0	52·2	−0·2	..	..	..	..	NNE	..	S	1·85	Neg.	30	..	20	30	1. 0
Oct. 18. 0	29·315	52·4	52·6	−0·2	..	..	..	..	Calm	..	..	..	Neg.	2	2	0	..	..
2	..	..	..	..	..	..	..	..	WSW	0 to 1	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	59·9	..	SSW	¼ to 1½	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	45·5	11·95	SSW	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			S by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	62·3	0·38	S by E	..	..	..	..	..	..	..	..	..
12	29·591	50·3	49·7	0·6	..	..	40·3		S	..	..	..	..	0	0	0	..	..
14	29·605	50·0	49·4	0·6	..	..		22·100	S	..	..	..	..	0	0	0	..	..
16	29·617	48·3	48·0	0·3	47·5	0·8	..		S by W	..	..	..	..	0	0	0	..	..
18	29·640	47·5	47·2	0·3	..	..	51·8	..	S	..	..	..	..	0	0	0	..	..
20	29·652	47·0	46·9	0·1	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
22	29·673	57·4	54·9	2·5	52·5	4·9	..	..	S by E	..	SW	4·65	..	0	0	0	..	..
Oct. 19. 0	29·671	62·0	56·4	5·6	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
2	29·629	62·5	56·0	6.5	..	..	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
4	29·622	59·9	54·5	5·4	51·0	8·9	63·3	..	SSW	..	..	..	Pos.	2	2	0	..	..
6	29·612	54·6	53·0	1·6	..	..	46·0	12·02	SSW	..	..	..	Pos.	2	2	0	..	..
8	29·593	51·8	51·4	0·4	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
10	29·560	51·3	50·9	0·4	50·0	1·3	74·5 / 43·3	0·12	Calm	..	..	..	Pos.	2	2	0	..	..
12	29·508	52·3	51·5	0·8	..	..		22·245	Calm	..	..	..	Neg.	40	..	50	150	0. 2
14	29·461	51·2	50·8	0·4	..	..	..		Calm	..	..	..	..	0	0	0	..	..
16	29·413	52·5	51·7	0·8	50·0	2·5	51·2	..	Calm	..	SSW	1·30	Pos.	2	2	0	..	..
18	29·409	51·6	51·2	0·4	..	..	..	..	WSW	..	..	..	Neg.	2	2	0	..	..
20	29·439	47·0	46·4	0·6	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
22	29·461	49·5	47·7	1·8	46·0	3·5	..	..	WSW	..	WSW	1·35	Neg.	2	2	0	..	..
Oct. 20. 0	29·449	55·0	50·4	4·6	..	..	..	..	SW	0 to ¼	..	..	..	0	0	0	..	..

DRY THERMOMETER.

October 16d. 16h and 20h, 17d. 22h, and 18d. 0h. The readings were lower than those of the Wet Thermometer.

October 18d. 22h. The reading was 10°·4 higher than at 20h.

ELECTRICITY.

October 19d. 12h. There were sparks at the distance of 0in·03.

GALVANOMETER.

October 19d. 12h. There was a current of 2° towards A.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: dense cirro-stratus.	T D
10	..	,, ,, rain falling heavily; it commenced at 13^h.	
10	..	,, cirro-stratus: rain falling heavily.	
10	..	,, ,, the rain ceased shortly before this observation.	
10	..	,, ,, rain falling heavily: several showers have fallen since the previous observation: the clouds were slightly broken at $19^h.\ 45^m$.	T D
8	Transit	Cirro-strati, fleecy clouds, and scud: breaks in and about the zenith.	L
9	..	Cirro-strati, fleecy clouds, and scud: small breaks in various directions.	L
$9\frac{3}{4}$	In Equator	Cirro-stratus and dense scud: there are a few breaks in various directions.	H B
3	..	Cirro-stratus, comoid cirri, and light clouds in various directions: the clouds have gradually dispersed since the previous observation.	T D
4	..	Cirro-stratus in the N. E. horizon, extending to a considerable altitude: light cirri and fragments of scud scattered in various directions.	
3	..	Cirro-stratus and haze in the S. horizon; clear elsewhere.	
0	..	Cloudless: hazy: several small meteors have been seen during the evening.	T D
9	..	Cirro-stratus: a few of the larger stars are visible in the N. and W.: a thin fog prevails.	L
..	..		
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus: rain falling heavily: slight fog.	
10	Transit	Overcast: cirro-stratus: rain falling, but not so heavily: slight fog.	
..	..		
..	..		
..	..		
..	..		
..	..		
0	..	Cloudless.	
0	..	,,	
0	..	,,	
0	..	,,	
0	..	A few light clouds towards the S., but to no numerical extent; otherwise cloudless.	L
$\frac{1}{2}$	..	A single line of cirri in the N., and a few light portions of scud near the S. horizon.	H B
4	Transit	Masses of white scud and cumuli scattered in every direction; cirro-stratus prevails also in the N. and N. E.: the clouds increased about 23^h.	T D
6	..	Cirri, small cumuli, and a considerable quantity of white scud.	H B
1	..	Cumuli in the N. and S. horizon; clear elsewhere. [there.	L
6	..	Cirro-stratus and dark scud towards the S.; the former prevails also in the N., and a few light clouds here and	
0	..	Cloudless: a shower of rain fell soon after the last observation; it lasted ten minutes, immediately after which the clouds dispersed.	
5	..	Cloudy to the S., cirro-stratus in the W. and N. horizon, and masses of scud here and there.	L
10	..	Overcast: rain falling heavily: several showers since the last observation.	H B
10	..	,, cirro-stratus and dense scud: the rain has ceased.	
10	..	,, ,,	
10	..	,, ,, rain falling heavily: gusts of wind to $\frac{3}{4}$.	
10	New	,, cirro-stratus and scud: the rain has ceased.	H B
10	..	,, cirro-stratus: the Sun's disk is faintly visible.	T D
6	Transit	Cirro-stratus and finely-formed cumuli in the N. and N. E.: the zenith, and for 20° around it, is clear: the clouds began to break in the S. and S.W. soon after the last observation.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 20. 2	29·434	57·4	51·8	5·6	..	..	..			..			SW	..	..	..	Pos.	2	2	0	..	..
4	29·440	54·1	50·2	3·9	45·0	9·1	..			..			WSW	..	..	..	Neg.	40	..	..	..	Recovered instantly.
6	29·461	50·5	48·5	2·0	..	..	..			..			SW	..	..	..	..	0	0	0	..	..
8	29·481	48·9	47·2	1·7	..	..	58·0 / 41·0			12·17			SW	..	..	..	..	0	0	0	..	..
10	29·488	45·9	44·7	1·2	43·5	2·4	71·0 / 36·0			0·00			SW	..	..	..	Pos.	2	2	0	..	..
12	29·460	44·6	42·7	1·9	..	..	..			22·520			SSW	..	..	..	..	0	0	0	..	..
14	29·402	44·4	42·1	2·3	..	..	51·2			..			SSW	..	..	..	..	0	0	0	..	..
16	29·304	46·2	45·0	1·2	..	..	..			..			S	0 to ¼	..	..	..	0	0	0	..	..
18	29·165	49·7	48·7	1·0	47·5	2·2	..			..			S by W	1½ to 3½	..	..	..	0	0	0	..	..
20	29·030	49·5	49·2	0·3	..	..	..			..			S by W	4½ to 8½	..	..	..	0	0	0	..	..
22	28·977	53·0	52·0	1·0	51·0	2·0	..			..			SW	¾ to 1	SSW	6·85	..	0	0	0	..	..
Oct. 21. 0	28·952	56·3	51·1	5·2	..	..	..			..			SW	1½ to 4	..	..	Pos.	2	2	0	..	..
2	28·919	55·2	49·4	5·8	..	..	..			..			SW	1½ to 4½	..	..	Pos.	2	2	0	..	..
4	28·892	52·3	47·4	4·9	43·0	9·3	..			..			SW	2 to 4½	..	..	Pos.	2	2	0	..	..
6	28·869	50·0	46·2	3·8	..	..	64·0 / 25·8			12·31			SW	3 to 7	..	..	Pos.	2	2	0	..	..
8	28·846	48·0	45·6	2·4	..	..	68·0			0·00			SW	3 to 5½	..	..	..	0	0	0	..	..
10	28·828	48·5	46·0	2·5	44·0	4·5	41·0			22·815			SW	3 to 4	SSW	5·44	..	0	0	0	..	..
12	28·835	46·6	46·0	0·6	..	..	..			..			WSW	3 to 7	..	..	Neg.	2	2	0	..	..
14	28·860	46·6	45·7	0·9	..	..	..			..			WSW	3½ to 4	..	..	..	0	0	0	..	..
16	28·884	46·7	44·8	1·9	43·0	3·7	50·8			..			WSW	3½ to 4½	..	..	..	0	0	0	..	..
18	28·912	45·8	43·9	1·9	..	..	..			..			W	4½ to 5½	..	..	..	0	0	0	..	..
20	29·042	45·8	43·6	2·2	..	..	..			..			WSW	4 to 4½	..	..	..	0	0	0	..	..
22	28·987	46·6	44·2	2·4	42·0	4·6	..			..			WSW	3½ to 5	WSW	4·71	..	0	0	0	..	..
Oct. 22. 0	29·007	47·0	44·8	2·2	..	..	..			..			WSW	3 to 7	..	..	..	0	0	0	..	..
2	29·037	46·8	44·9	1·9	..	..	..			..			WSW	1½ to 3	..	..	Pos.	2	2	0	..	..
4	29·093	49·0	46·0	3·0	44·0	5·0	..			..			WSW	2 to 4	..	..	..	0	0	0	..	..
6	29·144	47·2	44·5	2·7	..	..	38·8			..			WSW	1 to 3½	..	..	..	0	0	0	..	..
8	29·193	47·6	44·4	3·2	..	..	43·4			12·31			WSW	½ to 3	..	..	..	0	0	0	..	..
10	29·250	45·6	43·2	2·4	41·0	4·6	52·4			0·21			WSW	¼ to ½	..	..	..	0	0	0	..	..
12	29·286	44·7	42·2	2·5	..	..	36·5			22·840			WSW	0 to ¾	WSW	6·73	..	0	0	0	..	..
14	29·325	43·8	41·9	1·9	..	..	..			..			WSW	¾ to 1½	..	..	..	0	0	0	..	..
16	29·366	44·8	42·7	2·1	40·0	4·8	49·5			..			WSW	½ to 1½	W	0·65	..	0	0	0	..	..
18	29·399	45·2	42·9	2·3	..	..	..			..			WSW	0 to ½	..	..	..	0	0	0	..	..
20	29·489	46·0	42·9	3·1	..	..	..			..			WSW	0 to ¾	..	..	..	0	0	0	..	..
22	29·546	48·0	44·2	3·8	39·0	9·0	..			..			WSW	½ to 1½	WNW	0·70	Pos.	10	..	5	5	5. 0
Oct. 23. 0	29·600	49·8	44·8	5·0	..	..	..			..			W	0 to 3	..	..	Pos.	3	..	..	..	0. 10
2	29·645	52·3	45·8	6·5	..	..	..			..			W	0 to ½	..	..	..	0	0	0	..	..
4	29·678	51·5	44·8	6·7	39·0	12·5	..			..			WSW	..	..	..	..	0	0	0	..	..
6	29·711	45·0	42·2	2·8	..	..	..			..			WSW	..	WSW	2·10	..	0	0	0	..	..

ELECTRICITY.
October 20d. 4h. There were sparks at the distance of 0in·08.

HENLEY'S ELECTROMETER.
October 20d. 4h. The reading was 10°.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
5	..	Massive and finely-formed cumuli in the horizon, from the E. S. E. to S.W.; cirro-stratus and scud in the N. E.: the zenith, with the exception of a few clouds, is clear.	T D
10	..	Cumuli, cumulo-strati, and scud: the clouds began to increase in density at $3^h.40^m$: a few drops of rain are falling.	H B
9	..	Cumuli, fleecy clouds, and scud; the scud is slightly tinged with green in the W.: a heavy shower of rain fell soon after the last observation, it lasted five minutes.	
5	..	Cirro-stratus principally in the S.: the clouds dispersed in the N. about eight minutes since, previously to which time it had been overcast: rain fell from $6^h.15^m$ to $6^h.45^m$.	
0	..	Cloudless: gusts of wind to $\frac{3}{4}$: at $8^h.40^m$ the sky was covered with thin cirro-stratus till $8^h.50^m$, when the clouds gradually dispersed.	H B
3	..	Cirro-strati scattered in several directions, but more especially in the S.: the sky remained cloudless till $11^h.40^m$, when the clouds collected in the S. and S. S.W.	T D
10	..	A thin cirro-stratus covers the sky, through which Jupiter is visible: the amount of cloud has been variable since the previous observation.	
10	..	Overcast: cirro-stratus: a thin rain is falling.	
10	..	,, dense cirro-stratus: rain is falling.	
10	..	,, ,, violent squalls of wind and rain; the former in gusts to 3.	T D
10	..	,, cirro-stratus: rain has been falling occasionally since the previous observation: the wind is blowing in gusts to $1\frac{1}{2}$.	L
5	..	Cirro-stratus, detached cumuli, and loose masses of scud in every direction: gusts of wind to 2 +.	
7	Transit	Cirro-stratus, fleecy clouds, and large masses of scud: gusts of wind to 2 +.	L
8	..	Cirro-stratus, fleecy clouds, and masses of dark scud in every direction: there are a few large breaks in the neighbourhood of the zenith: gusts of wind to 2 +.	T D
10	..	Overcast: dense cirro-stratus and scud: gusts of wind to 3.	
5	..	Cirro-stratus in the horizon: the zenith, and for a considerable distance around it, is clear: the clouds began to disperse at $7^h.50^m$: gusts of wind to $2\frac{1}{2}$.	T D
10	..	Overcast: a few stars are occasionally visible near the zenith.	D
10	..	,, rain falling: gusts of wind to 2.	D
10	..	Overcast: cirro-stratus: the rain became less violent at $13^h.25^m$, and gradually ceased: gusts of wind to 2 and $2\frac{1}{2}$.	H B
10	..	,, ,, gusts of wind to 2 and $2\frac{1}{2}$.	H B
10	..	,, ,, gusts of wind to 2.	L
10	..	,, cirro-stratus and scud.	T D
10	..	,, ,,	C T
10	..	Overcast: rain has just commenced falling: frequent gusts of wind to $2\frac{1}{2}$.	H B
10	Transit	,, cirro-stratus and scud: gusts of wind to 2.	H B
10	..	,, ,, gusts of wind to $2\frac{1}{2}$.	L
10	..	,, scud: gusts of wind to $1\frac{1}{2}$ and 2.	G
10	..	,, cirro-stratus: gusts of wind to $1\frac{1}{2}$ and 2.	H B
6	..	Cirro-stratus in the S., extending from the horizon to the zenith, and detached masses scattered in every direction.	T D
10	..	Overcast: cirro-stratus: gusts of wind to $\frac{3}{4}$ or 1.	L
10	..		
10	..	,, ,, the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	,, ,, ,,	
10	..	,, ,, the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	L
5	..	Cirro-cumuli, cirro-strati, and fleecy clouds: frequent gusts of wind to 2: a thin fog prevails.	H B
7	..	Cumuli and masses of white scud.	
$\frac{1}{2}$	..	A few cumuli near the S. horizon, and fleecy clouds: the amount of cloud has been generally small since the previous observation.	H B
2	Transit	A few detached cumuli and loose scud scattered in various directions: gusts of wind to $\frac{3}{4}$.	L
4	..	Cirro-stratus round the horizon: fleecy clouds and scud in various directions: the wind is blowing in gusts to $\frac{1}{2}$.	

RAIN.

Oct. $22^d.22^h$. The amount of rain in rain-gauge No. 2 is that collected since $20^d.22^h$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 23. 8	29·720	41·7	38·7	3·0	..	..	57·8			..			SW	..	..	..	..	0	0	0	..	..
10	29·718	38·8	37·2	1·6	35·0	3·8	35·5			..			S by W	..	SSW	1·75	..	0	0	0	..	..
12	29·678	38·0	36·0	2·0	..	..				12·35			S by E	..	..	..	Pos.	2	2	0	..	..
							64·2															
							29·0			0·20												
14	29·615	40·5	38·2	2·3	..	..							SSE	..	..	..	Pos.	2	2	0	..	..
16	29·538	43·5	41·7	1·8	40·0	3·5	..			23·050			S	..	..	..	Pos.	2	2	0	..	..
18	29·484	48·1	45·7	2·4	..	..	48·8						SSW	0 to 1	..	..	Pos.	20	..	8	10	0. 30
20	29·403	47·8	47·5	0·3	..	..	..			..			S	½ to 2½	..	..	Neg.	30	..	12	10	0. 40
22	29·426	49·8	48·2	1·6	46·0	3·8	..			..			SW	0 to 1	S	1·20	Pos.	2	2	0	..	..
Oct. 24. 0	29·427	54·5	50·1	4·4	..	..	..			..			SW	..	..	..	Pos.	2	2	0	..	..
2	29·418	56·8	50·9	5·9	..	..	..			..			S W	..	..	..	..	0	0	0	..	..
4	29·401	49·8	47·6	2·2	45·0	4·8	57·8			..			WSW	..	..	..	Neg.	40	..	..	..	..
6	29·379	47·5	46·8	0·7	..	..	42·3			12·35			SSW	..	..	..	..	0	0	0	..	..
8	29·370	47·8	47·2	0·6	..	..	72·5			0·10			SW	..	..	..	Pos.	35	40	12	15	3. 0
10	29·367	47·2	46·7	0·5	44·5	2·7	37·0						NW	..	..	..	..	0	0	0	..	..
12	29·392	45·6	44·7	0·9	..	..				23·150			WNW	..	WSW	2·40	..	0	0	0	..	..
14	..	..	..	..	..	..	..						NW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	48·5			..			NNW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..			..			NNE	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			NNE	0 to ¼	..	..	..	..	..	..	..	..
22	29·562	47·0	45·7	1·3	..	..	..			..			NNE	0 to ½	NW	1·70	Pos.	2	2	0	..	..
Oct. 25. 0	..	..	..	..	..	..	..			..			NNW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..			..			NNW	0 to ¼	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..				..			NNW	..	..	..	..	..	..	..	..	..
6	29·645	49·0	47·8	1·2	..	..	51·5			..			NNW	..	..	..	Pos.	2	2	0	..	..
8	..	..	..	..	..	..	42·0			12·35			NNW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..							NNW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	54·0			0·06			Calm	..	..	..	..	..	..	..	..	..
14	29·782	44·0	44·0	0·0	..	..	37·5						Calm	..	..	..	..	0	0	0	..	..
										23·215												
16	29·824	45·0	44·9	0·1	45·0	0·0	..			..			NNW	..	..	..	..	0	0	0	..	..
18	29·836	44·0	43·8	0·2	..	..	48·0			..			NNW	..	..	..	..	0	0	0	..	..
20	29·863	43·4	43·2	0·2	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
22	29·889	43·3	43·2	0·1	43·0	0·3	..			..			Calm	..	NNW	2·68	Pos.	..	..	50	70	..
Oct. 26. 0	29·901	44·1	43·8	0·3	..	..				..			Calm	..	..	..	Pos.	40	..	30	50	1. 0
2	29·891	45·1	44·6	0·5	..	..	46·5			..			Calm	..	..	..	Pos.	2	2	0	..	..
4	29·910	46·0	45·2	0·8	44·0	2·0	37·5			12·35			Calm	..	..	..	Pos.	2	2	0	..	..
6	29·950	44·7	44·0	0·7	..	..							Calm	..	..	..	Pos.	2	2	0	..	..
8	29·981	43·9	43·3	0·6	..	..	47·5			0·00			Calm	..	..	..	Pos.	2	2	0	..	..
							35·9															
10	30·027	42·6	42·1	0·5	42·0	0·6				23·215			Calm	..	..	..	..	0	0	0	..	..
12	30·066	41·5	40·9	0·6	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
14	30·081	40·7	40·2	0·5	..	..	47·5			..			Calm	..	..	..	..	0	0	0	..	..

ELECTRICITY.
October 24d. 4h. There were several sparks at the distance of 0in·05 occurring at every second.

HENLEY'S ELECTROMETER.
October 24d. 4h. The reading was 8°.

GALVANOMETER.
October 24d. 4h. There was a current of 1° towards B.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless: the clouds nearly cleared off soon after the previous observation.	L
0	..	,,	L
8	..	Thin cirro-stratus obscures nearly the whole sky: the clouds collected at $11^h.45^m$. At $11^h.50^m.30^s$ a tolerably bright meteor was seen from about 20° zenith distance to 50° zenith distance, where it disappeared; it passed southward, and nearly in the meridian.	H B
$\frac{1}{2}$	..	Fragments of cirro-strati near the horizon: the clouds have been gradually dispersing during the last half hour.	
8	..	Cirro-stratus, scud, and vapour: the amount of cloud has been exceedingly variable since the previous observation.	
10	..	Overcast: rain falling: gusts of wind to $1\frac{1}{2}$ and 2: the sky became entirely overcast after the previous observation.	
10	..	,, ,, gusts of wind to 2: rain has fallen almost without intermission since the previous observation.	H B
6	..	Cirro-stratus and masses of scud in the N. and N.E. horizon: fleecy and light clouds in every direction: the rain ceased at $21^h.10^m$.	T D
4	..	Cirro-stratus in the horizon, extending from the W. to S.S.E.: in the N. finely formed cumuli prevail: the zenith, and for a considerable distance around it, with the exception of a few light cirri, is clear.	
4	..	Cirro-stratus, cumulo-stratus, scud, and fleecy clouds scattered over the sky.	T D
10	Transit Greatest dec. S.	Cirro-stratus and scud: rain falling heavily; a heavy shower fell at $3^h.35^m$.	H B
7	..	Cirri, cirro-strati, and masses of scud: the rain previously mentioned ceased shortly after 5^h: the clear sky in the E. is of a peculiar crimson colour.	
10	..	Overcast: cirro-stratus: heavy showers of rain have fallen since the previous observation.	
9	..	Cirro-stratus and scud: several stars have been visible around the zenith: gusts of wind to $\frac{3}{4}$.	H B
10	..	Overcast: cirro-stratus and scud: several of the larger stars are occasionally visible: the wind is blowing in gusts to $\frac{3}{4}$: directly after this observation the sky became cloudless.	L
..	..		
..	..		
..	..		
..	..		
8	..	The sky was overcast till $21^h.30^m$, when the clouds became slightly broken for a short time: the sky became soon again covered, and continued so till $21^h.55^m$, when extensive breaks were exhibited in the zenith, and the Sun shone faintly through the clouds: at present there are extensive breaks N. of the zenith, the remainder of the sky being covered with cirro-stratus, fleecy clouds, and scud: at $20^h.25^m$ a slight shower of rain fell.	T D
..	..		
..	..		
..	Transit		
9	..	With the exception of a portion of blue sky, extending from the zenith to the N. horizon in a long line, the sky is	
..	..	covered with cirro-stratus, cumulo-stratus, and scud: at $23^h.40^m$ a heavy shower of rain fell, and another at	
..	..	$2^h.20^m$.	
..	..		
3	..	A bank of cirro-stratus in the horizon, extending from the S. to the S.S.W.; clear elsewhere: the appearance of the sky is variable, and is frequently covered with a thin film of stratus.	
10	..	Overcast: dense cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, dense cirro-stratus: a thick fog prevails; it began to gather about $18^h.30^m$.	T D
10	..	,, ,, ,, the air is very calm.	G H
10	..	Overcast: dense cirro-stratus: a thick fog prevails.	
10	..	,, ,, the fog is not so dense.	G H
10	..	,, ,, very calm.	T D
10	Transit	,, ,, very gloomy.	
10	..	,, ,, at $7^h.50^m$ the clouds were slightly broken in the zenith, and a few stars were visible for a short time.	
10	..	Overcast: dense cirro-stratus: a few stars have occasionally been visible since 8^h.	T D
10	..	,, ,, a slight haze.	L
10	..	,, ,, ,,	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 26. 16	30·092	40·0	39·4	0·6	39·0	1·0	..	..	Calm	..	..	..	..	0	0	0	..	..
18	30·111	39·2	38·8	0·4	..	..	..	..	Calm	..	..	..	Pos.	35	..	20	30	2. 0
20	30·144	38·8	38·5	0·3	..	..	..	..	Calm	..	..	..	Pos.	30	..	10	20	4. 0
22	30·167	39·6	39·4	0·2	39·0	0·6	..	..	Calm	..	NNW	0·36	Pos.	40	..	30	50	3. 0
Oct. 27. 0	30·160	42·1	41·6	0·5	..	..	..	..	Calm	..	..	..	Pos.	40	..	20	20	8. 0
2	30·155	45·0	44·0	1·0	..	..	..	..	Calm	..	..	..	Pos.	20	..	10	10	1. 0
4	30·152	43·7	43·4	0·3	43·0	0·7	46·3	..	Calm	..	..	..	Pos.	20	..	10	15	1. 0
6	30·164	41·5	41·4	0·1	..	..	35·4	12·35	Calm	..	..	..	Pos.	15	..	6	10	2. 0
8	30·160	42·2	42·2	0·0	..	..	—		Calm	..	..	..	Pos.	2	2	0	..	..
10	30·152	40·8	40·8	0·0	40·5	0·3	51·5	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·141	40·6	40·6	0·0	..	..	31·6		Calm	..	..	..	..	0	0	0	..	..
14	30·136	39·4	39·2	0·2	..	..	—	23·220	Calm	..	..	..	..	0	0	0	..	..
16	30·123	38·2	38·0	0·2	37·5	0·7	..		Calm	..	..	..	Pos.	2	2	0	..	..
18	30·110	37·5	37·4	0·1	..	..	47·0	..	Calm	..	..	..	..	0	0	0	..	..
20	30·112	37·4	37·2	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·107	37·2	36·9	0·3	36·0	0·2	..	..	Calm	..	WNW	0·11	..	0	0	0	..	..
Oct. 28. 0	30·084	38·7	38·4	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	30·038	42·1	41·7	0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	30·023	42·2	41·9	0·3	41·0	1·2	44·5	..	Calm	..	..	..	Pos.	40	..	20	20	1. 0
6	30·005	40·2	40·0	0·2	..	..	35·0	12·35	Calm	..	..	..	Pos.	40	..	30	50	0. 30
8	30·000	40·2	40·2	0·0	..	..	—		Calm	..	..	..	..	0	0	0	..	..
10	29·996	40·0	39·8	0·2	38·5	1·5	47·5	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·980	40·0	39·9	0·1	..	..	35·0		Calm	..	..	..	..	0	0	0	..	..
14	29·961	40·6	40·6	0·0	..	..	—	23·225	Calm	..	..	..	..	0	0	0	..	..
16	29·932	40·7	40·6	0·1	39·8	0·9	..		Calm	..	..	..	..	0	0	0	..	..
18	29·928	41·0	40·8	0·2	..	..	47·0	..	Calm	..	..	..	..	0	0	0	..	..
20	29·933	42·2	42·2	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·946	44·4	44·4	0·0	44·0	0·4	..	..	NNE	..	NNE	0·27	..	0	0	0	..	..
Oct. 29. 0	29·944	48·2	48·2	0·0	..	..	..	..	NNE	..	..	..	Pos.	40	..	20	20	..
2	29·935	49·0	48·7	0·3	..	..	..	..	N	..	..	..	..	0	0	0	..	..
4	29·930	49·3	48·7	0·6	48·5	0·8	..	..	N	..	..	..	Pos.	20	..	5	5	6. 0
6	29·943	47·8	47·5	0·3	..	..	49·5	..	N	..	..	..	Pos.	15	..	8	10	0. 30
8	29·967	48·5	48·4	0·1	..	..	44·0	12·37	Calm	..	..	..	Pos.	8	10	5	5	..
10	29·983	48·5	48·2	0·3	47·3	1·2	53·0	0·06	Calm	..	..	..	Pos.	40	30	15	20	2. 0
12	29·977	48·5	48·2	0·3	..	..	41·0		Calm	..	..	..	Pos.	2	2	0	..	..
14	29·981	48·3	48·2	0·1	..	..	—	23·270	Calm	..	..	..	Pos.	30	20	10	17	7. 0
16	29·988	47·5	47·2	0·3	47·0	0·5	..		N	..	..	..	Pos.	35	20	10	17	5. 0
18	29·993	47·5	47·2	0·3	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
20	30·005	47·0	46·8	0·2	..	..	..	..	N	..	..	..	Pos.	2	2	0	..	..
22	30·010	48·4	48·0	0·4	47·0	1·4	..	..	N	..	N	1·61	Pos.	35	..	20	25	5. 0
Oct. 30. 0	30·025	50·5	49·4	1·1	..	..	..	..	NNE	..	..	..	Pos.	2	2	0	..	..
2	30·022	52·6	49·9	2·7	..	..	..	..	NNE	..	..	..	Pos.	10	5	0	..	..
4	30·026	49·0	47·2	1·8	45·5	3·5	..	..	NNE	..	..	..	Pos.	30	20	10	12	2. 0
6	30·021	47·6	46·5	1·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
8	30·030	47·0	46·1	0·9	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: dense-cirro-stratus: a thin fog.	L
10	..	,, ,, the fog is getting thicker.	
10	..	,, ,, a dense fog.	L
10	..	,, ,, ,,	G H
10	..	Overcast: cirro-stratus: it is still very foggy, but less dense than at the previous observation.	
10	..	,, ,, the fog is much less dense, and the Sun's orb is faintly visible.	G H
0	1st Qr.	Cloudless: a thin fog.	L
10	Transit	The fog is much more dense than at the last observation: the Moon is faintly visible.	
10	..	Overcast: cirro-stratus: foggy.	
10	..	,, ,, a thick fog.	L
10	..	A very dense fog.	G H
10	..	,, moisture is falling heavily.	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	G H
10	..	Overcast: a very dense fog: great deposition of moisture.	H B
10	..	Overcast: a very dense fog.	
10	..	,, the fog is less dense, and the Sun is visible.	H B
10	..	,, the fog is very thick.	G H
10	..	,, dense fog.	
10	Transit	,, ,,	
10	..	,, ,, great deposition of moisture.	G H
10	..	,, ,, ,,	H B
10	..	,, ,,	
10	..	,, the fog has cleared considerably since the last observation.	
10	..	,, the fog has nearly disappeared.	
10	..	,, a damp fog is prevalent.	H B
10	..	,, cirro-stratus: the air is very damp: the fog has nearly cleared off.	G H
10	..	Overcast: rain is falling.	
10	..	,, cirro-stratus: rain is falling.	G H
10	..	,, ,, a slight fog prevails.	H B
10	..	,, ,, at $4^h.\ 30^m$ the clouds N. of the zenith were slightly broken; the Moon was also visible for a short time at $5^h.\ 44^m$.	
10	Transit	Overcast: cirro-stratus and scud; the latter is moving from the E., but on the surface of the earth it is quite calm: the Moon has been occasionally visible.	
10	..	Overcast: cirro-stratus and dense scud: the Moon was frequently visible after 8^h.	H B
10	..	,, dense cirro-stratus: a thin mist is prevalent: the Moon has been occasionally visible since the last observation.	T D
10	..	Overcast: dense cirro-stratus: the mist has disappeared.	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,, no change has taken place the whole night.	T D
10	..	,, cirro-stratus: the clouds are much thinner in some places.	G H
10	..	Overcast: cirro-stratus: the clouds are broken in various directions.	
9	..	Cirro-stratus and scud: the clouds are thin, and broken in several places.	G H
10	..	Cirro-stratus, cumulo-stratus, and scud: the clouds are, however, very thin, and blue sky is visible through them in many places.	T D
10	..	Cirro-stratus and masses of scud: small portions of blue sky are seen, and the Moon is occasionally visible.	
10	..	Overcast: cirro-stratus and scud: the Moon is visible through the clouds.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Oct. 30. 10	30·048	46·0	45·4	0·6	45·0	1·0	53·8 / 37·7	.. / 12·37	Calm	..	NNW	0·68	..	0	0	0	..	..
12	30·031	43·2	42·6	0·6	..	..			Calm	..	..	..	..	0	0	0	..	..
14	30·027	41·7	41·6	0·1	..	..	66·2 / 33·5	0·00	Calm	..	..	..	..	0	0	0	..	..
16	30·012	38·8	38·7	0·1	38·0	0·8			Calm	..	..	..	..	0	0	0	..	..
18	30·026	40·2	40·0	0·2	..	..		23·270	Calm	..	..	..	..	0	0	0	..	..
20	30·031	40·3	40·2	0·1	..	..	..		Calm	..	..	..	..	0	0	0	..	..
22	30·031	41·5	41·4	0·1	41·7	−0·2	47·0	..	Calm	..	NW	0·13	..	0	0	0	..	..
Oct. 31. 0	30·016	41·7	41·7	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·992	43·0	42·8	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	29·989	43·2	42·9	0·3	..	..	43·9	..	Calm	..	..	..	..	0	0	0	..	..
6	29·988	41·7	41·5	0·2	..	..	37·5	12·37	Calm	..	..	..	Pos.	2	2	0	..	..
8	29·997	41·0	40·8	0·2	..	..			Calm	..	..	..	..	0	0	0	..	..
10	29·993	40·7	40·7	0·0	40·5	0·2	47·7	0·00	Calm	..	..	..	Pos.	2	2	0	..	..
12	29·973	40·2	40·0	0·2	..	..	35·7		Calm	..	..	..	Pos.	40	0	10	10	5. 0
14	..	..	..	..	..	..		23·280	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	46·8	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	29·933	40·8	40·7	0·1	..	..	..	..	Calm	..	W	0·05	Pos.	40	0	10	10	0. 40
Nov. 1. 0	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
2	29·891	52·8	51·0	1·8	..	..	..	..	Calm	..	..	..	Pos.	20	0	8	5	0. 10
4	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
8	29·878	48·5	47·8	0·7	..	..	..	..	Calm	..	..	..	Pos.	20	0	10	10	Instantly
10	..	..	..	..	..	..	57·5 / 39·6	12·37	Calm	..	..	..	..	..	..	..	..	..
12	29·869	44·2	43·9	0·3	..	..			Calm	..	..	..	Pos.	5	0	5	..	..
14	29·856	45·6	44·8	0·8	..	..	58·5 / 36·0	0·00	Calm	..	..	..	..	0	0	0	..	..
16	29·857	45·5	45·2	0·3	45·0	0·5	.. / 46·5	23·280 / ..	Calm	..	..	..	..	0	0	0	..	..
18	29·862	46·6	45·7	0·9	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·868	44·3	43·9	0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·873	49·4	48·0	1·4	45·5	3·9	..	..	Calm	..	SSE	0·90	..	0	0	0	..	..
Nov. 2. 0	29·866	53·4	50·7	2·7	..	..	..	..	SSE	..	..	..	..	0	0	0	..	..
2	29·848	55·3	50·8	4·5	..	..	..	..	SE	..	..	..	..	0	0	0	..	..
4	29·825	54·8	51·6	3·2	48·5	6·3	58·2	..	SSE	..	..	..	Pos.	2	2	0	..	..
6	29·836	51·3	50·0	1·3	..	..	49·9	12·37	SSE	..	..	..	..	0	0	0	..	..
8	29·838	51·8	50·4	1·4	..	..	61·4 / 44·5	0·00	SSE	..	SSE	2·35	Pos.	2	2	0	..	..
10	29·849	53·0	50·9	2·1	49·5	3·5	..	23·280	S by E	..	..	..	..	0	0	0	..	..
12	29·857	52·2	50·4	1·8	..	..	46·5	..	Calm	..	..	..	..	0	0	0	..	..
14	29·855	52·5	50·2	2·3	..	..	..	..	Calm	..	SSW	1·70	..	0	0	0	..	..

DEW POINT THERMOMETER.

October 30d. 22h. The reading was higher than that of the Dry Thermometer.

October 31d. 4h. The reading was omitted by inadvertence.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus: at $8^h.10^m$ the clouds suddenly dispersed, leaving three-fourths of the sky clear, but it again became overcast about 9^h.	T D
0	..	Cloudless, but hazy: the clouds gradually dispersed after the last observation.	G H
10	In Equator	Overcast: cirro-stratus: a dense fog is prevalent.	
10	Perigee	,, a dense fog.	
10	..	,, ,, a great deposition of moisture.	
10	..	,, ,, ,,	G H
10	..	,, ,, ,,	H B
10	..	Dense fog: great deposition of moisture.	T D
10	..	,, ,, the fog has increased in density since the last observation.	H B
10	..	,, ,,	G H
10	..	,, ,,	
10	..	,, ,,	
10	Transit	,, ,,	G H
10	..	,, very calm: no change during the evening.	H B
..	..		
..	..		
..	..		
..	..		
10	..	Overcast: a damp fog: within the last ten minutes the Sun has been seen occasionally.	
..	..		
3	..	Cirro-stratus and haze principally around the horizon. Since the last observation the Sun has been generally shining, the clouds having gradually dispersed.	
..	..		
..	..		
10	..	Soon after the last observation fleecy clouds and cumuli covered an extensive portion of the sky: cirro-stratus has been prevalent since that time, upwards of nine-tenths of the sky being covered: breaks of small extent are now seen in the zenith and S. of it.	
..	..		
2	Transit	The sky remained nearly covered with fleecy clouds till 11^h, when they suddenly cleared off, and since that time it has been cloudless, with the exception of fleecy clouds in the S.W.	
8	..	About $12^h.20^m$ the fleecy clouds mentioned in the last note became distributed in every direction. Coronæ were frequently seen around the Moon: soon afterwards the clouds became denser, and every portion of the sky was covered.	
10	..	Overcast: cirro-stratus and scud: shortly after the last observation the amount of cloud was about 5, but before $14^h.40^m$ the clouds had again collected, their amount being 8 nearly.	
$9\frac{3}{4}$	..	Cirro-stratus and dark scud: the clouds are broken along the W. horizon: generally overcast since 16^h.	
7	..	Cirro-cumuli and a few cirri are the clouds now prevalent: the cirro-stratus and scud cleared off suddenly soon after the last observation; the only part of the sky now covered with these clouds is near the S. and S.W. horizon.	H B
8	..	Cirro-cumuli, cirri, and fleecy clouds in every direction: small breaks throughout.	G H
7	..	Cirro-stratus, cirro-cumuli, and fleecy clouds: breaks in every direction.	
3	..	Cirro-stratus and fleecy clouds towards the S. and W. horizon: a few reticulated cirri in the zenith.	G H
4	..	Cirri and a few cirro-cumuli are the principal clouds now distributed: cirro-stratus around the N. horizon.	H B
7	..	The cirri mentioned in the last observation passed into cirro-strati, which at present cover the whole sky to the S. of the zenith, and a considerable portion to the N.: there are also some fleecy clouds to the N. of the zenith.	
8	..	Cirro-strati and fleecy clouds: extensive breaks to the S. of the zenith took place soon after the last observation, but they remained only for a short time. The Moon has been occasionally surrounded by a coloured corona.	
4	..	Cirro-strati and fleecy clouds in various directions: since the last observation the amount of cloud has been exceedingly variable.	H B
8	Transit	Cirro-strati and fleecy clouds W. of the zenith and about the place of the Moon: thin cirro-stratus towards the E.; Jupiter and the larger stars can be easily seen through it: small breaks N. of the zenith.	L
10	..	Cirro-stratus and fleecy clouds: a small break towards the E., but to no numerical amount.	

RAIN.

October $31^d.12^h$. The amount collected during the month of October in the rain-gauge No. 4, was $5^{in}.13$, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period, was $5^{in}.14$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in		°	°	div.	div.	m s
Nov. 2. 16	29·858	52·3	50·7	1·6	49·0	3·3	..	..	S	..	..	..	..	0	0	0	..	..
18	29·866	52·2	50·7	1·5	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
20	29·890	52·2	50·7	1·5	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
22	29·928	55·4	53·4	2·0	52·0	3·4	..	..	S	..	S	0·30	..	0	0	0	..	..
Nov. 3. 0	29·932	58·4	54·9	3·5	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
2	29·917	59·3	55·5	3·8	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
4	29·957	58·7	55·4	3·3	54·0	4·7	61·3	..	S by W	..	SSW	2·00	..	0	0	0	..	..
6	29·956	55·3	53·7	1·6	..	..	46·0	..	Calm	..	..	..	..	0	0	0	..	..
8	29·963	51·7	51·0	0·7	..	..		12·37	Calm	..	..	..	..	0	0	0	..	..
10	29·974	48·2	48·2	0·0	48·0	0·2	69·0 39·5	0·00	Calm	..	..	..	..	0	0	0	..	..
12	29·978	47·5	47·5	0·0	..	..			Calm	..	..	..	..	0	0	0	..	..
14	29·973	49·2	49·2	0·0	..	..	..	23·280	Calm	..	..	..	..	0	0	0	..	..
16	29·963	49·5	49·5	0·0	49·5	0·0	47·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·972	48·5	48·5	0·0	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	29·990	51·4	51·4	0·0	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·993	53·6	53·2	0·4	52·0	1·6	..	..	S by E	..	S	1·25	..	0	0	0	..	..
Nov. 4. 0	29·990	60·0	57·2	2·8	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
2	29·976	61·0	57·0	4·0	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
4	29·974	57·1	55·6	1·5	52·5	4·6	..	..	SSW	..	..	..	..	0	0	0	..	..
6	30·005	54·1	52·6	1·5	..	..	61·5 48·3	..	Calm	..	..	..	..	0	0	0	..	..
8	30·017	50·4	49·8	0·6	..	..		12·37	Calm	..	..	..	..	0	0	0	..	..
10	30·030	50·9	50·4	0·5	50·5	0·4	76·7	0·01	Calm	..	..	..	..	0	0	0	..	..
12	30·019	50·2	50·1	0·1	..	..	42·0		Calm	..	..	..	..	0	0	0	..	..
							..	23·310										
14	30·033	53·2	52·7	0·5	..	..	47·8	..	Calm	..	..	..	..	0	0	0	..	..
16	30·036	54·2	54·1	0·1	53·7	0·5	..	..	Calm	..	..	..	..	0	0	0	..	..
18	30·052	54·3	54·0	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	30·066	54·0	54·1	-0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·070	55·1	55·1	0·0	55·0	0·1	..	..	Calm	..	S	2·43	..	0	0	0	..	..
Nov. 5. 0	30·076	55·7	55·6	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	30·060	57·2	56·4	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	30·048	57·2	56·2	1·0	56·0	1·2	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
6	30·053	54·6	54·2	0·4	..	..	~~52·9~~	..	Calm	..	..	..	Pos.	2	2	0	..	..
8	30·052	50·3	49·2	1·1	..	..	41·0	12·37	Calm	..	SSE	0·82	Pos.	2	2	0	..	..
10	30·049	46·3	46·2	0·1	46·0	0·3	62·0 38·0	0·00	Calm	..	..	..	Pos.	2	2	0	..	..
12	30·045	47·8	47·7	0·1	..	..		23·310	Calm	..	..	..	Pos.	2	2	0	..	..
14	30·048	45·6	45·2	0·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
16	30·037	42·7	42·2	0·5	41·3	1·4	48·2	..	Calm	..	..	..	..	0	0	0	..	..
18	30·038	42·3	41·7	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	30·045	42·2	41·7	0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·063	42·0	41·6	0·4	40·5	1·5	..	..	Calm	..	E	1·00	..	0	0	0	..	..

DRY THERMOMETER.
November 4d. 20h. The reading was lower than that of the Wet Thermometer.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	Cirro-strati, fleecy clouds, and scud: small breaks in every direction.	L
8	..	Cirro-strati and fleecy clouds: small breaks in every direction.	
8	..	,, clear about the zenith.	L
9½	Full	Overcast, with cirro-stratus and scud: a small part of the sky is clear in the S. E. only.	G H
9	..	Overcast, with cirro-stratus and scud: no remarkable change since the last observation. remains clear.]	
6	..	Cirro-stratus, scud, and light fleecy clouds, more particulaly in the zenith and the S. and W.: the S. E. still	G H
8	..	Cirro-stratus, scud, and light fleecy clouds: small breaks in every direction.	L
10	..	Overcast: cirro-stratus and scud.	
5	..	The greater part of the sky became clear soon after the last observation: at present the southern half of the sky is mostly free from cloud, the remainder being mostly covered with loose scud and fleecy clouds.	
1	..	A bank of cirro-stratus toward the N.: a few light clouds scattered about.	
¼	Transit	Two or three very small patches of thin reticulated cirri in the zenith: the horizon has become clear since 10^h.	L
0	..	Cloudless: dew forming.	G H
1	..	A few thin fleecy clouds in the zenith and towards the S.E. and W.	
0	..	Cloudless.	
10	..	Overcast: cirro-stratus and scud: the sky began to be cloudy about 19^h, and soon became covered.	G H
10	..	The sky is covered with cirro-stratus and low passing scud; it became suddenly overcast at $21^h.\ 55^m$, previously to which time several large portions of blue sky were exhibited in several directions.	T D
4	..	Fine specimens of mottled cirri and light clouds N. E. of the zenith: a bank of cirro-stratus in the S. horizon, the remainder of the sky being beautifully clear: the clouds began to clear off at $22^h.\ 50^m$.	
8	..	Cirro-strati, linear cirri, light scud, and fleecy clouds scattered over the sky in equal portions.	T D
10	..	Overcast: cirro-stratus and scud: a few small breaks in the W. horizon.	G H
3	..	A bank of heavy dark cloud in the N.W. and S.W., a few cirri in the zenith, and a few cirro-strati distributed over the sky.	
1	..	Light fleecy clouds scattered over the sky, moving gradually towards the N. E.	
½	..	A few fleecy clouds in the zenith, and towards the S.W. horizon.	G H
7	..	Cirro-stratus, light passing scud, and fleecy clouds: the former prevails in the W. and N.W. horizon: fine specimens of comoid cirri are exhibited near the Moon, around which a beautifully-coloured corona is visible: at $11^h.\ 50^m$ the sky was cloudless.	T D
9	Transit	Cirro-strati, fleecy clouds, and scud in every direction, in which are several small breaks.	
10	..	The sky is covered with dense cirro-stratus.	
10	..	,,	
10	..	Overcast: cirro-stratus and scud: at $18^h.\ 25^m$ rain commenced falling, and continued till $19^h.\ 40^m$.	T D
10	..	,, ,, very light rain is falling.	G H
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	G H
10	..	Cirro-stratus and scud have prevailed since the last observation; at present the clouds are slightly broken in the zenith, but to no numerical extent.	T D
10	..	Overcast: cirro-stratus and scud: no change since the last observation.	
6	..	Cirro-stratus extending from the N.W. to the N. E. horizon: thin cirro-stratus and light portions of scud are scattered over the remainder of the sky: several stars are visible: the sky began to clear at 7^h.	
2	..	A few detached portions of cirri in the zenith and eastward of it; some cirro-strati also are exhibited in the N., otherwise the sky is very clear.	T D
10	..	Overcast: cirro-stratus and scud: the sky suddenly became covered with these clouds at $10^h.\ 40^m$, and has remained so to the present time.	H B
10	Transit	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, the Moon occasionally seen.	
10	..	,, the clouds are of the same density: no change whatever.	H B
10	..	,, cirro-stratus and scud.	G H

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 6. 0	30·067	42·6	42·0	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	30·050	44·6	43·2	1·4	..	..	..	..	E by S	..	..	..	..	0	0	0	..	..
4	30·033	45·3	44·0	1·3	42·0	3·3	45·5	..	E	..	..	..	Pos.	2	2	0	..	..
6	30·044	43·0	42·2	0·8	..	..	38·0	12·37	E	..	..	..	..	0	0	0	..	..
8	30·052	40·7	40·2	0·5	..	..	——	——	E by S	..	..	..	..	0	0	0	..	..
10	30·068	39·2	38·9	0·3	38·5	0·7	54·0	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·076	39·6	39·4	0·2	..	..	37·0	——	Calm	..	..	..	..	0	0	0	..	..
14	30·073	40·4	40·0	0·4	..	..	——	23·310	Calm	..	..	..	..	0	0	0	..	..
16	30·080	40·5	40·2	0·3	40·0	0·5	..		Calm	..	..	..	..	0	0	0	..	..
18	30·092	40·0	39·7	0·3	..	..	48·0	..	Calm	..	..	..	..	0	0	0	..	..
20	30·107	39·4	39·2	0·2	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	30·142	40·2	39·7	0·5	39·0	1·2	..	..	Calm	..	ESE	1·80	..	0	0	0	..	..
Nov. 7. 0	30·143	41·3	40·5	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	30·139	42·8	41·9	0·9	..	..	..	..	Calm	..	..	..	Pos.	40	..	20	30	0. 3
4	30·140	43·0	42·4	0·6	41·5	1·5	45·5	..	Calm	..	..	..	..	0	0	0	..	..
6	30·154	43·5	43·2	0·3	..	..	40·5	12·37	Calm	..	..	..	..	0	0	0	..	..
8	30·183	43·5	42·7	0·8	..	..	——	——	Calm	..	E	0·30	..	0	0	0	..	..
10	30·201	43·0	42·6	0·4	42·5	0·5	48·0	0·00	Calm	..	..	..	..	0	0	0	..	..
12	30·207	43·0	42·7	0·3	..	..	38·5	——	Calm	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	——	23·315	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	48·0	..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	30·271	45·4	44·2	1·2	..	..	..	..	Calm	..	ENE	0·42	..	0	0	0	..	..
Nov. 8. 0	..	..	..	..	..	..	..	..	E by S	..	..	..	..	..	..	..	..	..
2	30·257	46·7	45·2	1·5	..	..	..	..	ESE	..	..	..	..	0	0	0	..	..
4	..	..	..	..	..	..	47·1	..	ESE	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	40·0	12·37	ESE	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——	——	E	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	..	0·00	E	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	38·0	——	E	..	..	..	..	..	..	..	..	..
14	30·309	43·0	41·4	1·6	..	..	——	23·315	E	..	..	..	..	0	0	0	..	..
16	30·315	42·3	40·8	1·5	39·0	3·3	..		E by S	..	..	..	..	0	0	0	..	..
18	30·316	41·5	40·2	1·3	..	..	47·8	..	Calm	..	..	..	..	0	0	0	..	..
20	30·334	41·3	39·7	1·6	..	..	..	..	E	..	..	..	..	0	0	0	..	..
22	30·359	40·7	39·2	1·5	36·8	3·9	..	..	E	..	E	2·79	..	0	0	0	..	..
Nov. 9. 0	30·368	42·0	39·8	2·2	..	..	..	..	ESE	0 to ½	..	..	..	0	0	0	..	..
2	30·365	42·1	39·7	2·4	..	..	..	..	ESE	..	..	..	..	0	0	0	..	..
4	30·359	42·6	40·2	2·4	38·0	4·6	..	..	ESE	..	..	..	..	0	0	0	..	..
6	30·354	42·7	40·6	2·1	..	..	42·8	..	E	..	..	..	..	0	0	0	..	..
8	30·375	41·3	39·7	1·6	..	..	37·0	12·37	E by S	..	..	..	..	0	0	0	..	..
10	30·378	41·0	39·5	1·5	38·5	2·5	..	0·00	Calm	..	E	3·09	..	0	0	0	..	..
12	30·379	39·5	38·7	0·8	..	..	29·5	——	Calm	..	..	..	..	0	0	0	..	..
14	30·363	41·0	40·2	0·8	..	..	——	23·315	Calm	..	..	..	..	0	0	0	..	..
16	30·340	39·0	38·7	0·3	38·0	1·0	..		Calm	..	..	..	..	0	0	0	..	..
18	30·318	39·5	38·2	1·3	..	..	47·5	..	ENE	..	..	..	..	0	0	0	..	..

RADIATION MAXIMUM THERMOMETER.
November 7d. 22h. After this time the thermometer was sent for repair.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	Greatest declination N.	Overcast: cirro-stratus and scud; the scud appears thin and broken in many places.	G H
10	..	,, ,,	G H
9½	..	Cirro-stratus and scud: the clouds are now slightly broken in various directions.	H B
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	..	,, ,, no change whatever.	H B
10	..	,, ,, slight deposition of moisture.	G H
10	..	,, ,, great deposition of moisture.	
10	Transit	,, ,, ,,	
10	..	,, ,, ,,	
10	..	,, ,, a heavy fog over the river, and the atmosphere generally hazy.	G H
10	..	,, an extremely light thin misty rain is falling.	L
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	L
10	..	,, ,,	G H
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	G H
10	..	,, ,,	L
..	..		
..	Transit		
..	..		
..	..		
10	..	,, ,,	L & G H
..	..		
10	..	Overcast: cirro-stratus and scud.	L & G H
..	..		
..	..		
..	..		
..	..		
..	..		
10	..	,, ,,	L
10	..	,, ,,	
10	Transit	,, ,,	
10	..	,, ,,	L
10	..	,, ,,	G H
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, the scud thin and broken in different directions.	G H
10	..	,, ,,	C T
10	..	,, ,,	C
9½	..	At 7h. 15m the clouds became broken, and the sky soon after was cloudless; it continued so till 7h. 50m, when the clouds again collected: at present a few stars only are visible, cirro-stratus, scud, and vapour being prevalent.	C
0	..	At present it is cloudless, but vapour is at times so prevalent that a few stars only are visible.	T
10	..	Cirro-stratus and masses of dark scud, the Moon's place being faintly visible: the clouds began to gather at 11h. 30m, and since that time they have gradually increased in density.	T D
10	..	Overcast: cirro-stratus and scud.	
6	..	Cirro-stratus and dark scud, extending from the S. horizon to the zenith; detached masses scattered in several other directions, stars being visible through the breaks, and the Moon through the clouds.	
0	Transit	Cloudless.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 9. 20	30·344	39·5	37·7	1·8	..	..	..	..	E	0 to 1	..	..	..	0	0	0	..	..
22	30·364	41·5	39·4	2·1	36·0	5·5	..	..	E by S	..	ENE	0·50	..	0	0	0	..	..
Nov. 10. 0	30·362	45·4	41·9	3·5	..	..	..	..	ESE	0 to ½	..	..	..	0	0	0	..	..
2	30·320	49·4	44·6	4·8	..	..	..	..	E by N	0 to 1	..	..	Pos.	2	2	0	..	..
4	30·297	46·3	42·9	3·4	39·5	6·8	..	..	ENE	..	..	..	..	0	0	0	..	..
6	30·277	44·8	42·2	2·6	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
8	30·271	44·0	41·9	2·1	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
10	30·254	41·0	39·7	1·3	38·5	2·5	49·8	..	NE	..	..	..	..	0	0	0	..	..
12	30·212	41·5	40·3	1·2	..	..	38·7	12·37	NE	..	..	..	..	0	0	0	..	..
							..	0·00										
14	30·193	42·6	41·1	1·5	..	..	32·8	23·315	NE	..	E	1·70	..	0	0	0	..	..
16	30·179	43·6	41·7	1·9	40·5	3·1	.. 47·0	..	NE	..	..	..	..	0	0	0	..	..
18	30·168	44·0	41·7	2·3	..	..	..	..	ENE	½ to 1	..	..	..	0	0	0	..	..
20	30·167	43·5	42·0	1·5	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
22	30·174	45·4	43·6	1·8	41·0	4·4	..	..	NE	..	NE	2·55	..	0	0	0	..	..
Nov. 11. 0	30·171	48·0	45·7	2·3	..	..	..	..	ENE	½ to 1	..	..	..	0	0	0	..	..
2	30·163	50·5	47·4	3·1	..	..	..	..	ENE	½ to 1½	..	..	..	0	0	0	..	..
4	30·146	49·3	46·0	3·3	41·0	8·3	51·7	..	ENE	..	..	..	..	0	0	0	..	..
6	30·162	42·9	40·9	2·0	..	..	37·0	12·37	NE	..	..	..	..	0	0	0	..	..
8	30·181	40·5	39·9	0·6	..	..	..	0·00	NE	..	..	..	..	0	0	0	..	..
10	30·198	40·2	39·2	1·0	38·0	2·2	..	23·315	NE	..	..	..	..	0	0	0	..	..
12	30·198	39·5	39·2	0·3	..	..	35·0	..	NE	..	..	..	..	0	0	0	..	..
14	30·200	40·0	39·2	0·8	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
16	30·195	38·9	38·2	0·7	38·0	0·9	..	..	NE	..	..	..	..	0	0	0	..	..
18	30·204	39·8	39·2	0·6	..	..	46·5	..	NE	..	..	..	..	0	0	0	..	..
20	30·219	44·0	42·7	1·3	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
22	30·247	47·2	45·2	2·0	42·0	5·2	..	..	ENE	..	NE	3·85	..	0	0	0	..	..
Nov. 12. 0	30·254	49·0	46·2	2·8	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
2	30·236	49·8	47·0	2·8	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
4	30·240	48·1	46·2	1·9	44·0	4·1	50·0	..	NE	..	..	..	..	0	0	0	..	..
6	30·239	47·5	45·0	2·5	..	..	48·0	12·37	NE	..	..	..	..	0	0	0	..	..
8	30·250	46·5	44·8	1·7	..	..	..	0·00	NE	0 to ½	..	..	..	0	0	0	..	..
10	30·253	45·0	42·7	2·3	41·0	4·0	..	23·315	ENE	½ to 2	..	..	..	0	0	0	..	..
12	30·253	44·0	41·2	2·8	..	..	40·2	..	ENE	..	..	..	..	0	0	0	..	..
14	30·244	44·0	41·8	2·2	..	..	..	..	NE	..	..	..	..	0	0	0	..	..
16	30·237	44·2	42·5	1·7	41·0	3·2	..	..	NNE	..	..	..	..	0	0	0	..	..
18	30·240	44·5	42·9	1·6	..	..	46·0	..	NNE	..	..	..	..	0	0	0	..	..
20	30·249	44·6	43·2	1·4	..	..	..	..	NNE	..	..	..	..	0	0	0	..	..
22	30·252	44·3	43·6	0·7	42·4	1·9	..	..	NNE	..	ENE	4·10	..	0	0	0	..	..

Amount of Clouds. 0—10.	Phases of the Moon.	REMARKS.	Observer.
8	..	Cirro-stratus and masses of scud in every direction: the clouds began to gather at $19^h.\ 25^m$.	T D
0	..	With the exception of a few lines of cirri the sky is cloudless.	G H
2	..	Detached cumuli, fleecy clouds, and scud in various directions.	
2	..	Detached masses of cumuli in the S., W., and N. horizon: the zenith and eastern horizon cloudless.	G H
10	..	Overcast: cirro-stratus and dark masses of scud: the clouds began to increase at $3^h.\ 45^m$. [extent.	T D
10	..	Dense cirro-stratus and scud, with the exception of a singular streak of clear sky in the S. S.W. horizon, of small	
10	..	Overcast: cirro-stratus and scud: at $7^h.\ 25^m$ some stars were faintly visible in several directions, but at $7^h.\ 50^m$ dense clouds came up and covered the sky.	
3	..	Cirro-stratus in the S. horizon in detached portions; every other part of the sky is cloudless, but hazy in several directions.	T D
1	Last Qr.	Cirro-stratus and vapour prevail at present only in the N.W., but the amount of cloud has been very variable since the last observation, the sky becoming in a few seconds quite overcast after being cloudless. A faint meteor was seen at $11^h.\ 51^m.\ 35^s$, passing from the zenith through Ursa Minor.	H B
$9\frac{1}{2}$	..	The sky soon became obscured after the last observation, a dense bank of cirro-stratus having gradually extended from the S. E.: at $12^h.\ 40^m$ it was quite overcast, and has remained so since that time: the only part now free from cloud is in the constellation Orion: no meteors have been seen.	
10	..	Extensive breaks in the clouds occurred in every direction soon after 14^h, and continued till $14^h.\ 40^m$, when the sky became covered with cirro-stratus and scud: Jupiter and a few stars are occasionally seen.	
$9\frac{3}{4}$	Transit	Cirro-stratus and scud: the clouds are broken around the zenith: the sky has been overcast since the last observation: no meteor has been seen. [continually since 18^h.	
10	..	Cirro-stratus and scud: a few small breaks in the clouds occasionally occur: scud has been passing over the sky	H B
10	..	,, no change since the last observation.	G H
$3\frac{1}{2}$	..	Detached masses of cumuli in different parts of the horizon: the scud is less prevalent than at the last observation.	
$1\frac{1}{2}$	..	A few detached masses of cumuli about the S. horizon: the appearance of the sky has continued nearly the same since the last observation.	G H
0	..	Cloudless: the wind is blowing in gusts to 1.	H B
$\frac{1}{2}$	..	Cirro-stratus and vapour around the horizon; otherwise cloudless.	
0	..	Cloudless.	
0	..	,,	H B
0	..	,,	G H
0	Apogee	,,	
0	..	,, a light cloud constantly rises from the E., and is dissipated before reaching the zenith: dew is forming.	
2	..	A light cloud constantly rising from the E., and partially dissipating at, or soon after passing, the zenith: dew is forming.	
10	Transit	Overcast: cirro-stratus and scud: the cloud mentioned in the last observation has gradually increased to the amount of 10: it is now flying from E. to W.	G H
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	L
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	L
10	..	,, cirro-stratus and scud: no break has been seen during the morning.	T D
10	..	,, ,, no change since the last observation.	G H
10	..	,, ,, the wind is blowing in gusts from $\frac{1}{4}$ to $\frac{3}{4}$.	
10	..	,, the sky very dark and the clouds low: the wind is blowing in gusts from $\frac{1}{4}$ to 1.	
10	..	,, very dark.	G H
10	..	,, cirro-stratus: the sky has been covered since the last observation.	L
10	..	,, ,, ,,	
10	..	,, ,, the wind is blowing in gusts to $\frac{1}{2}$.	
10	..	,, ,, ,,	
10	Transit	,, ,, ,,	L
10	..	,, cirro-stratus and scud.	G H

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 13. 0	30·244	46·8	44·2	2·6	..	..	..	..	ENE	..	..	..	..	0	0	0	..	.01
2	30·234	45·7	43·7	2·0	..	..	..	..	ENE	..	..	..	..	0	0	0	..	.01
4	30·204	45·8	43·8	2·0	41·2	4·6	..	..	ENE	..	..	..	..	0	0	0	..	.01
6	30·210	45·1	42·4	2·7	..	..	47·2 / 43·9	12·37	ENE	..	..	..	..	0	0	0	..	.01
8	30·205	45·2	43·0	2·2	..	..			ENE	..	..	..	..	0	0	0	..	.01
10	30·205	45·6	43·5	2·1	41·0	4·6	57·1 / 40·5	0·00	ENE	..	..	..	..	0	0	0	..	.01
12	30·202	46·5	43·7	2·8	..	..			E	..	..	..	..	0	0	0	..	.01
14	30·192	45·5	43·2	2·3	..	..		23·315	Calm	..	..	..	..	0	0	0	..	.01
16	30·173	45·0	43·8	1·2	43·0	2·0	.. / 45·5	..	Calm	..	..	..	..	0	0	0	..	.01
18	30·159	45·4	43·6	1·8	..	..		..	Calm	..	..	..	..	0	0	0	..	.01
20	30·170	45·0	43·2	1·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	.01
22	30·180	45·9	44·2	1·7	42·0	3·9	..	..	Calm	..	E	3·00	..	0	0	0	..	.01
Nov. 14. 0	30·165	47·1	45·2	1·9	..	..	..	..	E by N	..	..	..	..	0	0	0	..	.01
2	30·139	48·6	46·8	1·8	..	..	..	..	NE	..	..	..	..	0	0	0	..	.02
4	30·125	47·5	46·2	1·3	45·3	2·2	49·2 / 39·0	..	Calm	..	..	..	..	0	0	0	..	.01
6	30·124	45·5	44·2	1·3	..	..		12·37	Calm	..	..	..	..	0	0	0	..	.01
8	30·129	45·1	44·2	0·9	..	..			Calm	..	..	..	..	0	0	0	..	.01
10	30·125	44·5	43·2	1·3	41·5	3·0	63·0 / 32·2	0·00	Calm	..	..	..	..	0	0	0	..	.01
12	30·115	43·5	42·2	1·3	..	..			Calm	..	..	..	..	0	0	0	..	.01
14	..	..	..	..	..	..		23·315	Calm	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	.. / 45·2	..	Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..		..	Calm	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..
22	30·068	43·5	41·7	1·8	..	..	..	..	Calm	..	E	0·70	..	0	0	0	..	.02
Nov. 15. 0	..	..	..	..	..	..	..	..	SE	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	ESE	..	..	..	..	..	..	..	..	..
4	30·037	43·9	41·2	2·7	..	..	47·4 / 38·5	..	SE	..	..	..	..	0	0	0	..	.02
6	..	..	..	..	..	..		12·37	ESE	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..			Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	..	0·00	Calm	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	35·8		Calm	..	..	..	..	..	..	..	..	..
14	30·059	40·9	39·8	1·1	..	..		23·315	SE	..	..	..	..	0	0	0	..	.02
16	30·052	41·0	38·9	2·1	36·0	5·0	..	..	ESE	..	..	..	..	0	0	0	..	.03
18	30·047	41·5	39·4	2·1	..	..	45·0	..	ESE	..	ESE	2·58	..	0	0	0	..	.01
20	30·058	39·4	38·4	1·0	..	..	..	..	ESE	..	..	..	..	0	0	0	..	.01
22	30·041	41·3	37·9	3·4	34·0	7·3	..	..	ESE	..	SE	0·90	..	0	0	0	..	.02
Nov. 16. 0	30·039	42·5	40·1	2·4	..	..	..	..	Calm	..	..	..	..	0	0	0	..	.01
2	30·006	43·1	40·8	2·3	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	.1
4	29·989	41·1	39·1	2·0	36·5	4·6	46·8 / 38·0	..	SSE	..	..	..	..	0	0	0	..	.2
6	29·982	40·4	38·3	2·1	..	..		12·37	Calm	..	..	..	..	0	0	0	..	.01
8	29·973	39·9	38·2	1·7	..	..	61·0 / 34·0	0·00	Calm	..	..	..	..	0	0	0	..	.01
10	29·948	39·4	37·8	1·6	35·0	4·4			Calm	..	..	..	..	0	0	0	..	.02
12	29·934	39·2	38·2	1·0	..	..		23·315	Calm	..	..	..	..	0	0	0	..	.02
14	29·890	41·0	40·8	0·2	..	..	45·5 / 44·8	..	Calm	..	..	..	..	0	0	0	..	.02
16	29·862	43·0	42·8	0·2	42·3	0·7	..	..	Calm	..	..	..	..	0	0	0	..	.02
18	29·837	43·6	43·1	0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	.01

RADIATION MAXIMUM THERMOMETER.
November 15d. 22h. The reading was not taken.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	.. 0	Overcast: cirro-stratus and scud: no change since the last observation.	G H
10	.. 0	0 ,, 0 ,,	G H
10	.. 0	0 ,, 0 ,,	C
10	.. 0	0 ,, ,, the clouds are slightly broken in several places: the wind blows occasionally in gusts to ½.	C T
10	.. 0	Overcast: cirro-stratus and scud: the clouds have been slightly broken since the last observation, and a few stars [were visible for a short time.	C T
10	In Equator	0 ,, 0 ,,	C
10	.. 0	0 ,, 0 ,,	T D
10	.. 0	0 ,, 0 ,,	
10	.. 0	0 ,, 0 ,,	
10	.. 0	0 ,, 0 ,,	
10	Transit	0 ,, 0 ,,	T D
10	.. 0	0 ,, 0 ,,	G H
10	.. 0	Overcast: cirro-stratus and scud.	
9½	.. 0	0 ,, 0 ,, a few breaks about the zenith.	G H
10	.. 0	The sky is covered with cirro-stratus and scud of a thin character, the blue sky being visible through the clouds in several directions.	T D
10	.. 0	Overcast: cirro-stratus and scud.	
10	.. 0	0 ,, 0 ,, very dark.	
10	.. 0	Cirro-stratus and scud of a thin character, Jupiter and some of the larger stars being visible through the clouds.	T D
10	.. 0	Overcast: cirro-stratus and scud; the scud thin about the zenith.	G H
..	.. ..		
..	.. ..		
..	.. ..		
..	.. ..		
8	Transit	Cirro-stratus and light clouds, with breaks in several directions; the Sun is shining through the clouds.	T D
..	.. ..		
..	.. ..		
6	.. 0	Cirro-stratus, scud, and fleecy clouds: large portions of blue sky chiefly in the E. and N. E: the clouds began to	
..	.. ..	diminish in quantity at 2h, previously to which time, with the exception of small breaks, the sky had remained	
..	.. ..	covered since 23h.	T D
..	.. ..		
..	.. ..		
10	.. 0	Overcast: thick clouds.	G H
10	.. 0	0 ,, 0 ,, no change since the last observation.	
10	.. 0	0 ,, 0 ,, the wind is blowing in gusts to ½.	
10	.. 0	0 ,, 0 cirro-stratus and scud: no change throughout the night.	G H
10	Transit	Cirro-stratus and scud: small breaks occasionally seen.	H B
10	.. 0	Overcast: cirro-stratus and scud: small breaks occasionally seen.	
4	.. 0	The clouds have been broken since the last observation: at present cirro-strati and portions of scud prevail near the horizon in all directions: fleecy clouds in motion, and a few fine cirri.	H B
7	.. 0	Slightly overcast: cirro-stratus and scud: a few cumuli about the horizon.	G H
10	.. 0	Overcast: cirro-stratus and scud: the scud is thin and broken about the zenith and the S.W. horizon: the wind blows occasionally in gusts to ½ from the S. E.	
10	.. 0	Overcast: cirro-stratus and scud.	
10	.. 0	0 ,, 0	G H
10	.. 0	0 ,, 0 a uniform cirro-stratus.	H B
10	.. 0	0 ,, 0 ,, a very thin sleet is falling.	
10	.. 0	0 ,, 0 ,,	
10	.. 0	0 ,, 0 ,,	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 16. 20	29·821	44·1	43·6	0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·817	46·8	45·9	0·9	45·0	1·8	..	..	Calm	..	SW	3·32	..	0	0	0	..	..
Nov. 17. 0	29·791	49·5	48·2	1·3	..	..	..	..	SSE	..	..	..	..	0	0	0	..	..
2	29·767	49·4	48·7	0·7	..	..	50·0	..	SE	..	..	..	..	0	0	0	..	..
4	29·758	49·0	48·3	0·7	46·0	3·0	45·6	..	S by E	..	..	..	..	0	0	0	..	..
6	29·745	47·8	47·0	0·8	..	..		12·37	SSE	..	..	..	Pos.	2	2	0	..	..
8	29·758	48·5	48·0	0·5	..	..	..		Calm	..	..	..	..	0	0	0	..	..
10	29·759	49·4	49·0	0·4	48·6	0·8	42·5	0·01	Calm	..	..	..	..	0	0	0	..	..
12	29·755	50·0	49·6	0·4	..	..			Calm	..	..	..	..	0	0	0	..	..
14	29·746	48·8	48·4	0·4	..	..	46·0	23·340	Calm	..	..	..	..	0	0	0	..	..
16	29·732	48·0	47·6	0·4	47·0	1·0	45·0	..	Calm	..	..	..	..	0	0	0	..	..
18	29·731	47·7	47·5	0·2	..	..		..	Calm	..	..	..	..	0	0	0	..	..
20	29·734	47·5	47·4	0·1	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·736	50·4	49·8	0·6	48·5	1·9	..	..	Calm	..	SSW	3·90	..	0	0	0	..	..
Nov. 18. 0	29·742	54·2	51·7	2·5	..	..	..	..	S by W	..	..	..	Pos.	2	2	0	..	..
2	29·710	55·7	52·1	3·6	..	..	..	..	S by W	..	..	..	Pos.	2	2	0	..	..
4	29·690	51·0	49·6	1·4	47·8	3·2	..	..	S by W	..	..	..	..	0	0	0	..	..
6	29·673	49·6	47·8	1·8	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
8	29·678	47·0	46·5	0·5	..	..	57·0	..	S by W	..	..	..	..	0	0	0	..	..
10	29·661	49·0	48·2	0·8	47·0	2·0	46·2	12·37	S	..	..	..	..	0	0	0	..	..
12	29·650	51·5	50·2	1·3	..	..	72·0	0·01	S by W	..	..	..	..	0	0	0	..	..
14	29·627	51·0	49·8	1·2	..	..	40·0		S by W	..	..	..	..	0	0	0	..	..
16	29·617	51·0	49·9	1·1	49·0	2·0		23·365	SSW	0 to 1	SSW	3·20	..	0	0	0	..	..
18	29·630	48·0	47·2	0·8	..	..	46·0	..	SSW	..	..	..	..	0	0	0	..	..
20	29·661	48·5	47·7	0·8	..	..	45·0	..	SSW	..	..	..	..	0	0	0	..	..
22	29·703	49·1	48·2	0·9	48·0	1·1	..	..	Calm	..	SW	2·00	..	0	0	0	..	..
Nov. 19. 0	29·730	53·6	50·2	3·4	..	..	..	..	WSW	0 to ½	..	..	Pos.	2	2	0	..	..
2	29·726	54·6	50·7	3·9	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
4	29·726	53·0	50·2	2·8	48·0	5·0	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
6	29·733	50·8	49·2	1·6	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
8	29·727	50·5	49·3	1·2	..	..	57·2	..	SW	..	..	..	..	0	0	0	..	..
							46·1	12·37										
10	29·719	50·5	49·2	1·3	48·0	2·5	77·0	0·00	SW	..	SW	3·70	..	0	0	0	..	..
							43·0											
12	29·676	50·7	49·2	1·5	..	..	46·8	23·365	SW	..	..	..	..	0	0	0	..	..
14	29·633	51·0	49·4	1·6	..	..	45·8	..	SSW	..	..	..	..	0	0	0	..	..
16	29·555	50·0	48·7	1·3	46·0	4·0	..	..	SSW	0 to ½	..	..	..	0	0	0	..	..
18	29·454	50·1	48·4	1·7	..	..	..	..	SSW	½ to 4	..	..	..	0	0	0	..	..

RADIATION MAXIMUM THERMOMETER.
November 17d. 22h. The reading was not taken.

Apparent Greenwich Time	Phases of the Moon.		REMARKS.	Observer.
h		°		
10	..	0	Cirro-stratus and scud: about half an hour since the clouds became slightly broken, and a few cirri were seen through the breaks.	H B
8	..	0	Cirro-stratus, fleecy clouds, and reticulated cirri: small breaks mostly S. of the zenith.	L
10	Transit	0	Cirro-stratus covers the whole sky, under which scud prevails: the clouds are much thinner in some places than in others, and blue sky is occasionally visible.	C T
10	..	0	Overcast: cirro-stratus.	L
10	..	0	0 ,, 0 cirro-stratus and scud: a few drops of rain fell shortly before the observation.	H B
10	..	0	,, ,, a slight shower of rain fell at 4h. 35m.	
10	..	0	,, ,, showers of rain fell since the last observation: very dark and gloomy.	
10	..	0	0 ,, 0 cirro-stratus: showers of rain fell since the last observation.	H B
10	..	0	0 ,, 0 ,, very fine and slight rain is falling, scarcely perceptible.	L
10	..	0	0 ,, 0 ,, Jupiter's place is occasionally visible.	
10	..	0	0 ,, 0 ,,	
10	..	0	0 ,, 0 ,,	
10	..	0	0 ,, 0 ,, the clouds are very thin in some places.	
½	..	0	A few fleecy clouds, and a small patch of cumulus between the zenith and S. horizon; the rest of the sky is cloudless.	L
3	Transit	0	A few cumuli about the horizon generally, and a few fleecy clouds near the zenith: a slight shower of rain fell at 23h.	G H
1½	..	0	A few cumuli about the horizon generally; the sky otherwise cloudless.	G H
2	..	0	Cirro-stratus to the W. and S.W. in the horizon: detached cumuli and a few light clouds in various directions.	C T
2	..	0	A bank of dark cirro-stratus cloud extending from the S.W. to W., along the horizon; every other part of the sky is cloudless.	C
1	..	0	Cloudless, with the exception of a few stratus clouds in the S.	C
3	..	0	A long bank of dark cirro-stratus in the horizon, extending from the S. S.W. to N., and detached portions of the same cloud passing over the sky: great deposition of moisture.	C T
9½	New	0	Overcast with cirro-stratus and thin scud: a few stars are faintly visible.	T D
10	..	0	Overcast: cirro-stratus and scud.	
9	..	0	Cirro-stratus and flying scud: several stars are visible through the clouds: rain is falling in large drops.	
6	..	0	Detached portions of cirro-stratus and scud in several directions: the stars that are visible look dim and watery: no rain is falling at present, but the aspect of the sky is very wild and unsettled.	
9	..	0	Cirro-stratus and flying masses of scud: the sky has retained the unsettled appearance mentioned in the last observation to the present time: a small portion of the sky in the S. S. E. is the only part free from cloud: rain has fallen at intervals since the last observation.	T D
0	..	0	Cloudless.	G H
½	Transit	0	A few cirri and two or three patches of cumuli towards the S. horizon.	
4	..	0	Scud, light fleecy clouds, and a few cumuli in various directions: the wind is blowing in gusts from ¼ to ¾.	G H
7	..	0	Cirro-stratus in detached portions scattered over the whole sky: the clouds in the N. look dark and threatening.	T D
2	..	0	Linear cirri in the S. and S. S.W. horizon, and some light clouds in the W.; every other portion of the sky is clear.	
3	..	0	Thin cirro-stratus prevails in the S. and S.W. horizon at a low elevation; no absolute cloud prevails in any other direction: the stars look dim in some places, as though obscured by a thin haze. At 7h. 55m a fine meteor was seen in the S., very near the horizon, moving from the S. to S. S.W.; its time of duration was 2s.	
5	..	0	Cirro-stratus in the S., extending nearly to the zenith: light detached portions of cirri here and there: Jupiter and the stars look dim.	T D
8	..	0	A thin cirro-stratus is distributed over every portion of the sky, through which stars of the second magnitude only are visible.	H B
9	..	0	Cirro-stratus and scud: about an hour since the cirro-stratus became less dense than before, but since that time it has considerably increased: the wind is blowing in gusts to ¾.	
7	..	0	Cirro-stratus and scud: the stars in every direction are very dim: the appearance of the sky has been very variable since the last observation.	
5	..	0	Cirro-stratus and scud; the latter is more distributed than at 16h: the wind is blowing in gusts to 2; it began to blow strongly at 17h. 40m.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 19. 20	29·365	49·6	47·7	1·9	..	..	..		..	..		..	SW	1 to 4	..	..	..	0	0	0	..	..
22	29·314	51·3	48·8	2·5	46·1	5·2	..		..	..		..	SW	1 to 4	S	3·75	..	0	0	0	..	..
Nov. 20. 0	29·244	49·9	48·6	1·3	..	..	..		..	..		..	S	3 to 5	..	..	..	0	0	0	..	..
2	29·192	53·0	50·7	2·3	..	..	..		..	..		..	S by W	3 to 4½	..	..	..	0	0	0	..	..
4	29·193	52·8	48·3	4·5	44·0	8·8	..		..	..		..	SSW	2 to 9	..	..	..	0	0	0	..	..
6	29·218	50·2	46·5	3·7	..	..	55·0		..	..	12·37		SSW	½ to 3	..	..	..	0	0	0	..	..
8	29·250	49·5	46·5	3·0	..	..	..		39·5	0·00			SSW	½ to 4½	..	..	..	0	0	0	..	..
10	29·310	49·2	46·5	2·7	43·0	6·2	47·2		46·0	23·405			SSW	½ to 5	..	..	..	0	0	0	..	..
12	29·370	49·0	46·2	2·8	..	..	..		..	..			SSW	½ to 4	..	..	..	0	0	0	..	..
14	29·430	47·5	45·6	1·9	..	..	..		..	..			SSW	½ to 1½	..	..	..	0	0	0	..	..
16	29·470	46·5	44·7	1·8	43·0	3·5	..		..	..			S by W	0 to ½	..	..	..	0	0	0	..	..
18	29·506	46·4	44·5	1·9	..	..	..		..	..			SW	..	..	..	..	0	0	0	..	..
20	29·532	46·5	44·9	1·6	..	..	..		..	..			S	..	..	..	..	0	0	0	..	..
22	29·538	47·4	45·7	1·7	44·0	3·4	..		..	..			S by E	..	SSW	9·15	..	0	0	0	..	..
Nov. 21. 0	29·543	50·9	47·4	3·5	..	..	..		..	..			SSW	..	..	..	..	0	0	0	..	..
2	29·534	52·0	48·0	4·0	..	..	..		..	..			SSW	..	..	..	..	0	0	0	..	..
4	29·522	50·1	46·7	3·4	44·0	6·1	52·2		..	..			SSW	..	SW	1·10	..	0	0	0	..	..
6	29·509	46·0	44·2	1·8	..	..	41·9		..	..			S by W	..	..	..	..	0	0	0	..	..
8	29·479	46·8	45·7	1·1	..	..	10·3		..	12·56			S by W	..	..	..	..	0	0	0	..	..
10	29·434	48·4	47·6	0·8	47·0	1·4	69·0		36·0	0·46			SSW	0 to 1½	SSW	1·10	Neg.	40	..	..	..	..
12	29·382	48·0	46·9	1·1	..	..	..		..	23·900			SSW	..	..	..	..	0	0	0	..	..
14	..	..	..	..	..	..	47·2		..	..			SSW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	46·0		..	..			SSW	½ to 1	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..		..	..			SSW	0 to ½	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..		..	..			SSW	..	..	..	..	..	..	..	..	..
22	29·326	44·5	42·8	1·7	..	..	..		..	..			SSW	0 to 1½	SW	3·90	..	0	0	0	..	..
Nov. 22. 0	..	..	..	..	..	..	..		..	..			SSW	½ to 3½	..	..	..	..	..	..	..	..
2	29·264	47·0	44·4	2·6	..	..	47·8		..	..			SW	½ to 2	..	..	Pos.	0	0	30	30	..
4	29·306	41·0	40·5	0·5	..	..	37·5		..	12·60			WSW	0 to 2	..	..	..	0	0	0	..	..
6	29·374	41·5	39·5	2·0	..	..	69·0		30·0	0·08			SW	..	..	..	..	0	0	0	..	..
8	..	..	..	..	..	..	..		..	24·015			SSW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	47·0		..	..			SW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	45·5		..	..			SW	0 to ½	..	..	..	..	..	..	..	..
14	29·629	40·5	38·2	2·3	..	..	..		..	..			SW	0 to 1	..	..	..	0	0	..	..	..

MAXIMUM RADIATION THERMOMETER.
November 20d. 22h. The instrument was out of order.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
4	..	Cirro-strati and fragments of scud are scattered in every direction: frequent gusts of wind to 2 and 2½ since the last observation.	R B
10	..	Overcast: cirro-stratus and scud; the scud thin and broken about the zenith; it is flying very rapidly towards the N.: the wind is blowing in gusts from ½ to 1: a heavy squall of rain has just commenced.	G H
10	..	Overcast: cirro-stratus and scud: the scud is flying rapidly towards the N.: it has rained heavily since the last observation, and now a light rain is falling: the wind is blowing in occasional gusts to 1¼.	
9½	Transit	Overcast: cirro-stratus and scud: a remarkable clear space of blue sky in the N. W. horizon: the Sun is occasionally seen very dimly through the clouds.	G H
3	..	Cirro-strati near the horizon, cirri in the S. S. E. and S. E., and masses of scud in rapid motion, are the clouds now prevalent: the wind is blowing in gusts to 2½ and 2½ +.	H B
9	..	Cirro-strati and dark scud nearly cover the sky: several stars are seen in the breaks: since the last observation heavy masses of dark scud and cumuli have been constantly passing over: the wind is blowing in very frequent gusts to 2½: a light shower of rain fell at 5h. 15m.	
½	..	The sky became nearly cloudless at 6h. 40m: at 7h two vivid flashes of lightning were seen in the S. W.; at 7h. 45m another flash was seen in the same quarter: the wind is blowing in frequent prolonged gusts to 2 and 2½.	
0	Greatest declination S.	Cloudless; but the stars near the horizon are dim: the wind is blowing in gusts to 2, but not so frequent as at the last observation.	H B
0	..	Cloudless: the wind is blowing in gusts to 1½.	G H
0	..	,, the wind is blowing in slight gusts to ½.	
0	..	,, the wind is blowing more evenly with the force ½ than at the last observation.	
0	..	,, the stars look dim towards the horizon.	
10	..	Overcast: cirrro-stratus and scud: the scud thin and broken towards the S. horizon: the sky became overcast soon after the last observation.	G H
7	..	Cirro-stratus around the horizon: in the zenith some patches of blue sky and light fleecy clouds.	T D
8	..	Cirro-stratus and fleecy clouds in every direction: small portions of blue sky here and there: the Sun is shining through the clouds.	
7	Transit	Detached cirro-stratus, light fleecy clouds, and portions of scud scattered all over the sky: several considerable breaks all around: very little change has taken place during the morning.	T D
1	..	The sky is covered with haze; some few lines of cirri are prevalent, and a very small amount of light fleecy clouds.	G H
0	..	A bank of cirro-stratus in the S. W. horizon, but of no numerical extent; with that exception the sky is cloudless.	
0	..	A few lines of cirri towards the S., but of no numerical extent: the sky has been sometimes partially overcast since the last observation.	
10	..	Heavy rain commenced falling at 9h. 15m, and still continues: wind blowing in gusts: the electrical apparatus is much excited.	G H
10	..	Overcast: cirro-stratus and scud.	T D
..	..		
..	..		
..	..		
..	..		
1	..	Hazy cirri, with a few lines of cirro-strati towards the S. and S. W.	G H
..	..		
7	..	Cirro-strati in various directions, and masses of white scud: at 0h. 10m there was one flash of lightning and thunder which lasted about 5 or 6 seconds.	G H
5	Transit	The sky has been gradually clearing during the last quarter of an hour: cirro-stratus is now distributed near the horizon and E. of the zenith.	H B
0	..	Cloudless.	G H
..	..		
..	..		
..	..		
10	..	The sky is covered with thin cirro-stratus, a few stars being visible through the clouds in several directions, but very dim and ill-defined.	T D

HENLEY'S ELECTROMETER AND RONALDS' SPARK MEASURER.

November 21d. 10h. The reading of Henley was 8°: there were sparks at the distance of 0in. 05, occuring at intervals of 1".

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 22. 16	29·666	41·5	39·4	2·1	36·0	5·5	..	..	SW	..	..	..	..	0	0	0	..	..
18	29·676	43·5	41·6	1·9	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
20	29·692	44·0	42·7	1·3	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
22	29·710	44·6	44·0	0·6	43·0	1·6	..	..	SW	..	SW	6·75	..	0	0	0	..	..
Nov. 23. 0	29·700	47·1	46·5	0·6	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·678	50·1	48·6	1·5	..	..	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
4	29·655	50·4	48·4	2·0	46·0	4·4	..	..	SSW	..	..	..	..	0	0	0	..	..
6	29·647	50·6	49·2	1·4	..	..	54·4 / 42·0 / 68·0	.. / 12·60 / 0·10	SSW	..	..	..	..	0	0	0	..	..
8	29·631	50·6	50·2	0·4	..	..	41·0	24·185	SSW	..	..	..	..	0	0	0	..	..
10	29·614	52·5	51·7	0·8	51·0	1·5	47·0 / 45·5	..	SSW	..	..	..	..	0	0	0	..	..
12	29·572	52·7	52·2	0·5	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
14	29·543	53·0	52·6	0·4	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
16	29·525	53·5	53·3	0·2	53·0	0·5	..	..	SW	..	..	..	..	0	0	0	..	..
18	29·496	53·6	53·5	0·1	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
20	29·486	53·8	53·8	0·0	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·481	53·9	53·8	0·1	53·0	0·9	..	..	SSW	..	SW	5·00	..	0	0	0	..	..
Nov. 24. 0	29·469	54·0	53·8	0·2	..	..	..	..	S	..	..	..	Pos.	2	2	0	..	..
2	29·468	56·0	55·5	0·5	..	..	..	..	SW	..	..	..	Pos.	2	2	0	..	..
4	29·489	55·6	55·0	0·6	55·0	0·6	..	..	WSW	..	..	..	Pos.	25	..	20	40	2. 0
6	29·519	54·3	54·0	0·3	..	..	..	..	SW	..	..	..	..	0	0	0	..	..
8	29·566	53·8	53·0	0·8	..	..	59·4 / 48·3 / ..	.. / 12·86 / 0·50	SW	..	..	..	..	0	0	0	..	..
10	29·597	52·5	51·8	0·7	50·8	1·7	43·5	23·510	SW	0 to ½	..	..	..	0	0	0	..	..
12	29·614	52·6	52·0	0·6	..	..	47·2 / 46·0	..	SW	..	..	..	..	0	0	0	..	..
14	29·621	51·7	50·7	1·0	..	..	..	..	SW	0 to ½	..	..	..	0	0	0	..	..
16	29·611	49·3	48·6	0·7	48·0	1·3	..	..	SSW	..	WSW	3·67	Pos.	2	2	0	..	..
18	29·580	49·6	48·6	1·0	..	..	..	..	S by W	..	..	..	..	0	0	0	..	..
20	29·565	48·5	48·3	0·2	..	..	..	..	S by E	..	..	..	..	0	0	0	..	..
22	29·521	49·3	49·0	0·3	48·5	0·8	..	..	S by E	..	SW	0·88	Pos.	10	..	10	8	..
Nov. 25. 0	29·465	51·2	50·7	0·5	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
2	29·366	52·5	51·7	0·8	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
4	29·268	54·2	53·8	0·4	53·0	1·2	56·0 / 44·9 / 69·4	.. / 13·03 / 0·20	S by W	..	..	..	..	0	0	0	..	..
6	29·203	55·0	54·6	0·4	..	..	39·0	24·725	SSW	..	SSW	1·15	..	0	0	0	..	..
8	29·173	55·1	53·8	1·3	..	..	48·0 / 46·8	..	SSW	½ to 6	..	..	..	0	0	0	..	..
10	29·154	51·8	49·8	2·0	48·0	3·8	..	..	SSW	½ to 2½	..	..	Pos.	2	2	0	..	..
12	29·167	49·1	47·0	2·1	..	..	..	..	SSW	0 to ½	..	..	Pos.	2	2	0	..	..

RADIATION MAXIMUM THERMOMETER.
November 24d. 22h. The reading was not taken.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10		Overcast: cirro-stratus and scud.	T D
10		,, ,,	
10		,, ,, rain has fallen at intervals since 18h.	T D
10		,, ,, rain is falling.	G H
10		Overcast: cirro-stratus and scud: a very slight rain is falling.	
10		,, ,, a few breaks towards the S.	G H
8	Transit	Cirro-stratus, linear cirri, scud, and fleecy clouds scattered over the sky: there are patches of blue sky chiefly N. and N.W. of the zenith: at 3h. 50m the clouds became extensively broken.	T D
10		The sky is covered with cirro-stratus and scud of various densities; it became wholly covered at 5h. 50m.	
10		Overcast: cirro-stratus and scud: at 6h. 5m heavy rain commenced falling, and continued until 6h. 35m: slight rain has again commenced falling.	
10		Overcast: cirro-stratus and scud: thin rain is falling.	T D
10		,, ,, cirro-stratus.	L
10		,, ,, ,,	
10		,, ,, ,,	
10		,, ,, ,, a few drops of rain are falling.	L
10		,, ,, ,, slight rain is falling.	T D
10		,, ,, cirro-stratus and scud: light rain is falling.	G H
10		Overcast: cirro-stratus and scud: heavy rain is falling.	
10		,, ,, ,, the rain ceased about 1h: the air is still very moist.	G H
9		The clouds have become much thinner since the last observation: at present the sky, with the exception of a few breaks in the zenith, is covered with cirro-stratus and scud.	C
2	Transit	Since the last observation the clouds have been much broken; cirro-strati, cumuli, and cumulo-strati passing over from the W. with great rapidity: at present strati prevail in the N. and W. horizon, and a few cirri near the place of the Moon; every other part of the sky is cloudless.	C
10		The appearance of the sky is continually changing, at present it is entirely covered with dense cirro-stratus and scud passing quickly from the W.	C T
10		Overcast: dense cirro-stratus: since the last observation the clouds have been frequently much broken: the Moon and several stars have been occasionally visible.	C T
9		The sky is partly clear from the zenith to the S.E. horizon; the rest of the sky is covered with an apparently thick scud.	G H
5		The sky is cloudy about the horizon and clear around the zenith: it became completely overcast soon after the last observation, but those clouds near the zenith have gradually dispersed.	
5		Cloudy about the horizon generally: the zenith and the part around it is clear.	
10		Overcast: cirro-stratus and scud.	
10		,, ,, rain is falling; it commenced about 18h. 30m.	G H
10		,, ,,	H B
10		Overcast: cirro-stratus and scud.	
10		,, ,, the scud moving slowly from the S.	H B
10		,, ,, rain is falling.	G H
10	Transit	,, ,, rain has been falling very fast since the last observation, and still continues: a narrow line of blue sky in the S.W. part of the horizon.	
6		The sky is partly overcast, with cirro-stratus and large masses of dark scud, which are driven rapidly towards the N.E.: occasionally all the different parts of the sky are visible, and again quickly overcast: the wind is blowing in gusts to 1: it ceased raining at 6h. 10m.	
10	Perigee	Overcast: cirro-stratus and scud: a few breaks towards the S.W., through which the Moon is partly visible.	G H
1	1st Qr.	Cirro-stratus around the horizon, otherwise cloudless: since the last observation the amount of cloud has been exceedingly variable: the wind is blowing in gusts to 1½.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Nov. 25. 14	29·138	48·5	46·8	1·7	..	..	..	..	SSW	0 to 1½	..	..	Pos.	2	2	0	..	..
16	29·114	48·5	46·7	1·8	45·5	3·0	..	..	SSW	0 to 2½	..	..	Pos.	2	2	0	..	..
18	29·093	46·8	44·7	2·1	..	..	..	..	SSW	0 to ¼	..	..	Pos.	2	2	0	..	..
20	29·087	45·8	44·4	1·4	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
22	29·123	47·0	45·6	1·4	43·5	3·5	..	..	WSW	..	WSW	5·65	..	0	0	0	..	..
Nov. 26. 0	29·151	49·2	46·2	3·0	..	..	..	..	WSW	..	..	..	..	0	0	0	..	..
2	29·151	48·4	46·2	2·2	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
4	29·155	48·0	45·9	2·1	42·5	5·5	..	..	SSW	..	..	..	..	0	0	0	..	..
6	29·154	42·8	41·8	1·0	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
8	29·167	42·2	41·3	0·9	..	..	..	..	Calm	..	..	..	Pos.	2	2	0	..	..
10	29·161	40·8	40·6	0·2	39·5	1·3	49·5 / 31·0 / 69·0 / 30·0 / 48·0 / 46·8	.. / 13·03 / 0·00 / 24·735 / ..	Calm	..	..	..	Pos.	20	..	10	15	2. 0
12	29·168	40·3	40·2	0·1	..	..			Calm	..	..	..	..	0	0	0	..	..
14	29·164	39·2	39·2	0·0	..	..			Calm	..	..	..	..	0	0	0	..	..
16	29·169	36·5	36·2	0·3	36·0	0·5	..	..	Calm	..	..	..	..	0	0	0	..	..
18	29·166	35·5	35·2	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
20	29·185	34·0	33·7	0·3	..	..	..	..	Calm	..	..	..	..	0	0	0	..	..
22	29·200	34·0	33·4	0·6	32·5	1·5	..	..	Calm	..	WSW	2·60	Pos.	..	..	..	200	0. 30
Nov. 27. 0	29·200	37·2	37·0	0·2	..	..	..	..	Calm	..	..	..	Pos.	..	80	..	100	0. 30
2	29·194	38·5	38·4	0·1	..	..	..	..	Calm	..	WNW	0·50	Pos.	..	80	..	150	0. 30
4	29·194	42·2	41·7	0·5	41·0	1·2	44·7 / 35·0 / 69·0 / 29·0 / 47·5 / 46·0	.. / 13·03 / 0·00 / 24·735 / ..	Calm	..	..	..	..	0	0	0	..	..
6	29·204	43·0	42·7	0·3	..	..			Calm	..	..	..	..	0	0	0	..	..
8	29·219	44·0	43·0	1·0	..	..			NNW	..	..	..	Pos.	2	2	0	..	..
10	29·244	43·2	42·2	1·0	40·5	2·7			NNW	..	..	..	Pos.	2	2	0	..	..
12	29·257	42·6	41·4	1·2	..	..			NNW	..	..	..	..	0	0	0	..	..
14	29·259	41·7	40·2	1·5	..	..			NNW	0 to ½	..	..	..	0	0	0	..	..
16	29·258	39·7	38·0	1·7	37·0	2·7			NNW	..	..	..	..	0	0	0	..	..
18	29·273	38·0	37·2	0·8	..	..			NNW	..	..	..	..	0	0	0	..	..
20	29·281	36·3	35·2	1·1	..	..	..	..	NNW	..	..	..	..	0	0	0	..	..
22	29·298	36·5	35·2	1·3	33·0	3·5	..	..	NNW	..	NNW	2·60	Pos.	2	2	0	..	..
Nov. 28. 0	29·317	37·0	35·7	1·3	..	..	40·4 / 29·2 / .. / 22·2 / 47·0 / 44·8	.. / 13·03 / 0·00 / 24·735 / ..	NNW	..	..	..	Pos.	10	..	10	10	..
2	29·316	39·8	37·6	2·2	..	..			NNW	..	..	..	Pos.	2	2	0	..	..
4	29·338	38·0	36·2	1·8	34·0	4·0			NNW	..	..	..	Pos.	2	2	0	..	..
6	29·369	37·1	35·8	1·3	..	..			Calm	..	NW	2·04	Pos.	8	..	5	5	..
8	29·394	35·6	34·3	1·3	..	..			Calm	..	..	..	Pos.	2	2	0	..	..
10	29·435	33·2	32·2	1·0	31·0	2·2			Calm	..	..	..	Pos.	2	2	0	..	..

ELECTRICITY.

November 26d. 22h. There was a spark at the distance of 0in·01.

November 27d. 0h and 2h. There were sparks at the distance of 0in·01 at both times.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
4	..	Cirro-stratus and vapour: the amount of cloud has been very variable since the last observation: at about $12^h.30^m$ three-fourths of the sky were nearly covered with cirro-stratus and vapour; but before $12^h.40^m$ not a cloud was visible: a few faint meteors were seen: occasional gusts of wind to $1\frac{1}{2}$.	H B
5	..	The appearance of the sky continues the same as before, the amount of cloud varying from 2 to 6 in a few seconds: at present vapour is distributed N. of the zenith: gusts of wind to $1\frac{1}{2}$, and occasionally to 2.	
2	..	Cirro-stratus and scud around the S. S. E. and S. horizon, otherwise cloudless.	
4	..	At $19^h.40^m$ cirro-strati and fleecy clouds suddenly came up from the S.W., and in a very short time three-fourths of the sky became covered; since that time they have been gradually clearing off; at present cirro-stratus prevails around the horizon: the wind is blowing in gusts to 1, but not frequent.	H B
4	..	Cirrus, cirro-stratus, and scud in various directions.	G H
1	..	Cirro-stratus in the horizon from the W. and S.W., the rest of the sky is cloudless.	
4	..	A heavy mass of cirro-stratus and scud in the S. E. horizon: a few cirri about the zenith. Part of a very faint halo was observed at $0^h.10^m$.	G H
2	..	Cumuli, cirro-strati, and fragments of light scud.	H B
$\frac{1}{2}$	..	Cirro-stratus around the horizon, otherwise cloudless: a slight fog.	
7	Transit	Cirro-stratus, fleecy clouds, and scud: there is a strong diffused light along the N. horizon (probably auroral).	
8	..	Cirro-stratus, fleecy clouds, and scud; three-fourths of the sky have been generally covered with these clouds since the last observation: a faint halo, but not perfect, has been occasionally visible around the Moon. There is a peculiar cloud visible (probably auroral), extending from the N. to the N.W.; the altitude of the apex about 20°.	H B
7	..	Cirro-stratus, light fleecy clouds, and scud are scattered over the sky in several directions: the sky is clear in the W. horizon, and for a considerable distance around.	T D
9	..	Cirro-stratus all around, with the exception of a small portion of clear sky in the zenith and S. horizon, where a few stars are visible: a mist prevails.	
$9\frac{1}{2}$	..	Cirro-stratus of various densities, a few stars being faintly visible here and there: a mist prevails, and everything is saturated with moisture.	
10	..	Overcast: cirro-stratus: no change since the last observation.	
10	In Equator	A dense fog.	T D
10	..	,,	G H
10	..	The fog is not so dense as at 22^h: the Sun is faintly visible.	
10	..	Overcast: cirro-stratus: a fog still prevails.	G H
10	..	,, cirro-stratus and scud: a mist prevails.	T D
10	..	The sky is covered with a uniform cloud of the cirro-stratus character, through which the Moon is visible: a thin fog is prevalent.	
10	Transit	Cirro-stratus and masses of scud: the Moon is occasionally seen: the sky has been overcast since the last observation.	T D
10	..	Cirro-stratus and dense scud: the Moon is occasionally visible through the clouds.	H B
10	..	Overcast: cirro-stratus and scud.	H B
10	..	,, ,,	G H
10	..	,, ,,	L
10	..	,, ,,	L
9	..	Cirro-stratus and scud; the zenith, and some small portions of the sky near it, is free from cloud.	T D
10	..	Overcast: cirro-stratus and scud: the clouds are very thin in some places.	H B
2	..	The S. E. portion of the horizon is covered with cirro-stratus and scud.	G H
3	..	Cirri, cirro-strati, and a few patches of scud in various directions, but more particularly near the S. E. portion of the horizon.	G H
8	..	Cirro-stratus and scud in every direction: breaks in the zenith.	T D
$9\frac{3}{4}$	..	A large portion of the sky was clear at $5^h.30^m$, soon after which time cirro-stratus and fleecy clouds suddenly came up from the E. S. E., and soon nearly covered every portion of it.	H B
0	..	Cloudless.	G H
0	Transit	,,	G H

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Readings of Double Gold Leaf.	Readings of Straws of Volta 1.	Readings of Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in		°	°	div.	div.	m s
Nov. 28. 12	29·460	31·2	30·4	0·8	..	..	..			..		Calm	..	WNW	0·25	Pos.	2	2	0	..	..
14	..	..	..	..	..	..	..			..		NNW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..			..		Calm	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..			..		SW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..			..		WSW	..	..	..	..	..	..	..	..	..
22	29·624	34·0	32·0	2·0	..	..	..			..		NNW	..	NNW	0·25	Pos.	5	..	5	5	3. 0
Nov. 29. 0	29·631	34·7	32·7	2·0	..	..	..			..		N	..	..	..	Pos.	20	..	30	20	5. 0
2	..	..	..	..	..	..	..			..		N by W	..	..	..	..	..	..	..	..	..
4	29·655	35·5	33·0	2·5	..	..	38·2			..		N by W	..	..	..	Pos.	2	2	0	..	..
6	..	..	..	..	..	..	23·4			..		Calm	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..				13·03		Calm	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..						Calm	..	..	..	..	..	..	..	..	..
12	29·703	29·1	27·7	1·4	..	..	..		16·5	0·00		Calm	..	..	..	Pos.	30	..	20	20	..
14	29·693	26·8	26·2	0·6	..	..				24·735		Calm	..	..	..	Pos.	30	..	20	20	5. 0
16	29·705	27·8	27·3	0·5	24·0	3·8	46·0			..		Calm	..	..	..	Pos.	20	..	10	10	3. 0
18	29·714	27·1	26·7	0·4	..	..	42·0			..		Calm	..	..	..	Pos.	10	..	5	5	2. 0
20	29·733	25·0	24·9	0·1	22·5	2·5				..		Calm	..	..	..	Pos.	30	..	20	20	4. 0
22	29·769	28·5	28·2	0·3	24·0	4·5	..			..		Calm	..	NW	2·07	Pos.	15	..	10	12	3. 0
Nov. 30. 0	29·778	31·8	31·6	0·2	..	..	..			..		NNW	..	..	..	Pos.	25	..	20	20	..
2	29·788	32·1	31·7	0·4	..	..	..			..		NNW	..	..	..	Pos.	20	..	10	10	5. 0
4	29·802	33·4	32·0	1·4	30·5	2·9	33·0			..		NNW	..	..	..	Pos.	2	2	0	0	..
6	29·826	32·6	32·0	0·6	..	..	26·0			..		N	..	..	..	Pos.	15	..	10	10	6. 0
8	29·844	32·5	32·0	0·5	..	..				13·03		N by E	..	..	..	Pos.	40	..	30	30	9. 0
10	29·858	30·6	31·2	−0·6	28·0	2·6	..			0·00		N by W	..	..	..	Pos.	30	..	20	20	7. 0
12	29·862	30·4	30·3	0·1	..	..	16·4			..		Calm	..	..	..	Pos.	40	..	80	80	..
14	29·860	29·8	29·7	0·1	..	..				24·735		Calm	..	..	..	Pos.	40	..	70	70	..
16	29·849	28·5	28·5	0·0	27·0	1·5	44·5			..		Calm	..	..	..	Pos.	40	..	150	150	12. 0
18	29·829	28·6	27·2	1·4	..	..	40·0			..		Calm	..	..	..	Pos.	40	..	150	150	22. 0
20	29·801	27·6	27·6	0·0	..	..	..			..		Calm	..	..	..	Pos.	40	..	200	200	2. 0
22	29·779	26·5	26·5	0·0	26·0	0·5	..			..		SW	..	NNW	1·49	Pos.	40	..	50	80	0. 30
Dec. 1. 0	29·739	30·2	30·1	0·1	..	..	..			..		SW	..	..	..	..	0	0	0	..	..
2	29·680	31·1	31·0	0·1	..	..	..			..		SW	..	..	..	..	0	0	0	..	..
4	29·634	30·0	29·8	0·2	28·0	2·0	31·5			..		SW	..	..	..	Pos.	40	..	80	80	2. 0
6	29·607	28·2	28·2	0·0	..	..	25·8			..		SSW	..	..	..	Pos.	40	..	150	150	5. 0
8	29·583	27·6	27·6	0·0	..	..				13·03		S by W	..	..	..	Pos.	40	..	100	100	6. 0
10	29·535	27·4	27·0	0·4	25·5	1·9	57·5			0·00		S	..	..	..	Pos.	40	..	80	80	2. 0
12	29·496	31·0	30·2	0·8	..	..	20·0			..		S by W	..	..	..	Pos.	40	..	100	100	5. 0
14	29·430	31·0	30·2	0·8	..	..				24·735		SSW	..	..	..	Pos.	40	..	150	180	2. 0
16	29·403	31·3	30·4	0·9	29·0	2·3	43·0			..		SSW	..	..	..	Pos.	40	..	200	200	1. 0
18	29·376	31·5	30·7	0·8	..	..	39·2			..		S by E	..	..	..	Pos.	40	..	100	120	3. 0
20	29·336	31·7	30·9	0·8	..	..	..			..		SW	..	..	..	Pos.	40	..	200	200	1. 0
22	29·307	32·1	31·4	0·7	26·0	6·1	..			..		SW	..	N	1·40	Pos.	40	..	120	120	5. 0
Dec. 2. 0	29·291	34·1	32·2	1·9	..	..	..			..		Calm	..	..	..	Pos.	25	..	10	10	..
2	29·265	34·8	34·0	0·8	..	..	..			..		Calm	..	..	..	Pos.	40	..	15	15	..
4	29·252	34·2	33·7	0·5	32·0	2·2	..			..		N by W	..	..	..	Pos.	25	..	20	15	10. 0
6	29·259	33·2	32·6	0·6	..	..	..			..		N	..	..	..	Pos.	15	..	10	15	12. 0

DRY THERMOMETER.

November 30d. 10h. The reading was lower than that of the Wet Thermometer.

RADIATION MAXIMUM THERMOMETER.

November 28d. 22h. The instrument was out of order.

ELECTRICITY.

November 29d. 20h. There was a spark at the distance of 0in·02.

November 30d, 12h, 14h, 16h, and 20h. There were sparks at the distances of 0in·01, 0in·01, 0in·03, and 0in·03 respectively.

December 1d. 4h, 6h, 8h, 10h, 12h, 14h. 16h, 18h, and 20h. There were sparks at the distances of 0in·01, 0in·02, 0in·01, 0in·01, 0in·01, 0in·01, 0in·02, 0in·01, and 0in·02 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
0	..	Cloudless: a slight haze.	L
..	..		
..	..		
..	..		
..	..		
7	..	Cirri and light clouds: hoar frost.	H B
3	..	Light clouds and cirri S. of the zenith; cirro-stratus around the horizon. A part of a solar halo has been dimly	
..	..	visible since the last observation.	
0	..	Cloudless.	
..	..		
..	..		
..	Transit		
0	..	,, the sky has been cloudless since the last observation, although a fog has been prevalent throughout the evening.	
0	..	Cloudless.	
0	..	,,	
0		,,	
0	..	,, a dense fog.	H B
0	..	,, the fog has nearly disappeared.	T D
10	..	Overcast, with cirro-stratus.	G H
10	..	,,	G H
10	..	,,	H B
10	..	,,	
10	..	,, no change.	
10	Transit	Cirro-stratus and dense scud: the clouds became extensively broken at $8^h.40^m$, since which time scud has been almost constantly passing over: at the present time every part of the sky is covered, but the Moon is visible.	H B
10	..	Overcast: cirro-stratus: the Moon's place is not visible: a fog prevails.	G H
10	..	,, ,, foggy.	
10	..	,, ,, ,,	
10	..	,, ,, ,,	
10	..	,, ,, a dense fog.	G H
10	..	,, ,, ,,	L
10	..	Overcast: cirro-stratus: a dense fog.	
10	..	,, ,, ,,	L
0	..	The atmosphere is very hazy and foggy.	G H
0		,,	
$9\frac{1}{2}$	..	Overcast, with cirro-stratus, through which the Moon is visible: there are a few small breaks in various parts of the	
..	..	sky.	
$\frac{1}{2}$	..	A few fleecy clouds are towards the S. E., and while they were passing over the Moon a corona was observed.	G H
10	Transit	Overcast: cirro-stratus and fleecy clouds: there has been a slight fog, which is now clearing off.	L
8	..	Cirro-stratus and fleecy clouds: there are small breaks in the clouds in different parts of the sky.	
10	..	Overcast: cirro-stratus.	
10	..	,, ,,	
10	..	,, ,,	L
10	..	,, ,,	G H
10	..	Overcast: cirro-stratus.	
10	..	,, ,,	G H
10	..	,, ,,	C T
10	..	,, ,, a slight mist.	C T

RAIN.

November $30^d.12^h$. The amount collected during the month of November in the rain-gauge No. 4, was $1^{in}.52$, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period, was $1^{in}.53$.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 2. 8	29·269	33·7	33·3	0·4	..	..	34·9	47·5	38·5	..			N	..	..	..	..	0	0	0	..	..
10	29·295	34·3	33·7	0·6	33·5	0·8	31·8			13·03			NNW	..	..	..	..	0	0	0	..	..
12	29·316	33·7	33·1	0·6	..	..							NW	..	..	..	..	0	0	0	..	..
14	29·331	34·5	33·9	0·6	..	..				0·00			NNW	..	..	..	..	0	0	0	..	..
16	29·354	34·3	33·7	0·6	33·0	1·3							NNW	..	..	..	..	0	0	0	..	..
18	29·379	34·4	33·7	0·7	..	..				24·735			NNW	..	..	..	..	Pos.	2	2	0	..	..
20	29·425	34·9	34·2	0·7	..	..							W	..	..	..	..	Pos.	2	2	0	..	..
22	29·467	34·5	33·1	1·4	29·0	5·5				..			NNW	..	NNW	1·15		Pos.	40	..	20	20	..
Dec. 3. 0	29·489	36·0	33·0	3·0	..	..	..	..	..	..			NNE	..	..	..		Pos.	20	..	10	10	..
2	29·515	36·4	32·9	3·5	..	..	..	..	..	..			NNE	..	..	..		Pos.	15	..	10	10	..
4	29·537	35·5	32·0	3·5	27·0	8·5	..	..	..	..			N by E	..	..	..		Pos.	2	2	0	..	..
6	29·569	32·0	29·2	2·8	..	..	~~32·0~~	25·3	..	..			N by W	..	..	..		Pos.	2	2	0	..	..
8	29·595	31·5	29·7	1·8	..	..				13·03			NNW	..	..	..		Pos.	2	2	0	..	..
10	29·616	28·0	27·2	0·8	23·0	5·0							NNW	..	..	..		Pos.	2	2	0	..	..
12	29·648	27·5	26·8	0·7	24·0	3·5		52·6		0·00			W by S	..	..	..		Pos.	40	..	100	150	..
14	29·659	27·2	27·0	0·2	..	..		15·5					WSW	..	..	..		Pos.	40	..	70	100	..
16	29·666	27·6	26·9	0·7	23·0	4·6				24·735			WSW	..	..	..		Pos.	20	..	12	15	8. 0
								41·8														
18	29·663	29·5	28·7	0·8	..	..		37·8		..			WSW	..	..	..		Pos.	40	..	40	40	15. 0
20	29·672	29·3	28·2	1·1	..	..	..			..			WSW	..	..	..		Pos.	40	..	70	100	4. 0
22	29·707	31·6	29·9	1·7	26·0	5·6	..			..			WNW	..	NNW	1·69		Pos.	15	..	10	10	..
Dec. 4. 0	29·718	36·0	32·5	3·5	..	..	..			..			NNW	..	..	..		Pos.	15	..	10	10	..
2	29·703	38·3	35·2	3·1	..	..	..			..			NNW	..	..	..		Pos.	2	2	0	..	..
4	29·720	36·4	34·4	2·0	30·5	5·9	..			..			NNW	..	..	..		Pos.	20	..	10	10	4. 30
6	29·750	34·7	33·6	1·1	..	..				..			NNW	..	..	..		Pos.	10	..	5	5	7. 0
8	29·768	34·1	33·2	0·9	..	..	38·4			..			NNW	..	..	..		Pos.	40	..	20	20	17. 0
							30·1			13·03												
10	29·784	33·5	32·7	0·0	31·0	2·5							NNW	0 to ½	..	..		Pos.	35	..	15	20	12. 0
							56·0			0·00												
12	29·800	33·0	32·4	0·6	..	..	24·0						NNW	0 to ¼	..	..		Pos.	10	20	10	..	..
14	29·817	32·5	31·8	0·7	..	..				24·735			NNW	0 to ¼	..	..		Pos.	2	2	0	..	..
							40·8															
16	29·837	31·8	31·8	0·0	31·8	0·0	37·0			..			N	..	..	..		Pos.	2	2	0	..	..
18	29·871	31·7	31·7	0·0	..	..	..			..			NNW	..	..	..		Pos.	10	10	8	..	3. 0
20	29·897	31·3	30·7	0·6	..	..	..			..			NNW	..	..	..		Pos.	15	15	8	..	..
22	29·909	32·0	31·4	0·6	29·3	2·7	..			..			NNW	..	NNW	3·36		Pos.	25	..	20	25	4. 0
Dec. 5. 0	29·897	34·0	32·2	1·8	..	..	..			..			SW	..	SSW	3·15		Pos.	40	..	30	30	5. 0
2	29·864	36·5	34·7	1·8	..	..	..			..			S	..	..	..		Pos.	35	..	30	30	6. 0
4	29·845	36·2	34·9	1·3	32·5	3·7	40·2			..			S	..	..	..		Pos.	40	..	80	80	3. 0
6	29·805	34·9	31·6	3·3	..	..	31·0			13·08			S by E	..	..	..		Pos.	40	..	80	80	..
8	29·763	35·5	33·6	1·9	..	..							S by E	..	..	..		Pos.	10	10	5	..	2. 0
10	29·708	37·0	35·2	1·8	33·0	4·0		50·5		0·00			S	..	..	..		Pos.	15	10	10	..	5. 0
12	29·651	38·4	37·2	1·2	..	..		26·0					S	0 to ½	..	..		Neg.	40	..	100	100	0. 10
14	..	..	..	..	..	..				24·815			SW	..	..	..		..	..	..	..	..	..
16	..	..	..	..	..	..		40·0					SW	..	..	..		..	..	..	..	..	..
18	..	..	..	..	..	..		36·2		..			WSW	..	..	..		..	..	..	..	..	..
20	..	..	..	..	..	..	..			..			NW	..	..	..		..	..	..	..	..	..
22	29·649	36·3	34·5	1·8	..	..	..			..			NW	..	NNW	1·05		Pos.	40	..	50	70	7. 0

ELECTRICITY.

December 3d. 12h, 14h, and 20h. There were sparks at the distances of 0in·02, 0in·01, and 0in·02 respectively.

December 5d. 4h, 6h, and 12h. There were sparks at the distances of 0in·01, 0in·01, and 0in·03, respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus: a slight mist.	C
10	..	,, ,, ,,	C
10	Transit Full	,, cirro-stratus and scud: the Moon is occasionally faintly visible through the clouds.	T D
10	..	Overcast: dense cirro-stratus.	
10	..	,, ,,	
10	..	The sky is covered with cirro-stratus and masses of scud: the Moon's place is visible through the clouds.	
10	..	Overcast: cirro-stratus and scud: a thin mist prevails: the clouds have not been broken throughout the night.	T D
10	..	,, cirro-stratus.	G H
10	..	Overcast: cirro-stratus and scud: there are breaks in the clouds in every direction.	
10	..	,, ,,	G H
7	..	Cirro-stratus, scud, and fleecy clouds: small portions of blue sky are visible.	T D
5	..	Cirro-stratus and haze in the horizon: the zenith, and the part for some distance around it, is clear.	
0	..	Cloudless, but very hazy.	
0	Greatest declination N.	,,	T D
0	..	Cloudless: hazy, especially to the N. of the zenith.	H B
0	Transit	,,	
10	..	Overcast: cirro-stratus, fleecy clouds, and scud: the clouds have considerably increased in amount and density since $15^h.\ 50^m$.	
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	
0	..	Cloudless: the clouds have gradually cleared away within the last half hour, with the exception of cirro-stratus near the horizon.	H B
0	..	Cloudless: the atmosphere hazy and foggy.	G H
10	..	Overcast: cirro-stratus and scud: the clouds are thin about the zenith and in the N.W. part of the horizon.	G H
2	..	A few light cirri in various parts of the sky; and in the horizon, at a low elevation, are cirro-stratus and haze.	T D
0	..	Cloudless: hazy round the horizon.	H B
0	..	Cloudless, except a few lines of cirro-stratus round the W. horizon: foggy.	
2	..	Light clouds are to the W. of the zenith and in various other directions: the sky has been alternately clear and cloudy since the last observation.	
1	..	Light fleecy clouds near the horizon in the S.W.: within the last twenty minutes cirro-stratus and masses of scud have frequently passed over the sky with great rapidity.	H B
0	..	Cloudless.	G H
2	Transit	A few fleecy clouds are near, and to the N.W. of the zenith. Since the preceding observation several coronæ have been visible, as light fleecy clouds have passed before the Moon.	
10	..	Overcast: cirro-stratus and scud, the Moon's place being visible: the scud is moving rapidly towards the S.W.	
4	..	Light fleecy clouds towards the S.W. and W. parts of the horizon.	
10	..	Overcast: cirro-stratus and scud.	G H
9	..	Cirro-stratus, fleecy clouds, and scud broken considerably in the zenith and to the S. E.: the Sun is faintly shining through the clouds.	T D
0	..	Thick haze around the horizon, but no absolute cloud prevails.	
0	..	Cloudless: hazy in the horizon.	T D
8	..	The sky is clear in the S. and W. parts of the horizon, the remainder being covered with cirro-stratus.	G H
2	..	A few cirro-strati towards the S. and W. parts of the horizon.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,, a light rain has just commenced falling.	G H
10	..	,, ,, since the last observation rain has been falling slightly at intervals, and the Moon	T D
..	..	has been frequently visible through the clouds, but at $11^h.\ 50^m$ the rain increased considerably, and is now	
..	Transit	falling heavily: the wind is blowing in gusts to $\frac{3}{4}$.	
..	..		
..	..		
0	..	Cloudless: slight vapour.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 6. 0	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
4	29·648	39·5	34·7	4·8	..	..	39·7	..	NW	..	..	..	..	0	0	0	..	..
6	..	..	..	..	..	..	34·5	..	NW	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		13·08	NW	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	53·1		NNW	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	28·0	0·00	NNW	0 to ½	..	..	..	..	..	..	..	..
14	29·728	36·5	34·7	1·8	..	..			N by W	..	..	..	..	0	0	0	..	..
16	29·748	36·5	35·2	1·3	33·6	2·9	39·8	24·815	NNW	0 to ½	..	..	..	0	0	0	..	..
18	29·763	36·4	34·9	1·5	..	..	36·5	..	NNW	..	..	..	..	0	0	0	..	..
20	29·780	35·5	33·9	1·6	..	..	..	..	NNW	..	..	..	Pos.	30	..	25	30	5. 0
22	29·809	36·5	35·9	0·6	34·3	2·2	..	..	NNW	..	NNW	4·66	Pos.	5	8	8	..	..
Dec. 7. 0	29·810	38·2	36·7	1·5	..	..	..	..	NNW	0 to ½	N	1·66	Pos.	2	2	0	..	..
2	29·797	40·4	39·0	1·4	..	..	..	..	N by W	½ to 1	..	..	..	0	0	0	..	..
4	29·834	41·0	39·7	1·3	38·4	2·6	41·3	..	N by W	½ to 3	..	..	..	0	0	0	..	..
6	29·899	39·3	37·2	2·1	..	..	35·5	..	N by E	..	NNE	1·59	..	0	0	0	..	..
8	29·930	39·1	37·2	1·9	..	..		13·08	N by E	..	..	..	..	0	0	0	..	..
10	29·998	38·5	37·2	1·3	35·0	3·5	55·2		N	..	N	1·28	Pos.	2	2	0	..	..
12	30·035	38·5	36·5	2·0	..	..	31·2	0·00	N by E	..	..	..	..	0	0	0	..	..
14	30·042	38·0	36·2	1·8	..	..			N by W	..	..	..	..	0	0	0	..	..
16	30·063	37·5	36·7	0·8	35·0	2·5	39·2	24·815	N	..	..	..	..	0	0	0	..	..
18	30·078	37·3	36·5	0·8	..	..	36·0	..	N	..	..	..	..	0	0	0	..	..
20	30·112	37·2	35·5	1·7	..	..	..	..	N	..	..	..	..	0	0	0	..	..
22	30·140	37·6	35·9	1·7	32·5	5·1	..	..	N	..	NNW	0·50	Pos.	40	..	30	25	10. 0
Dec. 8. 0	30·122	39·3	37·7	1·6	..	..	..	..	N	..	..	..	Pos.	8	..	5	5	5. 0
2	30·102	42·3	39.9	2·4	..	..	..	..	N by E	..	..	..	Pos.	30	..	25	20	..
4	30·085	40·3	39·6	0·7	38·0	2·3	..	..	N by E	..	..	..	Pos.	25	..	20	10	15. 0
6	30·087	40·5	39·7	0·8	..	..	42·3	..	N	..	..	..	Pos.	2	2	0	..	..
8	30·087	40·8	39·8	1·0	..	..	34·9	13·08	N by E	..	..	..	Pos.	2	2	0	..	..
10	30·084	38·8	37·8	1·0	37·0	1·8	54·0		NNE	..	..	..	Pos.	30	..	25	20	30. 0
12	30·083	39·7	38·6	1·1	..	..	32·0	0·00	NE	..	..	..	Pos.	40	..	50	50	3. 30
14	30·074	40·5	39·2	1·3	..	..	39·2	24·815	N	..	..	..	Pos.	30	..	20	20	7. 0
16	30·052	39·8	38·7	1·1	36·5	3·3	36·2	..	NNE	..	..	..	Pos.	35	..	20	20	8. 0
18	30·050	39·2	38·6	0·6	..	..	..	..	N by E	..	..	..	Pos.	20	..	15	12	12. 0
20	30·054	39·5	38·8	0·7	..	..	..	..	NNE	..	..	..	Pos.	25	..	15	15	6. 0
22	30·057	40·2	39·7	0·5	38·5	1·7	..	..	N by W	..	N	2·47	Pos.	15	..	10	12	5. 0
Dec. 9. 0	30·049	41·8	41·2	0·6	..	..	..	..	NNW	..	..	..	Pos.	35	..	60	50	..
2	30·014	42·8	42·6	0·2	..	..	..	..	NNW	..	..	..	Pos.	35	..	50	70	2. 0
4	30·006	42·0	41·7	0·3	41·0	1·0	..	..	NNW	..	..	..	Pos.	30	..	20	30	3. 0
6	30·000	41·2	40·9	0·3	..	..	..	..	N by W	..	..	..	Pos.	20	..	12	10	6. 0
8	29·991	41·4	41·2	0·2	..	..	..	..	N by W	..	..	..	Pos.	8	..	3	5	1. 0

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
..	..		
8	..	Cirro-stratus, scud, and fleecy clouds; small portions of blue sky in different directions: the clouds began to gather about $1^h.\ 50^m$.	T D
..	..		
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus and scud.	
9	Transit	The sky is covered with cirro-stratus and masses of scud, excepting a clear break in the S., through which the Moon and a few stars are visible.	
10	..	Overcast: cirro-stratus and scud.	
10	..	Cirro-stratus and scud: the Moon is visible through the clouds.	T D
10	..	Overcast: cirro-stratus and scud.	G H
10	..	Overcast: cirro-stratus and scud.	
8	..	Cirro-stratus and scud.	G H
10	..	,, rain has fallen at intervals since 2^h.	T D
10	..	Overcast: cirro-stratus and scud.	L
10	..	,, ,, a few stars are faintly visible at intervals.	C
$9\frac{1}{2}$	..	Cirro-stratus and scud: there are several breaks in the clouds in various parts of the sky: a few stars are faintly visible: the clouds in the E. horizon are very thin.	C T
10	..	Overcast: cirro-stratus and scud.	L
10	..	,, ,,	
10	Transit	,, ,, the wind is blowing in gusts to $\frac{1}{2}$.	
10	..	,, ,, ,,	
10	..	,, ,, ,,	
10	..	Cirro-stratus and scud: there are breaks in the clouds in every direction: the clouds along the S. horizon are slightly tinged with red.	L
$9\frac{3}{4}$	..	Cirro-stratus and scud: the clouds are slightly broken in almost every direction: a slight fog.	H B
$9\frac{1}{2}$	..	,, there are breaks in the clouds in every part of the sky: foggy; occasional light airs from the N. E.	H B
4	..	Stratus clouds extend from the N. N. E. to the S.W. horizon at an altitude of about 20°: a few cirri near the Sun's place, and a few cirro-cumuli in the N.	C
$9\frac{1}{2}$	..	Cirro-stratus covers nearly the whole of the sky; it has gradually increased in density since the last observation.	C T
8	..	Overcast: cirro-stratus: at $7^h.\ 30^m$ a clear break appeared at a low elevation in the E. horizon, which has gradually extended, and the stars are now shining brightly in that direction.	C T
5	..	Since the last observation the sky has been alternately clear and cloudy; at present it is one-half covered with cirro-stratus and vapour, through which some of the larger stars are visible.	C
10	..	Cirro-stratus and scud: Jupiter and a few of the brighter stars are occasionally visible as the scud passes over: the direction of the wind by the vane is N., but the clouds are moving steadily from the E.	H B
10	..	Overcast: cirro-stratus and scud.	
10	..	,, at $15^h.\ 40^m$ there were several breaks in the clouds in various parts of the sky, since which time the Moon has been occasionally visible.	
10	Transit	Overcast: cirro-stratus and scud.	
10	..	,, ,,	H B
10	..	,, ,,	T D
10	..	Overcast: cirro-stratus and scud.	C T
10	..	,, ,, a thin misty rain is falling.	C T
10	..	,, cirro-stratus: a thin misty rain is falling: foggy.	H B
10	..	,, cirro-stratus and scud: a thin misty rain is falling: foggy.	
10	..	,, ,, ,, ,, ,,	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 9. 10	29·979	41·2	41·2	0·0	41·0	0·2	42·5	..	NNW	..	..	..	Pos.	30	..	20	20	..
12	29·974	40·5	39·7	0·8	..	..	37·8	13·08	N	..	..	..	..	0	0	0	..	..
14	29·941	39·0	38·2	0·8	..	..	54·5	0·02	..	..	..	..	Pos.	30	..	20	25	6. 0
16	29·902	38·7	38·1	0·6	37·0	1·7	32·0	24·855	..	..	..	..	Pos.	30	..	20	25	3. 0
18	29·868	38·5	38·1	0·4	..	..	..	..	..	..	..	..	Pos.	20	..	12	12	8. 0
20	29·824	39·0	37·8	1·2	..	..	39·0	..	..	..	..	..	Pos.	27	..	20	20	6. 0
22	29·781	39·5	38·7	0·8	37·0	2·5	37·0	..	..	..	W	2·43	Pos.	10	20	10	..	..
Dec. 10. 0	29·702	41·8	40·6	1·2	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
2	29·627	43·5	41·8	1·7	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
4	29·561	42·5	41·7	0·8	40·8	1·7	..	..	WSW	½ to 1½	..	..	Pos.	30	..	20	20	2. 30
6	29·488	42·0	41·2	0·8	..	..	..	..	WSW	0 to 3	..	..	Pos.	40	..	30	30	1. 30
8	29·515	37·0	36·2	0·8	..	..	43·8	..	NNW	½ to 1½	..	..	Pos.	20	..	12	12	6. 0
10	29·539	34·0	33·0	1·0	32·0	2·0	25·3	13·13	NW	0 to ½	NW	3·47	Pos.	30	..	20	20	1. 0
12	29·548	32·2	29·8	2·4	32·5	−0·3	54·0	0·00	NW	½ to 1	..	..	Pos.	20	..	10	15	4. 0
14	29·544	31·4	29·7	1·7	..	..	17·7	..	NW	0 to ½	..	..	Pos.	2	2	0	..	..
16	29·543	29·6	28·2	1·4	22·5	7·1	39·0	24·955	WNW	½ to 1	..	..	Pos.	2	2	0	..	..
18	29·528	26·4	25·4	1·0	..	..	37·0	..	W	..	..	..	Pos.	2	2	0	..	..
20	29·516	26·8	26·2	0·6	..	..	..	..	W by S	0 to 1	..	..	..	0	0	0	..	..
22	29·522	27·7	27·2	0·5	19·0	8·7	..	..	WSW	..	W	2·75	Pos.	8	..	6	8	3. 0
Dec. 11. 0	29·484	28·7	28·2	0·5	..	..	..	..	W by N	1 to 1½	..	..	..	0	0	0	..	..
2	29·473	30·5	29·7	0·8	..	..	..	..	NNW	1 to 2	NW	0·40	Pos.	30	..	20	20	4. 0
4	29·483	30·7	30·4	0·3	21·0	9·7	..	..	NNW	1 constant	..	..	Pos.	2	2	0	..	..
6	29·499	29·5	27·2	2·3	..	..	31·3	..	NW	½ constant	..	..	Pos.	2	2	0	..	..
8	29·504	28·5	26·7	1·8	..	..	24·3	13·13	NW	½ constant	WNW	1·12	Pos.	2	2	0	..	..
10	29·516	27·3	25·8	1·5	18·5	8·8	..	..	W	..	..	..	Pos.	2	2	0	..	..
12	29·517	26·1	25·7	0·4	..	..	41·5	0·00	W by S	..	..	..	Pos.	40	..	100	150	..
14	29·494	25·5	25·0	0·5	..	..	18·3	24·955	WSW	..	..	..	Pos.	40	..	70	100	18. 0
16	29·489	26·8	25·8	1·0	21·5	5·3	38·5	..	WSW	..	..	..	Pos.	35	..	100	150	23. 0
18	29·474	29·7	29·2	0·5	..	..	36·5	..	NNW	..	NW	1·63	Pos.	20	..	25	30	10. 0
20	29·491	30·1	29·7	0·4	..	..	..	..	NNW	..	..	..	Pos.	8	..	5	5	3. 0
22	29·516	31·3	30·5	0·8	28·0	3·3	..	..	NNW	..	NNW	0·90	Pos.	20	..	15	20	5. 0
Dec. 12. 0	29·522	33·7	32·0	1·7	..	..	..	..	N by E	..	..	..	Pos.	30	..	25	30	5. 0
2	29·523	34·4	32·2	2·2	..	..	..	..	NNE	..	..	..	Pos.	30	..	20	25	3. 0
4	29·565	32·2	32·0	0·2	31·0	1·2	34·1	..	NNE	..	..	..	Neg.	..	..	10	10	0. 16
6	29·593	31·4	31·2	0·2	..	..	26·6	13·13	N	..	..	..	Pos.	8	..	5	5	5. 0
8	29·606	28·0	27·5	0·5	..	..	45·5	0·00	N by W	..	..	..	Pos.	40	..	70	100	..
10	29·625	28·6	28·0	0·6	26·0	2·6	16·0	24·970	NNW	..	..	..	Pos.	10	..	30	30	7. 0
							37·8	..										
							36·0											

DEW POINT THERMOMETER.

December 10d. 12h. The reading was higher than that of the Dry Thermometer.

ELECTRICITY.

December 11d. 12h, 14h, and 16h. There were sparks at the distance of 0in·04, 0in·01, and 0in·02.

December 12d. 8h. There was a spark at the distance of 0in·02.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Cirro-stratus and scud: since the last observation several stars have been visible: foggy.	H B
9	Apogee	The sky is covered with cirro-stratus, with the exception of a clear break in the N. E., through which some stars are visible: a few drops of rain are falling occasionally.	T D
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	Transit	,, ,,	
10	..	,, ,,	T D
10	..	,, ,, a light rain has fallen since the last observation.	G H
10	..	Overcast: cirro-stratus and scud.	L
10	..	,, ,,	G H
10	..	,, ,, rain continued falling since the last observation till $3^h.\ 45^m$.	T D
10	..	,, ,, rain commenced falling at 5^h, and still continues.	
10	..	,, ,, a thin rain is falling: violent gusts of wind, accompanied with rain and sleet, have frequently occurred since the last observation.	
10	3rd Qu.	Overcast: cirro-stratus and scud: rain mingled with large flakes of snow continued falling till $9^h.\ 30^m$, when it ceased: at $9^h.\ 40^m$ a few stars were visible in the zenith and in the E., but they have now disappeared.	T D
0	..	Cloudless.	L
10	..	Overcast: cirro-stratus and scud: there are a few breaks in the clouds about the zenith.	G H
5	..	Cirro-stratus: there are breaks in the clouds in every direction: the sky towards the W. and N.W. parts of the horizon is clear: the wind is blowing in gusts to $\frac{3}{4}$.	
5	Transit	Cirro-stratus and scud in various directions: shortly after the last observation the sky became clear, and remained so till within the last half-hour, when it again became partially covered with cirro-stratus. Several coronæ were visible in consequence of the clouds passing over the Moon.	
10	In Equator	Overcast: cirro-stratus and scud: about an hour since snow was falling, but it has now ceased.	G H
5	..	Cirro-stratus round the horizon, and light clouds in various parts of the sky: hazy: the wind is blowing in gusts to 2.	L
10	..	Overcast: cirro-stratus and scud: snow is falling slightly.	L
10	..	,, snow is falling thickly.	T D
10	..	,, cirro-stratus and scud.	G H
0	..	Cloudless, but hazy.	G H
0	..	,,	C
0	..	,,	C T
2	..	Cirro-stratus round the horizon in every direction.	H B
2	..	Soon after the last observation the sky became suddenly obscured, and remained so till $12^h.\ 45^m$, when a few stars became visible, since which time the sky has been generally clear: at present there is a considerable quantity of cirro-stratus and scud round the horizon in every direction.	
10	..	Overcast: cirro-stratus and scud.	
10	..	,, ,,	
10	Transit	,, ,,	H B
10	..	,, ,,	L
4	..	Thin cirro-stratus round the horizon, and light clouds in other directions.	
3	..	,, ,,	L
10	..	Overcast: since the last observation the sky has been alternately clear and cloudy, and snow commenced falling slightly, which has continued at intervals to the present time.	H B
10	..	Overcast: cirro-stratus: a very fine snow is falling: at $7^h.\ 49^m.\ 30^s$ a bright meteor was observed, a few degrees above Polaris, passing from the E. N. E., towards the W.: its duration was about a quarter of a second.	
3	..	Cirro-stratus round the horizon in every direction: the stars appear very dim: at 7^h the clouds began to clear away: several meteors have been visible since $7^h.\ 20^m$.	
9	..	Cirro-stratus and scud: soon after the last observation snow fell slightly, and the sky became overcast, and remained so till about 9^h, when it became clear: at present the sky is gradually becoming covered with cloud.	H B

OSLER'S ANEMOMETER.

December $9^d.\ 22^h$. The direction-pencil was found broken, and had been so since $13^h.\ 30^m$.
December $10^d.\ 9^h$. A gust of $4\frac{1}{2}$ lbs. pressure on the square foot was recorded.
December $11^d.\ 1^h.\ 20^m$. A gust of 4 lbs. pressure on the square foot was recorded.
December $12^d.\ 3^h.\ 20^m$. A sudden gust of $2\frac{1}{2}$ lbs. pressure on the square foot was recorded.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 12. 12	29·621	28·7	28·0	0·7	..	..	..	..	NNW	..	..	..	Pos.	10	..	10	10	5. 0
14	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	WNW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..
22	..	27·5	26·7	0·8	..	..	..	..	WNW	..	NNW	3·03	..	0	0	0	..	..
Dec. 13. 0	..	..	..	..	..	..	..	..	NNW	..	NNW	0·82	..	..	..	..	..	..
2	..	28·7	28·0	0·7	..	..	..	..	NW	..	..	..	..	0	0	0	..	..
4	..	..	..	..	..	..	29·5	..	NW	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	19·6	13·13	W by S	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	—		W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	45·0	0·00	W by S	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	17·5		SW	..	..	..	..	..	..	..	..	..
14	29·565	21·2	21·0	0·2	..	..	—	24·995	SW	..	..	..	Pos.	40	..	80	100	5. 0
16	29·543	20·5	20·4	0·1	18·0	2·5	37·0		SW	..	..	..	Pos.	20	..	10	20	3. 0
18	29·524	20·0	19·9	0·1	..	..	34·5	..	SSW	..	..	..	Pos.	2	2	0	..	..
20	29·510	19·8	19·7	0·1	..	..	..	..	SSW	..	..	..	Pos.	40	..	200	200	2. 0
22	29·499	21·5	21·2	0·3	16·0	5·5	..	..	SSW	..	WSW	3·00	Pos.	40	..	150	150	..
Dec. 14. 0	29·470	27·9	26·5	1·4	..	..	..	..	SW	..	..	..	Pos.	40	..	50	60	..
2	29·439	30·9	29·6	1·3	..	..	30·8	..	WSW	..	..	..	Pos.	40	..	60	80	..
4	29·409	29·0	27·7	1·3	21·5	7·5	18·8	13·13	WSW	..	..	..	Pos.	40	..	90	100	..
6	29·396	26·0	25·2	0·8	21·0	5·0	—		WSW	..	..	..	Pos.	40	..	120	130	9. 0
8	29·385	27·7	26·7	1·0	22·0	5·7	49·0	0·00	WSW	..	..	..	Pos.	40	..	100	120	1. 0
10	29·375	26·0	25·2	0·8	20·5	5·5	11·0		WSW	..	..	..	Pos.	40	..	70	60	5. 0
12	29·360	23·3	22·8	0·5	..	..	—	25·005	WSW	..	..	..	Pos.	40	..	10	10	..
14	29·341	21·0	20·7	0·3	..	..	36·0		WSW	..	..	..	Pos.	40	..	60	60	5. 0
16	29·321	22·0	22·0	0·0	19·0	3·0	33·0	..	WSW	..	..	..	Pos.	40	..	10	20	..
18	29·316	20·9	20·4	0·5	17·0	3·9	..	..	WSW	..	..	..	Pos.	40	..	100	110	7. 0
20	29·310	20·6	20·2	0·4	16·0	4·6	..	..	WSW	..	..	..	Pos.	40	..	20	40	3. 0
22	29·330	22·3	21·9	0·4	18·0	4·3	..	..	WSW	..	WSW	2·68	Pos.	40	..	150	150	2. 0
Dec. 15. 0	29·329	28·3	27·4	0·9	21·0	7·3	..	..	NNW	..	..	..	Pos.	40	..	50	50	..
2	29·348	28·2	27·4	0·8	22·0	6·2	..	..	NNW	..	NNW	0·72	Pos.	2	2	0	..	..
4	29·386	28·0	27·6	0·4	24·0	4·0	..	..	NNW	..	..	..	Pos.	40	..	20	30	5. 0
6	29·432	26·0	25·6	0·4	24·0	2·0	30·2	..	NNW	..	..	..	Pos.	40	..	20	40	5. 0
8	29·482	26·5	25·9	0·6	24·0	2·5	20·6	13·13	NNW	..	..	..	Pos.	40	..	20	30	20. 0
10	29·483	24·5	24·3	0·2	23·0	1·5	—		WSW	..	W	0·62	Pos.	40	..	30	30	1. 0
12	29·492	22·6	22·5	0·1	21·0	1·6	39·0	0·00	SW	..	..	..	Pos.	30	..	70	100	30. 0
14	29·481	25·4	24·6	0·8	20·5	4·9	15·5		SW	..	..	..	Pos.	20	..	40	50	..
16	29·486	27·0	26·0	1·0	21·0	6·0	—	25·005	WSW	..	..	..	Pos.	5	..	20	20	25. 0
18	29·510	29·0	27·7	1·3	21·5	7·5	35·0	..	WNW	1 to 3½	..	..	Pos.	2	..	5	5	..
20	29·532	29·2	28·0	1·2	22·0	7·2	32·5	..	WNW	1 to 1½	..	..	Pos.	2	2	0	..	..
22	29·579	29·8	28·2	1·6	20·0	9·8	..	..	W by N	½ to 2½	NNW	2·48	Pos.	2	2	0	..	..
Dec. 16. 0	29·604	32·8	31·0	1·8	..	..	..	..	NNW	0 to 3	NNW	1·75	Pos.	2	2	0	..	..
2	29·592	34·4	32·1	2·3	24·0	..	..	..	NNW	½ to 2½	..	..	..	0	0	0	0	..

ELECTRICITY.

December 13d. 14h, 20h, and 22h. There were sparks at the distance of 0in·02, 0in·02, and 0in·03, respectively.
December 14d. 4h. 6h, 8h, 18h, and 22h. There were sparks at the distance of 0in·03, 0in·03, 0in·03, 0in02, and 0in·01, respectively.
December 15d. 12h and 14h. There were sparks at the distance of 0in·01 and 0in·02, respectively.

OSLER'S ANEMOMETER.

December 15d. 16h. 20m. A gust of 2½ lbs. pressure on the square foot was recorded.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud.	L
..	..		
..	..		
..	..		
..	Transit		
10	..	,, ,,	G H
..	..		
10	..	Overcast.	
..	..		
..	..		
..	..		
..	..		
..	..		
0	..	Cloudless.	L
0	..	,,	
0	..	,,	
0	..	,,	L
0	Transit	,,	G H
3	..	A few fleecy clouds and cirri towards the S. and S.W.; the sky remained cloudless till about ten minutes previous to this observation, when clouds gradually came up from the S.W.; at present the Sun is obscured.	
0	..	A few light cirri towards the W., but to no numerical amount.	G H
0	..	Cloudless, but hazy around the horizon.	C T
0	..	,,	C
10	..	Overcast: cirro-stratus.	C
7	..	Cirro-stratus and haze: some of the larger stars situated S. and S. E. of the zenith are visible.	C T
0	..	Cloudless.	G H
0	..	,,	
10	..	Overcast.	
0	..	Cloudless.	
0	..	,,	G H
2	Transit	Cirro-stratus round the horizon: a slight fog.	L
10	..	Overcast: cirro-stratus, fleecy clouds, and scud.	
10	..	,, ,,	L
6	..	Cirro-stratus and scud towards the S. and S.W., and a few cirri in other directions.	G H
0	..	Cloudless.	G H
0	..	Cloudless, but the atmosphere thick, and the stars very dim.	G
0	..	The same as at the last observation.	G
0	..	Cloudless, but hazy.	H B
3	..	Cirro-stratus and vapour: a few of the larger stars only are visible.	
2	..	,,	
0	..	Cloudless: hazy: the wind is blowing in gusts to $1\frac{1}{2}$.	
0	..	,, the wind is blowing in gusts to 1, and occasionally to $1\frac{1}{2}$. Shortly after the last observation several lines of cirri were seen in the S. E., and fleecy clouds have frequently passed over since that time.	H B
2	Transit	The sky is clear, except cirro-stratus towards the horizon in the N. and S.: the wind is blowing in gusts to $\frac{3}{4}$: a slight vapour prevails.	L
1	..	Cirro-stratus and vapour towards the S. horizon: the wind is blowing in gusts to 1.	
7	..	Cirro-stratus and thin cirri, shewing blue sky above, cover the greater part of the sky: some very fine specimens of cymoid cirri are visible about the zenith: the wind is blowing in gusts to $1\frac{1}{2}$.	L

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). / Reading of No. 2. / Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of: Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 16. 4	29·620	34·0	31·8	2·2	24·5	9·5	34·6	..	WNW	..	WNW	0·55	Pos.	2	..	5	5	5. 0
6	29·644	30·9	30·5	0·4	..	..	26·5	13·13	W by S	..	..	..	Pos.	10	..	30	30	7. 0
8	29·659	28·5	27·9	0·6	25·0	3·5	——		WSW	..	..	..	Pos.	25	..	50	50	3. 0
10	29·645	28·2	27·7	0·5	25·5	2·7	43·5	0·05	SW	..	..	..	Pos.	30	..	100	150	3. 0
12	29·617	28·2	27·8	0·4	25·0	3·2	18·5		SW	..	WSW	2·05	Pos.	40	..	80	100	4. 0
14	29·574	29·6	29·0	0·6	26·0	3·6	——	25·005	SW	..	..	..	Pos.	40	..	100	120	8. 0
16	29·529	29·8	29·4	0·4	28·0	1·8	..		SSW	..	..	..	Pos.	40	..	40	50	10. 0
18	29·489	31·0	30·6	0·4	29.0	2·0	32·2	..	WSW	..	..	..	Pos.	2	2	0	..	..
20	29·472	32·2	31·9	0·3	..	..	..	..	WSW	..	..	..	Pos.	40	..	150	200	3. 0
22	29·496	34·3	32·9	1·4	31·0	3·3	..	..	WSW	..	NNW	0·80	Pos.	5	..	15	12	..
Dec. 17. 0	29·521	33·1	32·0	1·1	..	..	..	..	N by W	..	..	..	..	0	0	0	..	..
2	29·519	34·0	31·8	2·0	..	..	..	..	NNW	..	..	..	Pos.	2	2	0	..	..
4	29·538	33·7	30·7	3·2	24·5	9·2	..	..	NNW	..	NNW	1·38	..	0	0	0	..	..
6	29·563	32·1	31·9	0·2	..	..	34·9 / 21·5 ——	13·13	NNW	..	..	..	..	0	0	0	..	..
8	29·616	33·0	31·9	1·1	..	..	44·8	0·00	N by W	0 to ½	..	..	..	0	0	0	..	..
10	29·706	33·0	31·9	1·1	30·0	3·0	14·7		N by W	0 to ½	..	..	..	0	0	0	..	..
12	29·794	29·7	29·2	0·5	..	..	——	25·005	N	..	N	1·12	..	0	0	0	..	..
14	29 838	27·4	26·9	0·5	..	..	..		N by W	..	..	..	..	0	0	0	..	..
16	29·897	26·6	26·2	0·4	24·0	2·6	31·8	..	N by W	..	..	..	..	0	0	0	..	..
18	29·944	25·2	24·9	0·3	..	..	..	..	N by W	..	..	..	..	0	0	0	..	..
20	30·019	24·0	23·8	0·2	21·0	3·0	..	..	NNW	..	..	..	Pos.	40	..	40	50	10. 0
22	30·073	21·7	21·6	0·1	20·0	1·7	..	..	NNW	..	NNW	1·05	Pos.	20	..	30	30	3. 0
Dec. 18. 0	30·091	24·3	24·0	0·3	22·0	2·3	..	..	S by W	..	..	..	Pos.	15	..	15	20	5. 0
2	30·078	27·8	27·0	0·8	23·5	4·3	..	..	SSW	..	..	..	Pos.	2	2	0	..	..
4	30·079	30·0	29·3	0·7	24·5	5·5	..	..	SSW	..	..	..	..	0	0	0	..	..
6	30·066	29·0	28·1	0·9	..	..	..	..	SSW	..	..	..	..	0	0	0	..	..
8	30·038	28·2	28·2	0·0	24·5	3·7	39·5 / 20·8 ——	.. / 13·16	S by W	..	..	..	Pos.	..	0	10	20	10. 0
10	29·999	31·2	30·1	1·1	26·2	5·0	50·0	0·10	S by W	..	..	..	Pos.	2	2	0	..	..
12	29·936	34·5	32·0	2·5	..	..	21·5 ——	25·165	SSW	1 to 2	..	..	..	0	0	0	..	..
14	29·888	36·2	34·0	2·2	..	..	.. 32·0	..	SSW	1½ to 2	..	..	..	0	0	0	..	..
16	29·824	37·5	35·3	2·2	32·5	5·0	..	..	SSW	1½ to 2½	..	..	..	0	0	0	..	..
18	29·783	38·5	37·0	1·5	..	..	..	..	SW	3 to 4½	..	..	..	0	0	0	..	..
20	29·756	38·6	38·0	0·6	..	..	..	..	SW	2½ to 3½	..	..	Pos.	2	2	0	..	..
22	29·752	40·0	39·5	0·5	..	..	..	..	SW	½ to 2½	WSW	6·20	Pos.	2	2	0	..	..
Dec. 19. 0	29·724	40·6	40·6	0·0	..	..	..	..	WSW	..	..	..	Pos.	2	2	0	..	..
2	29·715	42·5	42·4	0·1	..	..	46·7	..	WSW	..	WSW	4·10	Pos.	2	2	0	..	..
4	29·720	43·8	43·8	0·0	43·3	0·5	39·1	13·18	WSW	..	..	..	Pos.	10	..	30	30	16. 0
6	29·741	44·2	44·2	0·0	..	..	——		SW	..	..	..	Pos.	10	..	20	25	15. 0
8	29·747	43·8	43·8	0·0	..	..	55·6	0·05	WSW	..	..	..	Pos.	10	..	15	20	5. 0
10	29·747	43·7	43·5	0·2	42·8	0·9	37·0		SSW	..	..	..	Pos.	15	..	30	30	6. 0
12	29·755	43·6	43·2	0·4	..	..	——	25·205	SW	..	SW	1·05	Pos.	10	..	10	15	5. 0
14	..	..	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	.. 32·0	..	SSW	..	..	..	..	..	..	..	..	..

TEMPERATURE OF THE DEW POINT.
December 18d. 22h. The reading was inadvertently omitted.

ELECTRICITY.
December 16d. 8h, 10h, and 20h. There were sparks at the distance of 0in·02, 0in·01, and 0in·01 respectively.
December 19d. 6h and 10h. There was a spark at the distance of 0in·01 at each time.

OSLER'S ANEMOMETER.
December 17d. 6h. 20m. A gust of 3 lbs. pressure on the square foot was recorded.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
2	..	Cirro-stratus and vapour: a slight fog.	H B
2	..	,, ,,	
1	..	,,	
0	..	Cloudless: hazy.	H B
3	..	Cirro-stratus round the horizon; every other portion of the sky is clear, but the stars appear very dim.	L
3	..	Cirro-stratus round the horizon.	
3	..	,,	
10	..	Overcast: cirro-stratus.	
10	..	,, ,, snow is falling.	L
10	..	,, ,, the snow ceased falling at $20^h.\ 40^m$.	H B
10	Transit	Overcast: cirro-stratus.	
4	..	Cirro-stratus and fleecy clouds in the N. and S.W. portions of the sky.	H B
7	..	Mottled cirri chiefly in and around the zenith; stratus in the S. and S.W. near the horizon, and cirro-stratus in other parts of the sky.	C
7	..	Dense cirro-stratus in the horizon from N. N.W. to S.W., and light clouds of the same modification are spread over the remainder of the sky.	C T
10	..	Overcast: cirro-stratus: shortly after the last observation the sky became entirely obscured by cloud.	C T
2	..	The sky has become nearly cloudless, small portions of cirro-stratus alone being visible.	C
0	..	Cloudless.	G H
0	..	,,	
0	..	,,	
0	..	,,	
0	Greatest declination S.	,,	G H
2	..	Cirro-stratus and vapour.	H B
8	Transit	Cirro-stratus and vapour chiefly round the horizon. [small red corona.	
7	New	Cirro-stratus and vapour cover the whole of the sky S. of the zenith. The Sun is occasionally surrounded by a	H B
0	..	Cloudless: the sky has a vapourish appearance.	G H
5	..	Scud towards the S. part of the sky: a few cymoid cirri about the zenith, and a few lines of cirri towards the W. portion of the horizon.	
10	..	Overcast: cirro-stratus, through which Jupiter is faintly visible: the amount of cloud has been very variable since the last observation.	
10	..	No change has taken place since 8^h.	G H
$9\frac{2}{4}$	..	The sky continued overcast till $11^h.\ 40^m$, when a few breaks occurred, through which Jupiter and α Orionis were visible for a short time: several stars are now faintly seen in the same direction: the wind is blowing in gusts to $\frac{3}{4}$.	H B
10	..	Overcast: cirro-stratus and scud: a few drops of rain are falling at intervals: the wind is blowing in gusts to 1.	
10	..	,, ,,	
10	..	,, ,, rain is falling heavily: the wind is blowing in gusts to $1\frac{1}{2}$.	
10	..	,, ,, ,, ,,	H B
10	..	,, ,, ,, the wind is blowing in gusts to $\frac{3}{4}$.	L
10	..	Overcast: cirro-stratus and scud: a light rain is falling.	G H
10	Transit	,, ,,	G H
10	..	,, ,, very gloomy: a damp fog.	H B
10	..	,, ,, ,, ,,	
10	..	,, ,, foggy.	
10	..	,, ,, a slight fog.	H B
10	..	,, ,, ,,	L
..	..		
..	..		

MAXIMUM THERMOMETER USED IN DETERMINING THE TEMPERATURE OF THE WATER OF THE THAMES.

December $16^d.\ 22^h$. The instrument had been previously sent for repair.

RAIN.

December $16^d.\ 22^h$. The amount collected in rain-gauge No. 2 was from the melting of snow.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 19. 18	..	..	..	..	..	..	..		..	..		..	SSW	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..		..	..		..	SSW	0 to 1½	..	..	..	..	..	..	..	..
22	29·668	46·8	46·4	0·4	..	..	..		..	..		..	SSW	0 to 1	WSW	1·00	Pos.	2	..	5	5	..
Dec. 20. 0	..	..	..	..	..	..	..		..	..		..	SW	½ to 1½	..	..	..	..	..	..	..	..
2	29·649	46·7	44·9	1·8	..	..	..		..	..		..	SW	0 to 1	WSW	3·80	Pos.	..	..	5	..	..
4	29·620	45·7	43·7	2·0	..	..	48·0		44·8	..		..	SW	0 to 1	..	..	Pos.	..	..	5	8	10. 0
6	..	..	..	..	..	..				13·24			SW	0 to ½	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..							SW	0 to 2	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	55·5		39·7	0·12			SSW	0 to 2	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..							S by W	..	..	..	..	..	..	..	..	..
14	29·422	46·0	45·3	0·7	..	..				25·335			S	½ to 1½	..	..	..	0	0	0	..	..
16	29·329	46·6	45·8	0·8	45·0	1·6	..			..			S by W	0 to 1½	..	..	..	0	0	0	..	..
18	29·238	47·0	46·3	0·7	..	..	33·0			..			S by W	1 to 4	..	..	..	0	0	0	..	..
20	29·147	47·2	46·4	0·8	..	..	..		..	..		..	S by W	1 to 3½	..	..	..	0	0	0	..	..
22	29·067	48·0	47·2	0·8	46·0	2·0	..		..	..		..	S	0 to 2½	S	4·48	Neg.	40	..	30	30	2. 0
Dec. 21. 0	28·997	49·0	47·2	1·8	..	..	..		..	..		..	SSW	½ to 2	..	..	..	0	0	0	..	..
2	28·914	49·5	47·9	1·6	..	..	..		..	..		..	SW	½ to 1½	..	..	..	0	0	0	..	..
4	28·896	48·3	45·7	2·6	43·5	4·8	..		..	..		..	WSW	1½ to 2	..	..	Pos.	..	..	10	..	..
6	28·918	45·2	43·2	2·0	..	..	49·9		31·8	..		..	SW	0 to ½	..	..	..	0	0	0	..	..
8	28·906	43·2	42·2	1·0	..	..				13·24			SW	0 to 1	..	..	Pos.	..	..	30	40	..
10	28·897	40·2	39·5	0·7	39·0	1·2	55·5		25·0	0·01			SW	..	..	..	..	0	0	0	..	..
12	28·867	38·8	38·2	0·6	..	..							WSW	..	..	..	..	0	0	0	..	..
14	28·833	35·8	35·1	0·7	..	..				25·590			SSW	..	..	..	..	0	0	0	..	..
16	28·826	33·5	32·8	0·7	32·0	1·5	38·5		34·5	..			WSW	..	..	..	..	0	0	0	..	..
18	28·841	34·2	34·1	0·1	..	..				..			W by S	..	..	..	..	0	0	0	..	..
20	28·883	33·0	32·7	0·3	..	..	..		..	..		..	WSW	..	..	..	..	0	0	0	..	..
22	28·924	33·0	32·8	0·2	32·0	1·0	..		..	..		..	SW	..	WSW	5·10	Pos.	40	..	60	100	..
Dec. 22. 0	28·967	35·3	34·9	0·4	..	..	..		..	..		..	WSW	..	..	..	..	0	0	0	..	..
2	28·985	38·9	37·7	1·2	..	..	..		..	..		..	WNW	..	WNW	0·55	..	0	0	0	..	..
4	29·020	38·5	37·2	1·3	35·0	3·5	..		..	..		..	WSW	..	..	..	..	0	0	0	..	..
6	29·024	36·2	35·4	0·8	..	..	40·4		32·8	..		..	SW	..	..	..	..	0	0	0	..	..
8	29·013	35·6	35·1	0·5	..	..				13·42			SW	..	..	..	..	0	0	0	..	..
10	28·977	35·4	34·7	0·7	34·0	1·4	53·0		27·2	0·24			SSW	..	WSW	1·10	..	0	0	0	..	..
12	28·894	34·9	34·2	0·7	..	..							Calm	..	..	..	Pos.	40	..	60	80	15. 0
14	28·790	35·3	34·5	0·8	..	..				25·630			Calm	..	..	..	Pos.	40	..	30	40	20. 0
16	28·698	36·4	35·7	0·7	34·0	2·4	37·0		35·0	..			SE	..	..	..	Neg.	40	..	180	200	2. 0
18	28·582	35·8	35·4	0·4	..	..				..			ENE	..	..	..	Neg.	40	..	200	200	1. 0
20	28·536	37·2	36·7	0·5	..	..	..		..	..		..	E by N	..	..	..	Neg.	40	..	180	180	3. 0
22	28·545	37·1	36·6	0·5	36·5	0·6	..		..	..		..	NE	..	E	2·35	Neg.	40	..	10	10	..
Dec. 23. 0	28·562	38·1	37·3	0·8	..	..	..		..	..		..	E by N	..	..	..	Pos.	10	..	20	20	10. 0
2	28·628	39·0	38·0	1·0	..	..	..		..	..		..	NNE	..	ENE	0·30	Pos.	2	2	0	..	..
4	28·721	38·3	37·5	0·8	36·0	2·3	..		..	..		..	N	½ to 1	..	..	..	0	0	0	..	..
6	28·802	34·6	33·2	1·4	..	..	..		..	..		..	N by W	0 to ½	..	..	Pos.	30	..	20	30	3. 0
8	28·879	34·9	33·2	1·7	..	..	..		..	..		..	N by W	..	NNE	0·48	..	0	0	0	..	..

MAXIMUM THERMOMETER USED IN DETERMINING THE TEMPERATURE OF THE WATER OF THE THAMES.

December 21d. 22h. Previously to this observation the instrument had been returned after repair.

ELECTRICITY.

December 20d. 22h. There was a slight spark at the distance of 0in·03.

December 22d. 16h, 18h, and 20h. There were sparks at the distance of 0in·03, 0in·05, and 0in·05 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..		
..	..		
..	..	Overcast: cirro-stratus and scud: a thin rain is falling.	H B
..	..		
9	Transit	There are a few breaks in the clouds in various parts of the sky.	
9½	..	Cirro-strati and scud with cirri and cirro-cumuli are scattered over the sky: shortly before this observation the clouds became extensively broken, and a few cirri were seen.	H B
..	..		
..	..		
..	..		
..	..		
10	..	Overcast: cirro-stratus and scud: the wind is blowing in gusts to 1.	L
10	..	,, ,, the wind is blowing in gusts to 1½: rain is falling slightly.	
10	..	,, ,, the wind is blowing in gusts to 1½ and 2.	
10	..	,, ,, the wind is blowing in gusts to 2.	L
10	..	,, ,, rain is falling heavily.	T D
10	..	Overcast: cirro-stratus and scud: the rain ceased to fall at 22h. 45m.	
10	..	,, ,, rain is now falling heavily.	T D
7	Transit Perigee	Cirro-strati, fleecy clouds, and scud: the clouds are extensively broken in various parts of the sky, more particularly E. and S.E. of the zenith, where some fine cirri are visible.	C T
7	..	Cirro-stratus and scud: the S.W. portion of the sky is clear.	C
2	..	A heavy bank of scud is towards the S. part of the horizon, the remainder of the sky being clear: light scud has been constantly passing since the last observation.	G H
0	..	Cloudless.	C
4	..	Cirro-stratus in the horizon all around: the stars in the zenith appear bright.	T D
4	..	Cirro-stratus round the horizon, particularly in the S.: the zenith, and for some distance around it, is clear.	
3	..	Cirro-stratus and haze all around the horizon.	
4	..	,,	
6	..	There are several breaks in the clouds about the zenith, and towards the E.N.E. and N.; every other portion of the sky is covered with thin cirro-stratus: hazy: a hoar frost.	T D
10	..	Overcast: cirro-stratus: foggy.	G H
10	..	Overcast, thin cirro-strati, cirri, and fleecy clouds.	
7	..	Cirro-strati, cirri, light fleecy clouds, and scud are in various parts of the sky.	G H
5	Transit	Cirro-strati, detached cirri, fleecy clouds, and haze scattered over the sky.	T D
3	..	Cirro-strati, scud, and light clouds are scattered over the sky, excepting in the E., which is quite clear.	
3	..	Thin cirro-stratus in the W. horizon, extending nearly to the zenith, through which the Moon is visible; with the exception of a thin haze in the N. and N.E. every other part of the sky is clear.	
8	..	Cirro-stratus all around, extending nearly to the zenith, except in the E., where the stars are bright.	T D
10	..	Overcast: cirro-stratus and scud.	G H
10	..	,, ,,	
10	..	,, ,, rain is falling heavily; it commenced about an hour since.	
10	..	,, ,, rain is falling heavily.	
10	..	,, ,,	G H
10	..	,, ,, occasional drops of rain are falling.	H B
10	..	Overcast: cirro-stratus and scud: very gloomy.	
10	..	,, ,,	H B
10	..	,, ,, a few drops of rain are falling.	G H
10	Transit	,, ,, rain is falling heavily.	
10	..	,, ,, rain is falling.	G H

Day and Hour, Göttingen Astronomical Reckoning.	Barometer corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's). Reading of No. 2. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 23. 10	28·921	34·7	33·8	0·9	32·0	2·7	39·3	..	N by W	..	..	..	Pos.	15	60	12	..	30. 0
12	28·961	34·4	33·8	0·6	..	..	32·0	13·45	NNW	..	..	..	Pos.	10	..	15	10	5. 0
14	28·969	34·0	33·6	0·4	..	..	55·0		NNW	..	N	1·28	Pos.	30	..	50	50	40. 0
16	28·996	32·7	32·4	0·3	..	..	29·5	0·11	WNW	..	..	..		0	0	0	..	..
18	29·007	33·0	32·7	0·3	..	..			WNW	..	..	..		0	0	0	..	..
20	29·042	33·0	32·6	0·4	..	..	37·0	25·740	WNW	..	..	..		0	0	0	..	..
22	29·082	33·0	32·7	0·3	31·5	1·5	35·5	..	WNW	..	E	0·44	Pos.	..	..	40	50	6. 0
Dec. 24. 0	29·113	34·3	33·7	0·6	..	..	..	..	E by S	..	..	..	Pos.	..	..	20	30	20. 0
2	29·145	33·5	32·7	0·8	..	..	..	..	E	..	..	..	Pos.	5	..	5	5	..
4	29·178	32·8	32·0	0·8	30·0	2·8	34·4	..	E	..	..	..	Pos.	2	2	0	..	..
6	29·226	32·7	32·0	0·7	..	..	26·4	13·45	E by N	..	N	1·20	..	0	0	0	..	..
8	29·254	32·4	31·8	0·6	..	..			E by N	..	..	..	..	0	0	0	..	..
10	29·290	32·8	30·2	2·6	22·5	10·3	54·5	0·00	ESE	..	..	..	Pos.	2	..	5	5	1. 0
12	29·310	32·4	30·5	1·9	..	..	21·5		ENE	..	..	..	Pos.	5	..	10	10	3. 0
14	..	..	..	..	..	..		25·740	NE	..	E	0·50	..	..	..	..	..	..
16	..	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	36·2	..	NE	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	N by W	..	..	..	..	..	..	..	..	..
22	29·530	27·0	26·5	0·5	24·4	2·6	..	..	N by W	..	NE	0·70	Pos.	30	..	20	20	8. 0
Dec. 25. 0	..	..	..	..	..	..	..	..	N by E	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	N by E	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	31·0	..	N	0 to ½	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	25·8	13·45	N	..	..	..	..	..	..	..	..	..
8	29·836	27·0	26·4	0·6	..	..			N	..	..	..	Pos.	40	..	30	30	4. 0
10	..	..	..	..	..	..	38·0	0·00	N	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	18·0		NNW	..	..	..	..	..	..	..	..	..
14	29·968	29·5	28·7	0·8	..	..		25·740	NNW	..	..	..	Pos.	3	..	15	10	20. 0
16	30·019	28·0	27·7	0·3	24·0	4·0	..		NNW	..	..	..	Pos.	5	..	8	10	25. 0
18	30·048	27·3	26·5	0·8	..	..	34·5	..	NNW	..	..	..	Pos.	20	..	60	50	25. 0
20	30·087	29·1	27·8	1·3	24·0	5·1	..	..	W	..	..	..	Pos.	3	..	10	10	15. 0
22	30·143	29·3	28·0	1·3	22·5	6·8	..	..	W	..	NNW	3·57	Pos.	40	..	30	40	5. 0
Dec. 26. 0	30·159	33·9	30·7	3·2	..	..	..	..	NNW	..	..	..	Pos.	30	..	30	40	5. 0
2	30·158	36·0	32·2	3·8	..	..	..	..	NNW	..	..	..	Pos.	30	..	20	20	6. 0
4	30·161	34·8	31·9	2·9	25·0	9·8	36·4	..	WNW	..	..	..	Pos.	40	..	70	100	20. 0
6	30·186	34·1	31·6	2·5	27·0	7·1	27·8	13·45	WNW	..	..	..	Pos.	10	..	30	25	15. 0
8	30·216	30·7	30·5	0·2	..	..			WSW	..	..	..	Pos.	40	..	70	100	25. 0
10	30·235	29·7	29·7	0·0	28·5	1·2	40·7	0·00	WSW	..	..	..	Pos.	40	..	70	100	15. 0
12	30·231	29·9	29·6	0·3	28·0	1·9	19·8		SW	..	..	..	Pos.	40	..	50	100	10. 0
14	..	..	..	..	..	..		25·740	W by S	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..		W by N	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	34·0	..	W	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	WNW	..	..	..	..	..	..	..	..	..
22	30·315	32·7	31·7	1·0	..	..	..	..	NNW	..	NNW	1·50	Pos.	2	2	0	..	..
Dec. 27. 0	..	..	..	..	..	..	36·2		N by W	..	N	0·06	..	..	..	..	..	..
2	..	..	..	..	..	..	22·3	13·45	NNW	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..		N by W	..	..	..	..	..	..	..	..	..
6	30·334	33·7	32·7	1·0	..	..	21·5	0·00	N by W	..	..	..	..	0	0	0	..	..
8	..	..	..	..	..	..			N by W	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	..	25·740	NNW	..	..	..	..	..	..	..	..	..
							33·5											

MAXIMUM THERMOMETER USED IN DETERMINING THE TEMPERATURE OF THE WATER OF THE THAMES.
December 24d. 22h. The instrument had been previously sent for repair.

MAXIMUM RADIATION THERMOMETER.
December 27d. 22h. The instrument was out of order.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
10	..	Overcast: cirro-stratus and scud: rain is falling slightly.	G
10	..	,, ,, snow is falling.	H B
10	..	,, ,, snow is falling slightly.	H B
10	..	,, snow is falling slightly.	L
10	..	,, cirro-stratus: rain mingled with sleet is falling.	T D
10	..	,, ,, occasional showers of snow and rain have fallen since the last observation.	T D
10	..	,, ,, there is a break in the clouds in the S. E.: the snow has ceased to fall.	G H
10	..	Overcast: cirro-stratus and scud: snow falling slightly.	H B
10	In Equator	,, ,, ,,	L
10	..	,, ,, ,,	L
10	Transit	,, ,, ,,	G
9	..	Cirro-stratus and scud: the Moon and a few stars are visible.	T D
10	..	Overcast: cirro-stratus and scud: the Moon is occasionally visible.	H B
10	..	,, ,, shortly before this observation several stars were visible for a short time.	H B
..	..		
..	..		
..	..		
..	1st Qr.		
6	..	Cirro-strati, scud, and fleecy clouds: portions of the sky surrounding the zenith are clear.	T D
..	..		
..	..		
..	..		
..	Transit		
0	..	Cloudless.	H B
..	..		
..	..		
1	..	Cirro-stratus and vapour round the horizon in every direction.	
0	..	Cloudless.	
0	..	,,	
0	..	,,	H B
0	..	,,	G H
0	..	Cloudless.	G H
0	..	,, hazy in the horizon.	T D
1	..	Vapour round the horizon.	H B
1	..	,, hazy in every direction: a slight fog.	
0	Transit	Cloudless, but exceedingly hazy: the larger stars only are visible: foggy.	
0	..	Cloudless, but exceedingly hazy and foggy.	H B
0	..	,, ,,	C
..	..		
..	..		
..	..		
..	..		
10	..	Cirro-stratus and scud slightly broken in the zenith.	T D
..	..		
..	..		
..	..		
..	..		
8	..	Cirro-strati, scud, and fleecy clouds.	
..	Transit		T D
..	..		

ELECTRICITY.

December 25d. 8h and 18h. There were sparks at the distances of $0^{in}\cdot03$ and $0^{in}\cdot02$ respectively.

December 26d. 4h, 6h, 8h, 10h, and 12h. There were sparks at the distances of $0^{in}\cdot02$, $0^{in}\cdot01$, $0^{in}\cdot02$, $0^{in}\cdot02$, and $0^{in}\cdot02$ respectively.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm.	Max. and Min. as read at 22h. of Rad. Therm.	Max. and Min. as read at 22h. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1. (Osler's).	RAIN GAUGES. Reading of No. 2.	RAIN GAUGES. Stand of No. 3. (Crosley's).	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot.	WIND. From Whewell's Anemometer. Direction.	WIND. From Whewell's Anemometer. Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Single Gold Leaf of Dry Pile Apparatus.	ELECTRICAL INSTRUMENTS. Readings of Double Gold Leaf.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 1.	ELECTRICAL INSTRUMENTS. Readings of Straws of Volta 2.	ELECTRICAL INSTRUMENTS. Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°			in.				from lbs. to lbs.		in.		°	°	div.	div.	m s
Dec. 27. 12	..	..	..	..	..	..	..			..			NNW	..	..	..	..	..	..	..	..	..
14	30·396	29·0	29·0	0·0	..	..	..			..			SSW	..	..	..	Pos.	30	..	20	25	7. 0
16	30·406	26·0	25·7	0·3	24·0	2·0	..			..			WSW	..	..	..	Pos.	2	2	0	..	..
18	30·400	24·0	23·6	0·4	20·0	..	..			..			SSW	..	..	..	Pos.	2	2	0	..	..
20	30·405	23·3	23·0	0·3	20·0	..	..			..			SW	..	..	..	Pos.	5	..	8	10	4. 0
22	30·414	23·5	22·8	0·7	19·3	4·2	..			..			S	..	SW	0·39	Pos.	15	..	12	12	5. 0
Dec. 28. 0	30·403	29·0	28·2	0·8	..	..	..			..			SSW	..	..	..	Pos.	40	..	40	40	5. 0
2	30·371	31·7	31·1	0·6	..	..	..			..			SW	..	..	..	Pos.	40	..	40	40	5. 0
4	30·364	32·8	31·7	1·1	29·0	3·8			36·2	..			S by W	..	..	..	Pos.	40	..	50	55	..
6	30·365	33·1	31·7	1·4	..	..			22·6	..			SW	..	..	..	Pos.	40	..	150	100	0. 30
8	30·377	33·4	31·8	1·6	..	..				13·46			S by W	..	..	..	Pos.	40	..	50	50	4. 0
10	30·360	33·6	32·5	1·1	31 0	2·6			45·5				S by W	..	..	..	Pos.	40	..	60	70	10. 0
12	30·337	34·0	32·8	1·2	..	..			20·0	0·00			S by W	..	..	..	Pos.	40	..	40	60	7. 0
14	30·332	34·3	33·2	1·1	..	..							S by W	..	..	..	..	0	0	0	..	..
16	30·343	34·5	33·2	1·3	31·5	3·0				25·745			S	..	..	..	..	0	0	0	..	..
18	30·354	33·5	32·7	0·8	..	..			..	..			S by E	..	..	..	..	0	0	0	..	..
20	30·354	33·0	32·1	0·9	..	..			33·5	..			S by E	..	..	..	Pos.	35	..	20	30	11. 0
22	30·371	31·9	31·7	0·2	30·5	1·4	..			..			SSE	..	SW	0·94	..	0	0	0	..	..
Dec. 29. 0	30·383	37·6	35·8	1·8	..	..	..			..			SSW	..	..	..	Pos.	2	2	0	..	..
2	30·386	36·3	34·8	1·5	..	..	..			..			SSW	..	..	..	Pos.	40	..	40	40	5. 0
4	30·388	34·0	32·2	1·8	30·0	4·0			39·4	..			SSW	..	..	..	Pos.	40	..	30	30	7. 0
6	30·399	32·0	31·2	0·8	..	..			26·6				SSW	..	..	..	Pos.	30	..	20	30	7. 0
8	30·427	31·4	29·7	1·7	..	..				13·46			Calm	..	..	..	Pos.	2	2	0	..	..
10	30·447	30·6	29·2	1·4	25·0	5·6			..				Calm	..	..	..	Pos.	2	2	0	..	..
12	30·448	28·5	27·7	0·8	..	..			21·3	0·00			SSW	..	..	..	Pos.	2	2	0	..	..
14	30·443	28·6	26·4	2·2	..	..							SSW	..	..	..	Pos.	2	2	0	..	..
16	30·445	27·4	25·9	1·5	20·0	7·4			..	25·750			SSW	..	..	..	Pos.	2	2	0	..	..
18	30·457	27·6	26·2	1·4	..	..			33·5	..			SSW	..	..	..	Pos.	2	2	0	..	..
20	30·474	28·1	26·8	1·3	..	..				..			SSW	..	..	..	Pos.	2	2	0	..	..
22	30·498	28·7	27·6	1·1	21·0	7·7	..			..			SSW	..	SSE	2·86	Pos.	5	..	10	10	3. 0
Dec. 30. 0	30·498	30·5	29·2	1·3	..	..	..			..			S by W	..	..	..	Pos.	2	2	0	..	..
2	30·476	31·9	30·7	1·2	..	..	..			..			S by W	..	..	..	Pos.	2	2	0	..	..
4	30·486	31·7	30·7	1·0	22·2	9·5	..			..			S by W	..	..	..	Pos.	40	..	80	80	..
6	30·478	30·3	29·3	1·0	25·5	4·8			~~27·5~~	..			S by E	..	..	..	Pos.	30	20	20	20	5. 0
8	30·495	27·0	25·9	1·1	..	..			18·1	13·46			S by E	..	..	..	Pos.	40	..	100	120	10. 0
10	30·493	26·7	25·7	1·0	20·5	6·2			..				S by E	..	..	..	Pos.	40	..	50	50	5. 0
12	30·486	24·0	22·7	1·3	18·0	6·0			6·8	0·00			Calm	..	..	..	Pos.	30	..	70	100	9. 0
14	30·467	22·3	21·5	0·8	..	..				25·750			Calm	..	..	..	Pos.	30	..	100	150	..
16	30·463	21·6	20·1	1·5	15·0	6·6			..	..			Calm	..	..	..	Pos.	30	..	70	100	12. 0
18	30·443	20·7	19·6	1·1	18·0	..			33·2	..			Calm	..	..	..	Pos.	30	..	100	180	15. 0
20	30·447	20·0	19·2	0·8	17·0	..	..			..			Calm	..	..	..	Pos.	10	..	30	40	20. 0
22	30·464	21·4	20·7	0·7	14·0	7·4	..			..			Calm	..	SSE	0·90	Pos.	35	35	20	30	20. 0
Dec. 31. 0	30·454	26·5	25·7	0·8	..	..	..			..			Calm	..	SSE	0·24	..	0	0	0	..	..
2	30·416	31·6	30·2	1·4	..	..	..			..			Calm	..	..	..	..	0	0	0	..	..
4	30·393	29·9	28·7	1·2	24·5	5·4	..			..			Calm	..	..	..	Pos.	2	..	5	5	3. 0

MAXIMUM RADIATION THERMOMETER.

December 29d. 22h and 30d. 22h. The instrument was out of order.

ELECTRICITY.

December 28d, 6h. There was a spark at the distance of 0in·05.

December 30d. 8h, 10h, 12h, 14h, 16h, and 18h. There were sparks at the distances of 0in·03, 0in·02, 0in·03, 0in·04, 0in·03, and 0in·04 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
..	..		
10	..	Overcast: cirro-stratus: a thick fog.	L
10	..	,, ,, ,,	
10	..	,, ,, ,,	
10	..	,, ,, ,,	L
10	..	,, ,, ,,	T D
8	..	Cirro-strati, scud, and fleecy clouds much broken in various directions.	
10	..	Overcast: cirro-stratus and haze.	T D
10	..	,, cirro-stratus: a slight fog.	C
10	..	,, ,, ,,	
10	..	,, ,,	C
10	Transit	,, ,,	G
10	..	,, ,,	T D
10	..	,, ,,	
10	..	,, cirro-stratus and scud.	
10	..	,, ,,	
8	..	Cirro-strati, scud, and fleecy clouds: a few stars are visible in the zenith and towards the N. E.: thin rain and sleet have fallen at intervals since the last observation.	T D
2	..	The sky about the zenith is clear: scud towards the S. and S.W. parts of the horizon.	G H
7	..	Cirro-cumuli and scud: the S. and S. E. parts of the horizon are clear.	L
10	..	Overcast: cirro-stratus and scud.	G H
10	..	,, ,,	G H
10	..	,, ,,	T D
10	..	,, ,, the Moon is occasionally visible through the clouds.	
10	Transit	,, ,, ,,	T D
10	..	,, ,,	G H
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	
10	..	,, ,,	G H
10	..	,, ,,	H B
10	..	Overcast: cirro-stratus and scud.	T D
10	..	,, ,,	T D
10	..	,, ,,	G H
10	..	,, ,,	
10	..	,, cirro-stratus and scud, the clouds being thin about the zenith: the Moon's place is visible.	
9	..	Thin cirro-stratus in various parts of the sky.	G H
½	Transit	Nearly cloudless: fragments of white scud are in different directions. A faintly-coloured corona is visible round the Moon, whose diameter is about 5°.	H B
0	..	Cloudless.	
0	..	,,	
0	..	,,	
1	..	Lines of fleecy clouds and cirro-strati are in the N.W. and W.: a slight fog.	H B
0	..	Cloudless.	G H
0	..	Cloudless.	
0	..	,,	G H
1	..	Lines of cirro-strati along the N. horizon, and a few cirri in other directions.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Thermom.	Wet Thermom.	Wet Thermom. below Dry.	Dew Point.	Dew Point below Dry Thermom.	Max. and Min. as read at 22h. of Free Therm. of Rad. Therm. of Therm. in Water of the Thames.	RAIN GAUGES. Stand of No. 1, (Osler's). Reading of No. 2. Stand of No. 3, (Crosley's).	WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot.	From Whewell's Anemometer. Direction.	Descent of the pencil during the continuance of each Wind.	ELECTRICAL INSTRUMENTS. Sign of Electricity, as shewn by Dry Pile Apparatus.	Readings of Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Straws of Volta 1.	Straws of Volta 2.	Interval of time in recovering the same degree of tension after discharge.
d h	in.	°	°	°	°	°	°	in.		from lbs. to lbs.		in		°	°	div.	div.	m s
Dec. 31. 6	30·379	27·1	25·7	1·4	22·0	5·1	..	..	Calm	..	..	..	Pos.	5	..	10	10	10. 0
8	30·368	26·6	25·5	1·1	23·0	3·6	..	..	Calm	..	..	..	Pos.	20	..	50	60	15. 0
10	30·343	27·0	25·9	1·1	23·0	4·0	..	..	Calm	..	..	..	Pos.	30	..	60	60	12. 0
12	30·333	27·2	26·2	1·0	23·0	4·2	..	..	Calm	..	NE	0·20	Pos.	40	..	40	40	15. 0

ELECTRICITY.

December 31d. 8h and 10h. There were sparks at the distance of 0in·02 and 0in·03 respectively.

Amount of Clouds, 0—10.	Phases of the Moon.	REMARKS.	Observer.
6	..	Cirro-stratus round the horizon, with fleecy clouds and cirro-cumuli in other parts of the sky: clear for a considerable distance S. of the zenith.	H B
10	..	Overcast: cirro-stratus and scud: soon after the last observation the sky became covered with cloud: at $6^h.30^m$ a few breaks appeared, and at $6^h.40^m$ only one-third of the sky was covered; but at $6^h.55^m$ it again became overcast.	
10	..	Overcast: cirro-stratus and scud.	H B
10	Transit	,, cirro-strati and fleecy clouds.	L

RAIN.

December $31^d.12^h$. The amount collected during the month of December in the rain-gauge No. 4 was $1^{in}.13$, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at Greenwich Hospital Schools during the same period, was $1^{in}.08$.

ROYAL OBSERVATORY, GREENWICH.

TERM-DAY

METEOROLOGICAL OBSERVATIONS.

1846.

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
January 20. 18	29·301	44·8	44·2	0·6	..	..	..	..	10
19	29·271	44·5	43·5	1·0	..	..	..	..	10
20	29·255	43·5	42·5	1·0	..	..	..	..	10
21	29·218	44·0	43·4	0·6	..	..	..	..	10
22	29·218	44·7	44·4	0·3	44·0	0·7	..	..	10
23	29·220	48·5	48·4	0·1	..	..	..	..	10
January 21. 0	29·235	52·0	51·4	0·6	..	..	SW	½ to 1½	10
1	29·230	52·5	51·4	1·1	..	..	SW	0 to ¼	10
2	29·224	52·2	51·2	1·0	..	..	SW	0 to ½	10
3	29·221	52·0	50·4	1·6	..	..	SW	0 to 1½	10
4	29·208	52·2	50·5	1·7	49·0	3·2	SSW	½ to 1½	10
5	29·213	51·6	50·6	1·0	..	..	SSW	..	10
6	29·195	51·0	50·6	0·4	..	..	SSW	..	10
7	29·172	50·8	50·4	0·4	..	..	SSW	..	10
8	29·151	50·7	50·7	0·0	..	..	SSW	..	10
9	29·128	51·4	51·2	0·2	..	..	SSW	0 to ½	10
10	28·977	51·3	51·2	0·1	51·0	0·3	SSW	½ to 3	10
11	28·945	51·8	51·8	0·0	..	..	SSW	1½ to 2½	10
12	29·025	51·6	51·7	— 0·1	..	..	SSW	2 to 4	10
13	28·927	52·0	51·9	0·1	..	..	SSW	2 to 3½	10
14	28·910	54·0	52·7	1·3	..	..	SW	3½ to 6	4
15	28·918	53·7	52·0	1·7	..	..	SW	3 to 8	10
16	28·921	52·8	50·7	2·1	48·8	4·0	SW	3 to 7	4
17	28·921	52·8	50·7	2·1	..	..	SW	3 to 6	10
18	28·920	51·7	50·4	1·3	..	..	SW	3 to 6	8
19	28·930	51·2	50·2	1·0	..	..	SW	4 to 7	10
20	28·932	51·5	49·5	2·0	..	..	SW	5½ to 7	8
21	28·932	51·3	49·2	2·1	..	..	SW	4½ to 9	10
22	28·923	51·5	49·7	1·8	48·0	3·5	SW	5½ to 10	8
23	28·963	52·5	50·2	2·3	..	..	SW	4½ to 10	10
January 22. 0	28·988	53·7	50·9	2·8	..	..	SW	3 to 7½	10
1	29·014	53·0	50·8	2·2	..	..	SW	2 to 4½	10
2	29·041	53·3	51·2	2·1	..	..	SW	2 to 4	10
3	29·050	53·3	50·9	2·4	..	..	SW	2 to 4½	3
4	29·068	52·6	50·2	2·4	48·0	4·6	SW	2 to 4	3
5	29·083	51·5	49·7	1·8	..	..	SW	1½ to 3½	10
6	29·085	51·0	48·9	2·1	..	..	SW	1 to 2½	10
7	29·105	50·5	48·6	1·9	..	..	SW	1 to 3	10
8	29·105	49·5	47·7	1·8	..	..	SW	½ to 1	9
9	29·105	48·7	47·4	1·3	..	..	SW	..	10
10	29·111	48·0	46·9	1·1	45·5	2·5	SSW	..	7
12	29·106	47·5	46·7	0·8	..	..	SW	..	7
13	29·110	46·4	45·8	0·6	..	..	SW	..	3
14	29·122	45·7	45·2	0·5	..	..	SW	..	0
15	29·123	45·8	45·2	0·6	..	..	SW	..	6
16	29·127	46·2	45·7	0·5	45·0	1·2	SW	..	10
17	29·129	46·5	46·0	0·5	..	..	SW	..	10
18	29·137	47·0	46·5	0·5	..	..	SSW	..	10
19	29·137	47·0	46·6	0·4	..	..	SSW	..	10
20	29·137	47·0	46·6	0·4	..	..	SSW	..	10

OSLER'S ANEMOMETER.
Jan. 20d. 22h. The direction-pencil was found off the rack-work.

DRY THERMOMETER.
Jan. 21d. 12h. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Overcast: cirro-stratus: wind in gusts to 1.	H B
,, cirro-stratus and heavy scud.	
,, ,,	
,, ,, light rain is falling.	H B
,, ,, drizzling rain is falling.	L
,, ,, the rain has ceased.	T D
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	T D
,, ,,	H B
,, ,,	
,, ,,	
,,	
,, rain is falling heavily.	H B
,, a slight rain is falling.	G
,, ,,	
,, ,, wind in gusts to $\frac{3}{4}$ and $1\frac{1}{2}$: there have been several squalls of rain within the last hour.	
,, frequent squalls: a very black night.	G
,, very dark: rain is falling in squalls: wind in gusts to $2\frac{1}{2}$ and 3, and occasionally the gusts are very heavy.	L
Cirro-stratus: loose scud in every direction: gusts of wind to 4.	
The sky gradually became clear after the last observation, but remained so only for a short time; it is now quite overcast: wind in gusts to 3 and 3+.	L
Cirro-stratus round the horizon; the remainder of the sky is clear: wind in gusts to $3\frac{1}{2}$.	T D
Overcast: rain is falling: wind in gusts to $3\frac{1}{2}$.	
Cirro-stratus and masses of dark scud scattered over the sky: wind in gusts to 3.	T D
Overcast: cirro-stratus and dark scud: rain is falling in slight drops; wind in gusts to $3\frac{1}{2}$: at $18^h.25^m$ a large portion of the sky was free from cloud.	H B
Cirro-stratus and scud: frequent gusts of wind to $3\frac{1}{2}$.	
,, frequent gusts of wind to 3 and $3\frac{1}{2}$.	H B
A gale of wind: clouds are rapidly flying; wind in frequent gusts to 3: there are occasional faint gleams of sunshine.	G
Overcast: the gale continues: wind in frequent gusts to 3, and occasionally to $3\frac{1}{2}$.	G
Overcast: cirro-stratus and large masses of scud: wind in gusts to $2\frac{1}{2}$ and 3.	L
,, cirro-stratus: wind in gusts to $2\frac{1}{2}$.	T D
,, ,, wind in gusts to 2.	T D
Detached cumuli, cirro-stratus, and scud: wind in gusts to $1\frac{1}{2}$ and 2.	L
Cirro-stratus and large masses of loose scud: wind in gusts to $1\frac{1}{2}$ and 2.	L
Overcast; cirro-stratus: wind in gusts to $1\frac{1}{2}$.	T D
,, cirro-stratus and scud: wind in gusts to 2.	T D
Cirro-stratus and scud. Jupiter and Venus are occasionally seen through the clouds.	H B
Several stars are now visible S. of the zenith to about 10°; the rest of the sky is covered with cirro-stratus.	H B
A few stars are occasionally visible near the zenith.	G
A few of the larger stars are visible near the zenith: all around below 30° from the zenith the sky is black and overcast.	G
Clear about the zenith, and for some distance S. of it; cloudy elsewhere.	L
Cloudy round the horizon; it is clear elsewhere.	
Cloudless.	
Clear round the horizon for some distance.	
Overcast, but the clouds are thin in many places.	
Overcast.	
,,	
,, a very slight rain has just begun to fall.	
,, a slight rain is falling.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
January 22. 21	29·128	47·0	46·9	0·1	..	..	S by W	..	10
22	29·107	47·7	47·2	0·5	46·5	1·2	S	..	10
23	29·089	48·3	48·2	0·1	..	..	S by W	..	10
January 23. 0	29·083	49·9	48·4	1·5	..	..	SSW	½ to 1½	10
1	29·061	49·8	49·2	0·6	..	..	SSW	0 to ½	10
2	29·046	52·8	50·9	1·9	..	..	SW	½ to 2½	10
3	29·054	47·5	47·7	—0·2	..	..	WSW	0 to 1	10
4	29·053	48·0	47·7	0·3	47·0	1·0	SSW	0 to ½	10
5	29·041	49·5	48·2	1·3	..	..	SW	0 to 2½	10
6	29·067	48·5	47·7	0·8	..	..	WSW	½ to 1	10
7	29·077	48·0	47·2	0·8	..	..	WSW	0 to 1	6
8	29·099	46·7	45·7	1·0	..	..	SSW	0 to ½	0
9	29·094	47·2	46·8	0·4	..	..	SSW	..	10
10	29·082	47·2	46·7	0·5	46·0	1·2	SSW	..	10
12	29·078	47·5	47·0	0·5	..	..	SSW	..	10
13	29·078	46·9	46·4	0·5	..	..	S by W	..	4
14	29·078	46·0	45·7	0·3	..	..	Calm	..	8
15	29·081	46·5	46·2	0·3	..	..	Calm	..	8
16	29·088	46·3	46·2	0·1	46·0	0·3	Calm	..	4
17	29·107	46·2	46·0	0·2	..	..	Calm	..	0
18	29·128	46·4	46·2	0·2	..	..	Calm	..	10
19	29·147	46·0	45·9	0·1	..	..	Calm	..	5
20	29·184	46·0	45·7	0·3	..	..	Calm	..	10
21	29·210	45·8	45·7	0·1	..	..	Calm	..	10
22	29·282	45·9	45·8	0·1	..	..	Calm	..	10
23	29·312	46·6	46·4	0·2	..	..	Calm	..	10
January 24. 0	29·350	47·7	47·2	0·5	..	..	WSW	..	10
1	29·382	48·2	47·5	0·7	..	..	WSW	..	10
2	29·415	49·2	48·4	0·8	..	..	WSW	..	10
3	29·431	50·5	49·2	1·3	..	..	WSW	..	10
4	29·461	51·2	49·4	1·8	48·0	3·2	WSW	..	6
5	29·496	49·5	48·0	1·5	..	..	WSW	..	10
6	29·525	48·8	47·2	1·6	..	..	WSW	..	7
7	29·537	46·0	45·2	0·8	..	..	SSW	..	2
8	29·561	46·0	45·0	1·0	..	..	SSW	..	6
9	29·547	46·2	45·4	0·8	..	..	SSW	..	5
10	29·542	45·5	45·1	0·4	45·0	0·5	SSW	..	0
11	29·539	45·8	45·4	0·4	..	..	SSW	..	5
12	29·513	46·4	45·7	0·7	..	..	SSW	..	10
February 20. 18	29·995	44·0	43·5	0·5	..	..	SSW	..	10
19	29·999	45·2	44·2	1·0	..	..	S by W	..	10
20	30·007	46·0	44·7	1·3	..	..	S by W	..	10
21	30·015	46·8	46·0	0·8	..	..	Calm	..	10
22	30·022	48·4	47.4	1·0	..	..	SSW	..	8
23	30·016	52·0	49·2	2·8	..	..	SSW	..	4
February 21. 0	30·022	54·2	50·8	3·4	..	..	SSW	..	2
1	30·018	55·6	51·4	4·2	..	..	SSW	..	5
2	30·015	55·4	51·0	4·4	..	..	SSW	..	1

DRY THERMOMETER.
Jan. 23d. 3h. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Overcast: a slight rain is falling, scarcely perceptible.	L
,, a slight rain is falling.	T D
,, ,,	
Overcast: rain is falling heavily.	
,, rain is falling very heavily.	T D
,, cirro-stratus and scud.	H B
,, rain is falling heavily.	T D
,, the rain has just ceased.	L
,, the sky is covered with masses of dark flying scud.	T D
,, cirro-stratus, fleecy clouds, and large masses of scud: wind in gusts to $\frac{1}{2}$.	L
The sky S. and E. of the zenith is mostly covered with cloud; it is clear elsewhere: wind in gusts to $\frac{1}{2}$.	
Cloudless.	
The sky became overcast at $8^h.\ 30^m$, and a little rain fell at $8^h.\ 35^m$: a few stars are occasionally visible in the zenith.	
Overcast.	
,, rain is falling; it began at $11^h.\ 47^m$.	L
Thin cirro-stratus and haze: the stars are bright in the zenith.	T D
The sky is covered with a thin cirro-stratus, with the exception of a few breaks in the E., through which a few stars are visible.	
The sky is covered with a thin cirro-stratus: a few stars are shining in the zenith.	
Thin cirro-stratus in several directions; the stars look dim and watery.	
Cloudless: hazy.	
Overcast: cirro-stratus.	
Cirro-stratus around the horizon; the rest of the sky is clear.	
Overcast: cirro-stratus.	
,, ,,	T D
The clouds are slightly broken in some places.	H B
,,	H B
Overcast: cirro-stratus.	L
,, ,,	
,, ,,	
,, ,,	L
Cirro-stratus, scud, and light fleecy clouds.	T D
Cirro-stratus and scud.	
Cirro-stratus, scud, and light fleecy clouds.	
A few light cirri in the S.W.	
Cirro-stratus in the horizon, extending from the N. E. to the S.W., to an altitude of 70°; the remainder of the sky is clear.	
Cirro-stratus in the S.W.	
Cloudless: hazy in the horizon.	
Cirro-stratus and haze in several directions.	
Overcast: cirro-stratus.	T D
Overcast: cirro-stratus and scud.	L
,, ,,	
A narrow clear break towards the E. horizon, but to no numerical extent; cirro-stratus and scud elsewhere: the clouds are thin about the zenith.	
Thin cirro-stratus and scud cover the sky.	L
The sky in several directions is covered with a thin film of cirro-stratus and light scud: a pale blue sky is visible in the zenith and in the N. E.: a few drops of rain fell a few minutes since.	T D
Light cirri and fleecy clouds are scattered over the sky: a very fine morning.	
A few fleecy clouds in the W. and N. E.; the remainder of the sky is clear.	
Cirri-cumuli in large masses all around the horizon: a few fleecy clouds in the zenith.	
A few fleecy clouds are scattered over the sky.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
February 22. 4	29·997	53·8	48·4	5·4	46·0	7·8	SSW	..	1
5	30·010	52·0	48·7	3·3	..	..	SSW	..	7
6	30·020	50·3	48·2	2·1	..	..	SSW	..	10
7	30·025	49·0	47·7	1·3	..	..	SSW	..	10
8	30·025	48·7	47·5	1·2	..	..	SSW	..	10
9	30·029	48·6	47·2	1·4	..	..	SW	..	10
10	30·023	48·5	47·2	1·3	45·0	3·5	SW	..	10
11	30·020	49·0	47·4	1·6	..	..	SW	..	10
12	30·010	47·0	46·4	0·6	..	..	Calm	..	5
February 27. 10	29·523	52·5	50·7	1·8	49·0	3·5	Calm	..	8
11	29·530	52·7	50·6	2·1	..	..	Calm	..	10
12	29·530	53·4	50·9	2·5	..	..	Calm	..	10
13	29·529	50·7	49·2	1·5	..	..	Calm	..	8
14	29·530	51·0	49·4	1·6	..	..	Calm	..	8
15	29·532	50·2	48·7	1·5	..	..	Calm	..	2
16	29·532	50·0	48·6	1·4	47·5	2·5	Calm	..	0
17	29·546	48·4	47·2	1·2	..	..	Calm	..	0
18	29·545	48·2	47·0	1·2	..	..	Calm	..	0
19	29·551	48·2	47·2	1·0	..	..	Calm	..	0
20	29·568	49·9	48·3	1·6	..	..	Calm	..	7
21	29·580	50·4	49·1	1·3	..	..	Calm	..	1½
22	29·556	53·5	51·0	2·5	48·5	5·0	Calm	..	2
February 28. 0	29·620	59·5	55·6	3·9	..	..	WSW	..	2
1	29·529	60·8	56·7	4·1	..	..	SW	..	5
2	29·629	59·9	56·1	3·8	..	..	SSW	..	7
3	29·652	59·2	55·9	3·3	..	..	SSW	..	7
4	29·666	56·3	54·0	2·3	51·0	5·3	SW	..	10
5	29·700	55·0	52·9	2·1	..	..	SW	..	10
6	29·725	53·8	51·9	1·9	..	..	SW	..	10
7	29·752	50·7	49·9	0·8	..	..	SW	..	4
8	29·765	50·0	49·4	0·6	..	..	SSW	..	0
9	29·789	49·0	48·7	0·3	..	..	SSW	..	3
10	29·807	48·5	48·2	0·3	48·0	0·5	WSW	..	0
March 18. 10	29·434	36·2	33·4	2·8	29·5	6·7	Calm	..	10
11	29·439	35·2	32·7	2·5	..	..	Calm	..	10
12	29·442	33·8	31·7	2·1	..	..	Calm	..	9
13	29·440	32·7	31·9	0·8	..	..	Calm	..	10
14	29·428	31·5	31·0	0·5	..	..	Calm	..	10
15	29·429	31·2	30·8	0·4	..	..	Calm	..	10
16	29·430	30·5	29·2	1·3	27·0	3·5	Calm	..	10
17	29·432	29·7	28·7	1·0	..	..	Calm	..	9
18	29·433	28·5	27·9	0·6	..	..	Calm	..	4
19	29·447	28·7	27·7	1·0	..	..	Calm	..	8
20	29·459	30·9	32·2	—1·3	..	..	Calm	..	8

DRY THERMOMETER.
March 18d. 20h, 21h, and 22h. The readings were lower than those of the Wet Thermometer.

REMARKS.	Observer.
A few fleecy clouds towards the W. horizon.	T D
Cirro-stratus and fleecy clouds in all directions: clouds began to collect soon after the last observation.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
Cirro-stratus around the horizon, the stars in every direction look dim and watery: the portion of the sky now free from cloud became so about five minutes before this observation.	T D
The appearance of the sky is momentarily changing, from being nearly cloudless to its being nearly wholly covered, but never quite either one or the other; at present a few only of the larger stars are visible, and those appear ill defined.	G
Overcast: cirro-stratus: the sky became wholly covered a short time after 10^h, and it has continued so.	
,, ,, the night is very dark.	G
Clear towards the N.W.; cloudy elsewhere.	L
Cirro-stratus and scud: breaks in every direction.	
Cloudy towards the S. horizon; clear elsewhere.	L
Cloudless.	T D
,,	
,,	T D
,,	H B
Cirro-stratus, cumuli, and scud in every direction, but principally S. of the zenith; the cirro-stratus collected shortly after 19^h rising from the S. horizon.	
With the exception of a few cumuli around the horizon, cirro-stratus and fleecy clouds near the S. E., the sky is cloudless.	H B
A few white clouds are scattered about a fine blue sky: a very fine morning.	G
A few light cirri and fleecy clouds are scattered over the sky.	T D
Cumuli and light cirri in the zenith; cirro-stratus in the N.	T D
Cumuli near the N. horizon; cirro-stratus, scud, and fleecy clouds are distributed in other directions. There is an imperfect halo around the Sun.	H B
Thin cirro-stratus and fleecy clouds in all directions.	L
Overcast: cirro-stratus, scud, and fleecy clouds.	L
,, cirro-stratus and heavy scud.	H B
,, ,,	H B
The sky continued covered with cirro-stratus and scud till $6^h.45^m$: the scud was passing quickly from the S.W.: at present a few thin clouds are scattered over the sky: it is generally clear.	G
Cloudless.	G
Cirro-stratus and thick haze in the S.W.; the remainder of the sky is clear.	T D
A slight haze prevails around the horizon, with this exception the sky is cloudless.	T D
Overcast, and very dark.	G
,,	
A few stars are visible near the zenith; every other part of the sky is cloudy.	G
Cirro-stratus: a few stars are occasionally visible about the zenith.	L
,,	
,,	L
,, the Moon is dimly visible through the clouds.	H B
The clouds are slightly broken in the N.W.; in other respects no change has taken place since the last observation: cirro-stratus very dense S. of the zenith.	
A bank of dark cirro-stratus along the S. E. horizon, and an extensive amount of fleecy clouds N. and S. of the zenith: cirro-stratus in fragments around the horizon.	H B
Cirro-stratus, fleecy clouds, and scud in every direction: a few breaks in various parts of the sky.	T D
Cirri, fleecy clouds, and scud; much broken in the zenith: a bank of cirro-stratus around the horizon.	

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.	
March	18. 21	29·478	31·2	32·2	−1·0	..	..	Calm	..	10
	22	29·483	31·0	32·1	−1·1	28·0	3·0	Calm	..	10
	23	29·479	35·2	32·0	3·2	..	..	Calm	..	10
March	19. 0	29·483	38·0	32·2	5·8	..	..	Calm	..	10
	1	29·471	40·0	36·7	3·3	..	..	Calm	..	10
	2	29·461	40·2	37·0	3·2	..	..	Calm	..	10
	3	29·452	38·8	35·4	3·4	..	..	Calm	..	10
	4	29·443	38·3	35·5	2·8	34·0	4·3	Calm	..	10
	5	29·433	38·5	35·2	3·3	..	..	Calm	..	10
	6	29·427	37·5	34·0	3·5	..	..	Calm	..	10
	7	29·429	37·3	33·2	4·1	..	..	Calm	..	10
	8	29·433	35·4	31·9	3·5	..	..	Calm	..	8
	9	29·436	33·2	30·7	2·5	..	..	Calm	..	2
	10	29·447	32·3	31·1	1·2	28·0	4·3	Calm	..	2
	12	29·457	31·7	30·5	1·2	..	..	Calm	..	8
	13	29·447	30·2	30·0	0·2	..	..	Calm	..	10
	14	29·448	31·5	31·2	0·3	..	..	Calm	..	10
	15	29·439	31·3	31·4	−0·1	..	..	Calm	..	10
	16	29·428	31·0	31·4	−0·4	31·0	0·0	Calm	..	10
	17	29·425	30·8	31·0	−0·2	..	..	Calm	..	10
	18	29·424	30·7	31·0	−0·3	..	..	Calm	..	10
	19	29·429	31·6	31·5	0·1	..	..	Calm	..	10
	20	29·437	31·7	31·6	0·1	..	..	Calm	..	10
	22	29·452	33·5	32·0	1·5	29·0	4·5	Calm	..	10
	23	29·468	35·0	32·4	2·6	..	..	Calm	..	10
March	20. 0	29·477	35·7	34·5	1·2	..	..	Calm	..	9
	1	29·490	37·2	35·5	1·7	..	..	Calm	..	10
	2	29·490	39·8	37·1	2·7	..	..	Calm	..	9
	3	29·500	39·4	36·5	2·9	..	..	Calm	..	7
	4	29·503	39·8	37·0	2·8	34·0	5·8	Calm	..	9
	5	29·526	39·4	35·2	4·2	..	..	Calm	..	10
	6	29·542	38·7	36·5	2·2	..	..	Calm	..	10
	7	29·559	37·7	33·9	3·8	..	..	Calm	..	10
	8	29·574	36·0	33·4	2·6	..	..	Calm	..	10
	9	29·590	34·8	32·5	2·3	..	..	Calm	..	10
	10	29·586	34·5	33·4	1·1	32·0	2·5	Calm	..	10
	12	29·592	33·0	32·0	1·0	..	..	Calm	..	4
	13	29·590	30·6	30·0	0·6	..	..	Calm	..	1
	14	29·590	30·7	29·7	1·0	..	..	Calm	..	0
	15	29·594	30·3	29·2	1·1	..	..	Calm	..	1
	16	29·578	29·1	27·7	1·4	23·0	6·1	Calm	..	2
	17	29·568	27·8	27·2	0·6	..	..	Calm	..	2
	18	29·564	27·6	27·2	0·4	25·0	2·6	Calm	..	3
	19	29·560	27·0	27·2	−0·2	..	..	Calm	..	2
	20	29·554	28·8	28·7	0·1	..	..	Calm	..	1
	21	29·546	32·8	31·4	1·4	..	..	Calm	..	0
	22	29·527	38·0	32·2	5·8	24·5	13·5	Calm	..	4
	23	29·507	41·5	37·6	3·9	..	..	S	0 to ½	8
March	21. 0	29·490	42·8	39·1	3·7	..	..	S by W	0 to ½	9
	1	29·458	45·7	41·1	4·6	..	..	SSW	½ to 2	7
	2	29·436	45·4	41·6	3·8	..	..	SSW	½ to 2½	8

DRY THERMOMETER.

March 19d. 15h, 16h, 17h, and 18h. The readings were lower than those of the Wet Thermometer.

March 20d. 18h. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Cirro-stratus: a great gloom prevails.	T D
A thick mist, almost amounting to a fog; there are occasional faint gleams of sunshine.	G
Cirro-stratus and scud: very gloomy towards the N. E.	L
Cirro-stratus and scud.	L
Cirro-stratus, through which the Sun is visible.	T D
Cirro-stratus of various densities, but thicker N. of the zenith than in other directions: the Sun casts a faint shadow.	H B
Cirro-stratus and scud.	L
,,	L
,,	T D
,,	T D
,, the air is nearly calm.	H B
Cirro-stratus and light clouds cover the greater part of the sky: breaks in every direction.	
Cirro-stratus around the N. horizon; in other directions the sky is cloudless.	H B
Cirro-stratus around the N. horizon.	G
Clear in the zenith, and for a short distance around it; cloudy elsewhere.	L
Cirro-stratus.	
,,	
,, snow is falling heavily.	
,, ,,	
,, the snow has ceased falling.	
,,	
,,	
,,	L
,, the snow on the ground is thawing.	H B
,, ,,	
Cirro-stratus and fleecy clouds: there are breaks of small extent in every direction.	
Cirro-stratus, cumulo-stratus, and dark scud; the latter is moving slowly from the N.	
Cirro-stratus and scud: the Sun casts a faint shadow.	
Extensive breaks in every direction, the prevailing clouds being cirro-stratus, a few cumuli, and a large quantity of scud.	
Cirro-stratus, with a break a little N. of the zenith: cumuli in the N. horizon.	H B
Cirro-stratus and scud: the clouds are thin about the zenith.	L
,,	
,,	
,,	
Cirro-stratus: a few stars are occasionally seen about the zenith.	
Cirro-stratus: very dark.	L
Cirro-stratus around the horizon.	H B
Cloudless: very hazy.	
Cloudless, with the exception of some cirro-stratus around the horizon.	
Cirro-stratus around the horizon: light clouds S. of the zenith.	
Cirro-stratus around the horizon; cloudless elsewhere: the stars are dimly seen.	
Cirro-stratus around the horizon: light clouds S. of the zenith: a hoar frost.	
Cirro-stratus around the horizon; elsewhere it is cloudless.	
,, ,, a thin fog.	
Cloudless: a splendidly blue sky.	H B
Cirro-stratus in the N., extending to the S.W.: light fleecy clouds about the zenith; every other portion of the sky is clear.	T D
Cirro-stratus and fleecy clouds in detached masses in every direction.	
Cirro-stratus and fleecy clouds and scud, with a few small breaks.	
Large portions of massive cumuli in the zenith and in the S.; cirri and light fleecy clouds in every other direction.	
Large portions of massive cumuli and light fleecy clouds: some portions of the sky are visible in the zenith and S. E.	

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.	
March 21.	3	29·414	45·8	41·4	4·4	..	..	SSW	1 to 3½	10
	4	29·350	43·0	38·7	4·3	32·0	11·0	S by W	1 to 3½	10
	5	29·320	41·8	38·6	3·2	..	..	S by W	1½ to 5	10
	6	29·288	40·4	38·3	2·1	..	..	S	1½ to 5	10
	7	29·247	39·5	38·2	1·3	..	..	S by E	1 to 4	10
	8	29·201	40·5	40·0	0·5	..	..	SSE	1 to 2½	10
	9	29·180	43·4	42·7	0·7	..	..	S by W	1 to 3½	10
	10	29·149	44·5	43·7	0·8	43·5	1·0	SSW	¾ to 2½	10
	11	29·145	44·5	43·7	0·8	..	..	SSW	½ to 1½	10
	12	29·125	43·4	42·5	0·9	..	..	SSW	½ to 1	10
April 20.	18	29·951	33·3	32·7	0·6	..	..	Calm	..	10
	19	29·951	35·0	35·2	−0·2	..	..	Calm	..	10
	20	29·954	35·8	36·0	−0·2	..	..	Calm	..	10
	21	29·951	38·3	38·4	−0·1	..	..	Calm	..	10
	22	29·948	43·3	42·2	1·1	41·0	2·3	Calm	..	10
	23	29·944	46·2	43·7	2·5	..	..	N	..	5
April 21.	0	29·932	49·0	43·7	5·3	..	..	NNE	..	7
	1	29·923	49·0	44·0	5·0	..	..	N by W	..	8
	2	29·908	51·4	45·7	5·7	..	..	N	..	10
	4	29·873	49·7	42·8	6·9	35·0	14·7	Calm	..	10
	5	29·867	49·8	44·6	5·2	..	..	SW	..	10
	6	29·865	48·5	43·7	4·8	..	..	Calm	..	10
	7	29·858	49·3	43·8	5·5	..	..	Calm	..	8
	8	29·862	43·8	39·8	4·0	..	..	Calm	..	6
	9	29·865	41·8	39·6	2·2	..	..	Calm	..	2
	10	29·861	42·0	39·2	2·8	35·0	7·0	Calm	..	0
	11	29·851	39·0	37·7	1·3	..	..	Calm	..	0
	12	29·840	38·7	37·0	1·7	..	..	Calm	..	4
	13	29·827	38·2	36·6	1·6	..	..	Calm	..	4
	14	29·824	37·6	36·2	1·4	..	..	Calm	..	3
	15	29·805	36·7	35·5	1·2	..	..	Calm	..	3
	16	29·796	36·7	35·5	1·2	34·0	2·7	Calm	..	4
	17	29·787	36·5	35·2	1·3	..	..	Calm	..	4
	18	29·785	36·2	35·2	1·0	..	..	Calm	..	7
	19	29·786	38·4	37·5	0·9	..	..	Calm	..	0
	20	29·785	43·4	41·2	2·2	..	..	Calm	..	6
	22	29·764	50·6	46·5	4·1	40·5	10·1	SE	..	5
	23	29·762	51·4	45·2	6·2	..	..	ESE	..	8
April 22.	0	29·753	52·0	45·9	6·1	..	..	SE	..	10
	1	29·743	53·3	46·2	7·1	..	..	ESE	..	10
	2	29·743	54·1	49·0	5·1	..	..	E by S	..	9
	3	29·733	52·3	47·7	4·6	..	..	E	0 to ½	10
	4	29·730	51·6	47·2	4·4	43·0	8·6	E by S	0 to ½	10
	5	29·730	50·5	45·7	4·8	..	..	E by S	..	10
	6	29·730	49·5	45·7	3·8	..	..	E by S	..	10
	7	29·733	46·6	43·6	3·0	..	..	E by S	..	10
	8	29·735	46·2	42·8	3·4	..	..	E	..	7
	9	29·740	44·0	41·2	2·8	..	..	E	..	5
	10	29·747	42·2	39·7	2·5	37·0	5·2	E by N	..	3
	11	29·738	41·2	39·2	2·0	..	..	ENE	..	1
	12	29·737	40·3	39·1	1·2	..	..	ENE	..	1

DRY THERMOMETER.
April 20d. 19h, 20h, and 21h. The readings were below those of the Wet Thermometer.

REMARKS.	Observer.
Cirro-stratus, fleecy clouds, and scud of various densities.	T D
Cirro-stratus, cumulo-stratus, and scud: occasional drops of rain.	H B
Cirro-stratus and cumulo-stratus: the wind in gusts to $1\frac{1}{2}+$.	
Cirro-stratus, cumulo-stratus, and scud: the wind in gusts to 2.	
,, some drops of rain are falling: the wind in gusts to $2\frac{1}{2}$.	
,, rain falling.	
,, ,, the wind in gusts to $2\frac{1}{2}$.	
Cirro-stratus and cumulo-stratus: the rain has ceased: the wind in gusts to $1\frac{1}{2}$.	
,, rain is falling: the wind in gusts to 1.	H B
Cirro-stratus: the air is very dense, but no rain is falling.	T D
Overcast: foggy.	L
,, dense fog.	
,, ,,	
,, the fog is not quite so dense.	L
The fog still prevails.	T D
Cumuli, and some light fleecy clouds, with some portions of cirri in the horizon.	
Cirro-stratus in the W. to a considerable elevation: cumuli in the horizon.	
Cirro-stratus, detached cumuli, and fleecy clouds in every direction.	
Cirro-stratus of a thin character covers the sky, through which the Sun faintly gleams.	T D
Cirro-stratus and scud: a few cumuli towards the N.	L
Cirro-stratus, scud, and fleecy clouds.	
,,	
,, some breaks in the zenith and towards the W.	
Cirro-stratus around the horizon.	
Cirro-stratus towards the horizon; cloudless elsewhere.	
Cloudless.	L
,, a thin haze prevails.	T D
Cirro-stratus: heavy vapour prevails in the horizon; the stars are dimly seen.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
Cirro-stratus in the N. E., and dense haze around the horizon.	
Cirro-stratus of a thin character covers the sky, with the exception of a small portion in the S. E.	
Cloudless: hazy in the horizon.	
Thin cirro-stratus in the horizon to a considerable distance: the clouds are more dense in the N. and N. W.	T D
Cirro-stratus prevails to a great extent, but less dense in the S. E.; a few cumuli in the N. W.	H B
Cirro-stratus, cumuli, and fragments of scud.	
Cirro-stratus, cumuli, and scud.	
,,	
Cirro-stratus of a thin character: large masses of scud near the S. horizon.	H B
Cirro-stratus and scud.	T D
,,	
,,	
,,	
Cirro-stratus, but of great density in the W.	
Cirro-stratus, with some detached cirri and fleecy clouds in the S. W.	T D
Cloudy in the horizon; clear in and around the zenith.	G
Cirro-stratus around the horizon: the stars are dimly seen.	
With the exception of a few clouds near the horizon the sky is cloudless.	
,,	G

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
	d h	in.	°	°	°	°	°		from lbs. to lbs.	
April	22. 13	29·733	39·0	38·4	0·6	..	..	ENE	..	1
	14	29·717	38·3	37·9	0·4	..	..	Calm	..	0
	15	29·702	39·0	38·7	0·3	..	..	ENE	..	0
	16	29·698	38·9	38·5	0·4	37·0	1·9	ENE	..	0
	17	29·691	37·8	37·5	0·3	..	..	ENE	..	0
	18	29·693	38·0	37·7	0·3	..	..	ENE	..	1
	19	29·702	39·5	39·2	0·3	..	..	ENE	..	6
	20	29·700	43·4	42·8	0·6	..	..	ENE	..	6
	21	29·701	46·4	44·2	2·2	..	..	ENE	½ steady	6
	22	29·703	47·5	44·7	2·8	42·0	5·5	ENE	¼ ,,	10
	23	29·700	50·5	46·1	4·4	..	..	NE	..	9
April	23. 0	29·686	50·0	45·6	4·4	..	..	ENE	..	9
	1	29·683	51·5	45·9	5·6	..	..	ENE	..	7
	2	29·675	52·5	45·8	6·7	..	..	E by N	..	9½
	3	29·665	53·3	47·2	6·1	..	..	NE	..	8
	4	29·657	53·5	48·3	5·2	41·5	12·0	ENE	..	10
	5	29·656	52·5	49·2	3·3	..	..	NE	..	10
	6	29·658	48·5	45·2	3·3	..	..	NE	..	10
	7	29·656	49·0	44·6	4·4	..	..	E	..	10
	8	29·663	47·5	44·6	2·9	..	..	E by N	..	10
	9	29·663	45·7	42·9	2·8	..	..	ENE	..	9
	10	29·670	44·8	42·2	2·6	39·0	5·8	ENE	..	4
	11	29·664	43·8	42·0	1·8	..	..	NE	..	10
	12	29·654	43·8	42·1	1·7	..	..	NE	..	10
	13	29·644	42·5	41·5	1·0	..	..	NE by N	..	5
	14	29·625	41·8	41·0	0·8	..	..	NNE	..	4
	15	29·625	42·7	41·7	1·0	..	..	NE	..	10
	16	29·609	42·3	42·2	0·1	42·0	0·3	NE	..	10
	17	29·610	42·5	42·5	0·0	..	..	NE	..	10
	18	29·613	42·8	42·7	0·1	..	..	NE	..	10
	19	29·618	43·2	43·2	0·0	..	..	NNE	..	10
	20	29·627	45·5	45·3	0·2	..	..	NNE	..	10
	21	29·631	46·6	46·0	0·6	..	..	NE	..	10
	22	29·644	46·8	45·9	0·9	45·0	1·8	ENE	..	10
	23	29·652	49·0	47·5	1·5	..	..	ENE	..	9
April	24. 0	29·657	50·6	49·5	1·1	..	..	Calm	..	10
	1	29·661	52·2	50·0	2·2	..	..	Calm	..	8
	2	29·666	52·2	50·4	1·8	..	..	Calm	..	10
	3	29·661	55·3	53·0	2·3	..	..	S by W	..	7
	4	29·658	55·2	51·2	4·0	46·0	9·2	Calm	..	8
	5	29·660	53·4	50·6	2·8	..	..	Calm	..	7
	6	29·673	52·0	49·7	2·3	..	..	Calm	..	10
	7	29·693	51·0	48·4	2·6	..	..	Calm	..	10
	8	29·721	49·6	48·0	1·6	..	..	Calm	..	10
	9	29·734	46·8	46·4	0·4	..	..	Calm	..	4
	10	29·746	44·9	44·3	0·6	43·5	1·4	Calm	..	0
	12	29·769	43·0	42·2	0·8	..	..	Calm	..	0
	13	29·773	42·4	41·7	0·7	..	..	Calm	..	0
	14	29·775	41·5	41·1	0·4	..	..	Calm	..	3
	15	29·772	41·7	41·4	0·3	..	..	Calm	..	5
	16	29·776	42·0	41·7	0·3	41·5	0·5	Calm	..	9

REMARKS.	Observer.
A bank of cirro-stratus towards the N. horizon; clear elsewhere.	L
Cloudless.	
,,	L
,,	H B
Cloudless, with the exception of a few fragments of cirro-stratus near the S. horizon.	
A few light clouds and fragments of cirro-stratus near the horizon.	H B
Cirro-stratus around the horizon, and detached portions are scattered over the remainder of the sky.	T D
The same as at the last observation.	
Cirro-stratus, cumulo-stratus, and a few masses of light scud.	T D
The sky is covered with large masses of scud and cumulo-stratus clouds: occasional small patches of blue sky are visible.	G
Cumuli are forming all around the horizon; occasional bright gleams of sunshine: scud is passing from the E.	G
Cirro-stratus, cumulo-stratus, and scud.	H B
,, extensive breaks in the clouds N. E. of the zenith.	
,, a few cumuli near the N. N. E. horizon.	
,, an extensive portion of the sky S. of the zenith is clear.	
,,	H B
Cirro-stratus, fleecy clouds, and scud.	L
,,	L
The sky is covered with a thin cirro-stratus.	T D
,,	T D
Cirro-stratus: a few stars are visible near the zenith.	G
The sky is generally cloudy to the altitude of 20° round the horizon, the remainder being clear.	G
Cirro-stratus and scud: rain falling slightly.	H B
,, a single star is visible near the zenith.	
Cirro-stratus near the horizon, and more especially towards the N.	
Cirro-stratus and scud near the horizon, in every direction.	
Cirro-stratus and scud: light drops of rain.	
,, heavy rain.	
,, ,,	
,, ,,	
,, ,,	
,, the rain has ceased.	
,,	H B
,,	L
Cirro-stratus, scud, and fleecy clouds: a few breaks near the Sun.	
Cirro-stratus and scud.	
Cirro-stratus, scud, and fleecy clouds: small breaks in all directions: a few cumuli towards the N. horizon.	
Cirro-stratus and fleecy clouds: a few small breaks near the E. horizon.	
Cirro-stratus and scud in all directions: a few cumuli in the N.	L
Cirro-stratus, scud, and fleecy clouds.	H B
,, extensive portions of clear sky around the zenith: cirri in the E. S. E.	
Cirro-stratus, cumulo-stratus, and scud.	
Cirro-stratus and scud: a few breaks are visible, but of small extent.	
,,	
Cirro-stratus and scud around the horizon: a few drops of rain have fallen since the last observation.	
Cloudless.	H B
,, a thin haze prevails in the horizon.	T D
,, ,,	
Cirro-stratus in the N.: the remainder of the sky is cloudless.	
Cirro-stratus around the horizon: clear about the zenith.	
Cirro-stratus of various densities: rain has commenced falling.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
April 24. 17	29·778	41·7	41·7	0·0	..	..	Calm	..	10
18	29·782	42·0	41·8	0·2	..	..	Calm	..	10
20	29·794	45·0	44·9	0·1	..	..	Calm	..	9
22	29·804	54·0	51·2	2·8	48·0	6·0	ESE	..	8
23	29·797	56·7	52·8	3·9	..	..	E by S	..	6
May 20. 18	29·509	47·5	46·9	0·6	..	..	Calm	..	7
19	29·534	50·0	48·9	1·1	..	..	Calm	..	6
20	29·543	55·0	52·9	2·1	..	..	S by E	..	9
21	29·552	54·2	52·0	2·2	..	..	SSE	..	9
22	29·582	57·0	53·7	3·3	49·0	8·0	S by E	..	10
23	29·592	60·7	55·2	5·5	..	..	SSE	..	7
May 21. 0	29·618	59·5	54·0	5·5	..	..	SE	..	7
1	29·634	63·5	57·7	5·8	..	..	SSE	..	5
2	29·654	63·2	56·1	7·1	..	..	SE	..	5
3	29·672	61·0	54·4	6·6	..	..	SE	..	10
4	29·655	60·0	54·7	5·3	50·0	10·0	..	..	10
5	29·691	59·7	55·2	4·5	..	..	E by N	..	8
6	29·738	58·5	54·9	3·6	..	..	E by S	..	10
7	29·751	57·0	54·2	2·8	..	..	E	..	7
8	29·770	54·3	53·0	1·3	..	..	ESE	..	4
9	29·798	52·0	50·4	1·6	..	..	E by S	..	6
10	29·816	50·0	49·0	1·0	46·0	4·0	Calm	..	1
12	29·864	47·8	47·4	0·4	..	..	Calm	..	1
13	29·872	47·0	47·2	−0·2	..	..	Calm	..	3
14	29·883	46·0	45·9	0·1	..	..	Calm	..	2
15	29·894	45·0	45·0	0·0	..	..	Calm	..	3
16	29·907	43·0	43·2	−0·2	42·5	0·5	Calm	..	5
17	29·924	41·5	41·5	0·0	..	..	Calm	..	4
18	29·952	43·6	44·2	−0·6	..	..	Calm	..	6
19	29·968	46·8	47·2	−0·4	..	..	Calm	..	10
20	29·997	49·6	49·7	−0·1	..	..	Calm	..	8
21	30·013	57·6	54·9	2·7	..	..	Calm	..	1
22	30·022	61·8	55·5	6·3	51·0	10·8	Calm	..	0
23	30·026	64·0	57·8	6·2	..	..	S by E	..	3
May 22. 0	30·032	64·3	57·5	6·8	..	..	SW	..	6
1	30·036	67·5	59·6	7·9	..	..	Calm	..	4
2	30·037	69·5	60·7	8·8	..	..	Calm	..	5
3	30·035	69·2	60·4	8·8	..	..	S by W	..	4
4	30·029	67·7	59·5	8·2	49·0	18·7	SW	..	7
5	30·036	66·7	59·5	7·2	..	..	SSW	..	4
6	30·038	66·1	58·2	7·9	..	..	SW	..	5
7	30·051	65·4	59·1	6·3	..	..	SSW	..	1
8	30·054	60·6	54·7	5·9	..	..	Calm	..	½
9	30·074	57·6	53·2	4·4	..	..	Calm	..	1
10	30·084	55·3	51·5	3·8	48·5	6·8	Calm	..	1
11	30·085	52·8	50·5	2·3	..	..	Calm	..	1½
12	30·098	53·7	50·9	2·8	..	..	Calm	..	10
13	30·088	53·0	50·5	2·5	..	..	Calm	..	10
14	30·076	52·4	50·2	2·2	..	..	Calm	..	7

DRY THERMOMETER.
May 21d. 13h, 16h, 18h, 19h, and 20h. The readings were below those of the Wet Thermometer.

REMARKS.	Observer.
Cirro-stratus and scud: the rain has ceased.	T D
,, a slight shower of rain fell five minutes previously to this observation.	
Clouds of no definite modification: a fog has prevailed since 19^h.	T D
Cirro-stratus, fleecy clouds, and scud: a few small breaks W. of the zenith.	L
,, breaks in all directions.	
The sky N. of the zenith is covered with cloud: cirro-stratus towards the S. horizon, and a few cirri and light clouds S. of the zenith.	
Cirro-stratus and scud around the horizon: a few cumuli towards the N.; light clouds elsewhere.	
Cirro-stratus and large masses of scud and detached cumuli cover the greater portion of the sky: a few breaks a little N. of the zenith.	
Cirro-stratus and detached cumuli cover the greater portion of the sky: a single break N. of the zenith.	L
Cirro-stratus and masses of scud in every direction.	H B
Cirro-stratus, cumuli, and masses of white scud.	
Cirro-stratus, detached cumuli, and masses of dark scud: breaks in every direction.	
Cumulo-strati in the N.: cumuli and fragments of scud near the S. and S. E. horizon.	
Cumuli and fragments of scud in every direction.	
Cirro-stratus and scud.	H B
Cirro-stratus, large masses of scud, and detached cumuli cover the sky.	L
Cirro-stratus and scud in every direction.	
Detached cumuli, cirro-stratus, and scud cover the sky.	
Cirro-stratus and fragments of scud in all directions.	
Cirro-stratus around the horizon; light clouds elsewhere.	
Cirro-stratus and scud in every direction.	
A bank of cirro-stratus in the N.; clear elsewhere.	L
Cirro-stratus in the S. E. and around the horizon: very hazy.	H B
Cirro-stratus S. of the zenith: very hazy.	
Cirro-stratus and fragments of scud near the S. horizon: hazy.	
,, a fog.	
Cirro-stratus to a considerable altitude: a dense fog.	
,, ,,	
,, ,,	
Cirro-stratus and vapour.	
,, the fog is less dense.	
Cirro-stratus near the N., W., and S. parts of the horizon: the fog and haze have nearly disappeared.	H B
Cloudless.	T D
Cumuli in detached portions around the horizon.	
Cirro-stratus in the N.; cumuli of various formations cover the remainder of the sky.	
Cumuli in detached masses cover the whole sky.	
Cirro-strati and cumuli around the horizon: cloudless in the zenith.	
Cumuli, cirro-strati, and light scud in all directions.	T D
Cumulo-strati in the N. and S. E.: detached cumuli and cirri S. of the zenith.	H B
Cumulo-strati around the N. horizon: cumuli and a few fragments of scud near the S. E.	
Cumuli, comoid-cirri, and a few fragments of scud.	
Cirro-stratus near the N. horizon: light cirri N. and S. of the zenith.	
Light cirri near the S. horizon.	
Cirro-stratus around the horizon.	
A few lines of cirro-stratus near the N. and W. horizon; cloudless elsewhere.	
Cirro-stratus along the N. and W. horizon.	H B
Cirro-stratus and scud.	T D
,,	
Cirro-stratus around the horizon: the stars are shining dimly in the zenith.	

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	Pressure in pounds per square foot.	Amount of Clouds 0—10.
	d h	in.	°	°	°	°	°		from lbs. to lbs.	
May	22. 15	30·073	51·5	49·7	1·8	..	..	SSW	..	3
	16	30·063	51·0	49·2	1·8	48·0	3·0	S by W	..	5
	17	30·067	51·2	49·4	1·8	..	..	Calm	..	5
	18	30·069	51·3	49·6	1·7	..	..	SSW	..	7
	19	30·081	55·0	52·9	2·1	..	..	SW	..	7
	20	30·096	57·5	55·2	2·3	..	..	WSW	..	10
	21	30·099	59·4	55·5	3·9	..	..	W by S	..	10
	22	30·108	61·0	55·5	5·5	51·0	10·0	WSW	..	10
	23	30·109	62·2	57·2	5·0	..	..	W by S	..	10
May	23. 0	30·104	62·8	58·5	4·3	..	..	W	..	10
	1	30·102	62·0	58·0	4·0	..	..	W by N	..	10
	2	30·105	60·8	56·7	4·1	..	..	W	..	10
	3	30·095	61·2	57·2	4·0	..	..	Calm	..	10
	4	30·081	62·5	58·4	4·1	55·0	7·5	N by W	..	10
	5	30·084	63·3	59·7	3·6	..	..	N by W	..	10
	6	30·079	63·0	59·4	3·6	..	..	Calm	..	10
	7	30·077	60·0	58·4	1·6	..	..	Calm	..	4
	8	30·077	57·8	57·0	0·8	..	..	Calm	..	3
	9	30·104	57·2	56·1	1·1	..	..	Calm	..	10
	10	30·107	57·6	56·2	1·4	54·0	3·6	Calm	..	10
May	29. 10	30·199	52·6	48·8	3·8	45·5	7·1	Calm	..	0
	11	30·198	50·4	47·3	3·1	..	..	Calm	..	0
	12	30·199	49·1	46·3	2·8	..	..	Calm	..	0
	13	30·204	46·3	44·7	1·6	..	..	Calm	..	0
	14	30·190	46·3	44·2	2·1	..	..	Calm	..	0
	15	30·182	44·7	43·7	1·0	..	..	Calm	..	0
	16	30·178	45·5	43·7	1·8	42·0	3·5	Calm	..	0
	17	30·171	45·8	44·2	1·6	..	..	Calm	..	0
	18	30·178	45·8	44·7	1·1	..	..	Calm	..	0
	19	30·179	50·0	48·3	1·7	..	..	Calm	..	1
	20	30·181	56·3	51·9	4·4	..	..	Calm	..	0
	21	30·182	62·5	55·5	7·0	..	..	Calm	..	1
	22	30·186	64·7	55·6	9·1	46·0	18·7	Calm	..	0
	23	30·175	67·5	58·4	9·1	..	..	WSW	..	0
May	30. 0	30·155	69·1	59·4	9·7	..	..	SW	..	1
	1	30·137	71·8	62·2	9·6	..	..	..	..	0
	2	30·128	72·2	62·7	9·5	..	..	..	..	0
	3	30·112	71·9	62·1	9·8	..	..	..	..	0
	4	30·101	71·3	61·6	9·7	56·0	15·3	..	..	0
	5	30·089	71·2	61·9	9·3	..	..	..	..	0
	6	30·070	70·2	62·3	7·9	..	..	..	..	3
	7	30·064	68·5	61·9	6·6	..	..	..	..	2
	8	30·066	63·5	58·2	5·3	..	..	..	..	2
	9	30·075	60·0	56·0	4·0	..	..	..	..	0
	10	30·069	58·6	54·7	3·9	51·0	7·6	..	..	0
June	21. 18	29·859	61·0	60·4	0·6	..	..	Calm	..	10
	19	29·856	62·9	62·2	0·7	..	..	Calm	..	10
	20	29·857	68·0	65·8	2·2	..	..	ENE	..	8½
	21	29·847	71·3	66·8	4·5	..	..	ENE	..	3
	22	29·832	76·2	69·4	6·8	65·0	11·2	NE by N	..	0

OSLER'S ANEMOMETER.

May 30d. 1h. The direction-pencil went off the rackwork at this time, but during the continuance of the Hourly Observations afterwards the air was nearly in a calm state.

REMARKS.	Observer.
A few lines of cirro-stratus in the N. horizon; cloudless elsewhere.	T D
Cirro-stratus and fleecy clouds extending from the N. horizon to the zenith, and detached portions in other directions: clear in [the S.	
Cirro-stratus and fleecy clouds.	
,, some beautiful specimens of mottled cirri are exhibited in the N. and N. E.	
,,	
Cirro-stratus.	
,,	T D
,,	L
,,	
Clrro-stratus and scud.	
,,	
,,	
,,	L
,,	T D
,,	
Cirro-stratus, cumuli, and scud: the Sun shines dimly through the clouds.	
Cirro-stratus, cumuli, and scud in the N.; cloudless elsewhere.	T D
Cirro-stratus and fleecy clouds towards the N.; clear elsewhere.	L
Cirro-stratus, fleecy clouds, and scud cover the sky.	
,,	L
Cloudless.	D
,,	
,,	D
,,	L
,,	
,,	L
,,	T D
Cloudless: a thin mist prevails.	
,,	T D
Cirro-stratus and vapour near the horizon.	H B
Cloudless: a thin fog.	
Cirro-stratus and vapour near the horizon.	H B
Cloudless.	D
,,	L
Cirro-stratus around the horizon.	H B
Cloudless.	D
,,	
,,	
,,	
,,	D
Cirro-stratus and vapour near the horizon: very hazy.	H B
,, ,,	H B
,,	L
Cloudless.	L
Overcast: cirro-stratus and scud: a thick haze prevails.	T D
,, ,, ,,	
Cirro-stratus all around the horizon: large clear breaks to the W. and N. W. of the zenith.	
Fragments of cirri and light clouds scattered in various parts of the sky.	T D
There are a few light clouds towards the N., but to no numerical amount.	L

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
	d h	in.	°	°	°	°	°		from lbs. to lbs.	
June	21. 23	29·809	79·6	71·4	8·2	..	..	NE	..	1
June	22. 0	29·790	85·0	72·0	13·0	..	..	ESE	..	3
	1	29·756	86·8	73·2	13·6	..	..	ESE	..	2
	2	29·736	85·0	72·7	12·3	..	..	E by N	..	3
	4	29·685	85·2	72·7	12·5	64·4	20·8	E by S	0 to ¼	4
	5	29·662	84·0	71·1	12·9	..	..	..	..	4
	6	29·648	82·0	70·2	11·8	..	..	..	0 to 1	7
	7	29·621	79·9	69·7	10·2	..	..	..	..	1½
	8	29·614	77·0	67·8	9·2	..	..	..	..	8
	9	29·605	74·5	65·4	9·1	..	..	Calm	..	7
	10	29·609	71·3	65·1	6·2	61·0	10·3	Calm	..	6
	12	29·522	68·0	63·9	4·1	..	..	Calm	..	9
	13	29·521	66·0	64·4	1·6	..	..	Calm	..	10
	14	29·492	64·7	63·6	1·1	..	..	Calm	..	10
	15	29·476	64·2	63·2	1·0	..	..	Calm	..	10
	16	29·464	63·5	62·7	0·8	61·0	2·5	Calm	..	10
	17	29·454	61·2	60·7	0·5	..	..	Calm	..	10
	18	29·446	60·5	60·2	0·3	..	..	W by N	0 to 1	10
	19	29·439	60·5	60·2	0·3	..	..	Calm	..	10
	20	29·450	60·6	60·2	0·4	..	..	Calm	..	10
	21	29·456	60·6	60·4	0·2	..	..	WSW	..	10
	22	29·444	62·8	62·6	0·2	62·0	0·8	WSW	..	10
	23	29·441	64·3	61·1	3·2	..	..	WSW	½ to 1½	6
June	23. 0	29·460	62·5	59·6	2·9	..	..	WSW	½ to 3½	10
	1	29·477	61·4	59·5	1·9	..	..	WSW	½ to 1	10
	2	29·473	63·5	58·0	5·5	..	..	WSW	0 to ½	10
	3	29·480	62·9	59·2	3·7	..	..	WSW	½ to 3	9
	4	29·504	63·5	58·0	5·5	52·0	11·2	WSW	½ to 1½	10
	5	29·498	62·0	56·2	5·8	..	..	WSW	..	10
	6	29·504	63·2	56·8	6·4	..	..	WSW	½ to 2	8
	7	29·506	62·0	54·2	7·8	..	..	WSW	½ to 2½	4
	8	29·526	58·6	52·9	5·7	..	..	WSW	0 to ½	7
	9	29·481	57·3	52·5	4·8	..	..	SW	..	6
	10	29·522	54·7	51·7	3·0	49·0	5·7	SW	..	7
	12	29·500	54·0	51·6	2·4	..	..	SW	..	9
	13	29·493	54·2	51·6	2·6	..	..	SW	..	10
	14	29·484	53·2	50·8	2·4	..	..	SW	..	4
	15	29·476	52·1	49·7	2·4	..	..	SW by S	..	3
	16	29·456	50·7	48·7	2·0	45·8	4·9	SW	..	2
	17	29·446	50·5	48·7	1·8	..	..	Calm	..	5
	18	29·430	52·5	51·2	1·3	..	..	Calm	..	9
	19	29·409	58·3	55·5	2·8	..	..	Calm	..	9
	20	29·394	58·1	55·2	2·9	..	..	SW	..	7
	21	29·383	59·6	56·4	3·2	..	..	SSW	..	10
	22	29·360	61·0	57·4	3·6	55·0	6·0	Calm	..	10
	23	29·337	61·4	57·4	4·0	..	..	Calm	..	10
June	24. 0	29·329	58·5	56·2	2·3	..	..	S by E	..	10
	1	29·293	64·0	60·1	3·9	..	..	Calm	..	10
	2	29·272	60·5	56·1	4·4	..	..	Calm	..	10
	3	29·252	60·0	54·8	5·2	..	..	Calm	..	10

REMARKS.	Observer.
Fleecy clouds towards the S. horizon, every other part of the sky is clear.	L
Cirri and fleecy clouds in various directions, mostly N. of the zenith; also there are a few cirro-cumuli.	
Cirro-stratus and fleecy clouds.	
Cumulo-strati, cumuli, and loose fragments of scud.	L
,, ,,	T D
,, ,,	
Cirro-stratus in the S. and S. E: large masses of detached cumuli in every direction.	
A bank of cumuli in the S. with some detached portions in the N.; clear elsewhere.	
Cumuli, cumulo-strati, and scud: the clouds have an electrical appearance.	
,, a large clear break S. of the zenith.	
Cumuli, cumulo-strati, scud, and fleecy clouds: distant thunder occasionally heard.	T D
Cirro-strati, cumulo-strati, and large masses of scud: constant flashes of lightning from clouds in the N. and S.W.	L
Cirro-stratus and scud: rain falling heavily: there have been occasional flashes of lightning: between $12^h.\ 10^m$ and $12^h.\ 40^m$ the wind blew with a pressure from 3 lbs. to 4 lbs. on the square foot, and at the latter time the air became in a calm state again.	
Cirro-stratus and scud: rain falling.	
,, ,,	
,, ,,	
,, rain falling slightly.	
,, ,,	
,, ,,	
,, ,,	
,, the rain has ceased.	L
,,	H B
Cumuli and masses of dark scud: the wind in gusts to $\frac{3}{4}$: the clouds became much broken a few minutes before the observation.	
Cirro-stratus, cumulo-stratus, and scud: rain falling.	
Cirro-stratus and scud: rain falling slightly.	
,, the wind in gusts to $1\frac{1}{2}$.	
,, rain has been falling heavily since the last observation: thunder has been frequently heard.	H B
,, large drops of rain occasionally: the wind in gusts to $1\frac{1}{2}$.	L
,, ,, small breaks about the zenith: the wind in gusts to $1\frac{1}{2}$.	
Cirro-strati, cumulo-strati, and cumuli in all directions: some breaks, mostly about the zenith.	
Cirro-strati, cumuli, and scud: a clear sky S. of the zenith.	
,, some breaks about the zenith: the wind in gusts to $\frac{1}{2}$.	
Cirro-stratus and large masses of scud in all directions.	
Thin cirro-stratus and scud N. of the zenith, with masses of dark scud about the S.: the wind in gusts to $\frac{1}{2}$.	L
Cirro-stratus and dense scud: flashes of lightning are occasionally seen in the S. E.	H B
Cirro-stratus and scud.	
Cirro-stratus and dark scud N. of the zenith.	
Cirro-stratus and scud.	
Fragments of cirro-strati and scud in various directions.	
Cirro-strati and scud are generally prevalent.	
Cirro-strati and fleecy clouds cover the sky.	
,, some breaks of small extent.	
Cirro-strati and scud S. of the zenith: clear in the N.	
Cirro-strati and scud.	H B
,,	T D
,,	
Cirro-stratus and scud: a thin rain falling.	
,, the rain has ceased falling: occasional gleams of sunshine.	
,, rain falling heavily.	
,,	T D

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
	d h	in.	°	°	°	°	°		from lbs. to lbs.	
June	24. 4	29·247	59·3	53·5	5·8	48·0	11·3	Calm	..	10
	5	29·235	64·0	56·8	7·2	..	..	Calm	..	7
	6	29·232	62·2	55·3	6·9	..	..	WSW	..	9½
	7	29·246	61·0	54·5	6·5	..	..	Calm	..	9½
	8	29·253	57·0	52·5	4·5	..	..	Calm	..	6
	9	29·280	54·8	51·7	3·1	..	..	Calm	..	10
	10	29·272	53·7	50·9	2·8	45·0	8·7	Calm	..	10
	11	29·293	52·2	50·0	2·2	..	..	Calm	..	10
	12	29·296	53·0	49·8	3·2	..	..	SW	..	10
	13	29·294	51·5	49·0	2·5	..	..	Calm	..	8
	14	29·298	50·8	48·7	2·1	..	..	Calm	..	9
	15	29·306	51·8	49·2	2·6	..	..	Calm	..	10
	16	29·309	50·5	48·5	2·0	47·0	3·5	Calm	..	10
	17	29·318	50·0	48·4	1·6	..	..	Calm	..	2
	18	29·335	50·6	48·6	2·0	..	..	SW	..	7
	19	29·349	51·2	49·0	2·2	..	..	SW by W	0 to ¼	0
	20	29·362	57·7	53·5	4·2	..	..	SW	½ to 1	8
	21	29·370	58·5	52·6	5·9	..	..	WSW	½ to 3	4
	22	29·387	63·5	55·6	7·9	..	..	WSW	1 to 2½	9
	23	29·396	64·3	55·0	9·3	..	..	SW by W	1½ to 4	7
June	25. 0	29·404	59·5	52·7	6·8	..	..	SW by W	1 to 2½	8
	1	29·401	65·8	55·0	10·8	..	..	SW by W	1 to 2½	4
	2	29·406	67·5	56·2	11·3	..	..	SW by W	1 to 2½	8
	3	29·435	62·7	54·9	7·8	..	..	SW	½ to 3½	9
	4	29·436	65·0	55·2	9·8	48·0	17·0	WNW	0 to ¾	9
	5	29·448	64·0	54·4	9·6	..	..	WNW	..	8
	6	29·458	62·8	53·9	8·9	..	..	W	0 to ¼	4
	7	29·469	62·6	54·1	8·5	..	..	W by S	..	2
	8	29·485	60·6	50·6	10·0	..	..	Calm	..	1
	9	29·503	56·8	51·4	5·4	..	..	Calm	..	0
	10	29·524	55·3	50·7	4·6	45·5	9·8	Calm	..	0
July	20. 18	29·816	57·5	56·6	0·9	..	..	SSW	..	10
	19	29·809	61·0	58·9	2·1	..	..	SSW	..	10
	20	29·801	62·2	59·7	2·5	..	..	SSW	..	10
	21	29·803	64·7	60·9	3·8	..	..	SSW	0 to ¼	10
	22	29·786	68·0	62·2	5·8	..	..	SW	1 to 2	10
	23	29·771	..	..	..	..	..	S W	½ to 2	10
July	21. 0	29·771	66·0	60·2	5·8	..	..	SW	½ to 3½	10
	1	29·763	62·0	58·5	3·5	..	..	SW	½ to 1	10
	2	29·760	67·5	61·2	6·3	..	..	SW	¼ to 3½	10
	3	29·751	71·4	63·2	8·2	..	..	SW	1 to 3	7
	4	29·745	69·0	61·0	8·0	..	..	SW	½ to 3	8
	5	29·726	68·9	60·7	8·2	..	..	SW	½ to 3	8
	6	29·720	66·5	59·8	6·7	..	..	SW	¼ to 2	10
	7	29·710	66·2	59·6	6·6	..	..	SW	0 to ½	10
	8	29·700	63·6	59·7	3·9	..	..	SW	0 to ½	10
	9	29·719	62·5	59·1	3·4	..	..	SW	..	10
	10	29·725	62·0	58·4	3·6	56 0	6·0	SW	..	10

DEW POINT THERMOMETER.
June 24d. 22h. The observation was omitted.

THERMOMETER STAND.
July 20d. 23h. The position of the Thermometer Stand was changed at this time; and from that cause no readings of the Dry and Wet Thermometers were taken at this hour, and no reading of the Dew Point Thermometer at 22h.

REMARKS.	Observer.
Cirro-stratus and scud: rain falling in slight showers.	H B
Cirro-stratus, scud, and fleecy clouds in every direction: clear N. of the zenith.	
Cirro-stratus, cumulo-stratus, and masses of dark scud in the E.	
Cirro-stratus and scud: occasional gleams of sunshine.	
,, cirri around the zenith: cirro-cumuli in the S. S.W.	H B
The sky is wholly covered with dark scud, moving slowly from the W.	G
Stratus to the N. and scud to the S.: a thin film of cloud all over the sky.	
Overcast, chiefly with scud: much lightning near the S. horizon.	
Overcast: the sky has become unusually black, and the night is quite dark: the lightning still continues in the S. and S. S. W.	G
Cirro-stratus and scud: breaks about the zenith: wind in gusts to $\frac{1}{2}$.	L
,, small breaks in various parts of the sky.	
Overcast: cirro-stratus and scud.	L
,, ,,	T D
Some detached portions of cirri and scud in the zenith; otherwise the sky is cloudless.	
Cirro-stratus, fleecy clouds, and scud in every direction.	T D
Cloudless.	H B
The sky is now nearly covered with cumuli, cirro-strati, fleecy clouds, and rapidly moving scud; the cumuli are principally S. of the zenith, near the horizon: wind in gusts to 1.	
Scud passing rapidly from the W.: cumuli in various directions.	H B
With the exception of a few clear portions, the sky is covered with loose cumuli: there is no upper cloud.	G
Cumulo-strati to the N. and cumuli to the S.: a bright blue sky between the clouds.	G
Cirro-strati, cumuli, and large masses of white scud: small breaks in various directions: wind in gusts to $1\frac{1}{2}$ and 2: a few drops of rain falling.	L
Cumuli and cumulo-strati around the horizon: masses of white scud floating about: wind in gusts to $1\frac{1}{2}$ and 2.	L
Massive cumuli and portions of cirri scattered over the sky.	T D
Cirro-stratus and masses of scud.	
Cumuli, cirro-strati, and masses of dark scud: thunder was heard a few minutes since in the S. W.	
Cumuli, cumulo-strati, and scud: several loud peals of thunder have been heard since the last observation.	T D
Cumuli towards the S.: masses of loose scud in every direction: a few cirri about the zenith: wind in gusts to 1.	L
Massive cumuli around the S. S.W. and N. E. horizon: scud moving rapidly across the zenith: very hazy near the N. horizon: occasional gusts of wind to 1.	H B
Cumuli near the S. horizon: cirro-stratus and vapour near the N. horizon.	H B
With the exception of a few loose clouds of no numerical extent the sky is cloudless.	G
A few clouds of no numerical amount.	G
Cirro-stratus and scud.	T D
,,	
,, a thin rain has just commenced falling.	
,, a few small breaks in the S. E.	T D
,, wind in gusts to $\frac{1}{2}$.	L
Cirro-stratus, fleecy clouds, and scud.	
Cirro-stratus, fleecy clouds, and scud: the wind in gusts to $\frac{3}{4}$.	L
Cirro-stratus and scud: at $0^h.\ 50^m$ a squall of rain and wind in heavy gusts occurred, which lasted about five minutes.	C T
,, a few small breaks in the zenith: the wind in gusts to $\frac{3}{4}$.	
Cumuli in the N. horizon; cirro-strati and fleecy clouds elsewhere: breaks of some extent, chiefly N. of the zenith.	C T
Cumuli, cumulo-strati, scud, and fleecy clouds: the wind in gusts to 1.	T D
,, ,, ,,	
Cirro-stratus and scud: the wind in gusts to $1\frac{1}{2}$.	
,,	
,,	
,, a few drops of rain have fallen since the last observation.	
Overcast: cirro-stratus and scud.	T D

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
	d h	in.	°	°	°	°	°		from lbs. to lbs.	
July	21. 12	29·724	59·0	55·7	3·3	..	..	SW	½ to 1½	9
	13	29·719	58·2	55·4	2·8	..	..	SW	½ to 1	10
	14	29·709	58·5	55·2	3·3	..	..	SW	½ to ½	10
	15	29·702	57·2	55·0	2·2	..	..	SW	½ to 3	10
	16	29·715	56·5	54·4	2·1	53·0	3·5	SW	..	10
	17	29·724	56·8	54·7	2·1	..	..	SW	½ to 1	10
	18	29·736	58·4	55·4	3·0	..	..	SW	0 to ½	10
	19	29·756	58·5	55·7	2·8	..	..	WSW	½ to ½	4
	20	29·753	62·5	56·4	6·1	..	..	W	0 to 2	2
	22	29·774	66·2	56·2	10·0	50·0	16·2	W by S	0 to ½	5
	23	29·776	70·0	57·0	13·0	..	..	W by N	½ to 1	4
July	22. 0	29·778	70·2	57·5	12·7	..	..	WSW	½ to 1	4
	2	29·786	72·0	58·7	13·3	..	..	WSW	½ to 1½	8
	3	29·781	71·5	58·5	13·0	..	..	WSW	½ to 1	9
	4	29·790	71·8	60·0	11·8	49·0	22·8	WSW	½ to 1	9
	5	29·783	71·0	58·9	12·1	..	..	WSW	..	7
	6	29·778	69·5	58·2	11·3	..	..	WSW	..	6
	8	29·800	65·0	56·5	8·5	..	..	WSW	..	6
	10	29·813	61·1	55·7	5·4	51·0	10·1	Calm	..	10
	11	29·809	60·6	56·2	4·4	..	..	Calm	..	10
	12	29·823	59·0	55·8	3·2	..	..	Calm	..	9
	13	29·803	58·4	56·2	2·2	..	..	Calm	..	10
	14	29·797	57·2	54·8	2·4	..	..	Calm	..	9
	15	29·794	56·0	54·6	1·4	..	..	Calm	..	10
	16	29·781	55·6	54·4	1·2	53·0	2·6	Calm	..	10
	17	29·777	55·7	54·7	1·0	..	..	Calm	..	10
	18	29·787	57·5	55·8	1·7	..	..	Calm	..	10
	19	29·779	59·7	57·2	2·5	..	..	SSW	..	10
	20	29·779	62·0	58·0	4·0	..	..	SSW	..	10
	21	29·778	63·9	58·4	5·5	..	..	SSW	..	10
	22	29·764	65·5	59·4	6·1	55·0	10·5	SSW	0 to ½	10
	23	29·760	67·9	59·9	8·0	..	..	SSW	½ to 1½	6
July	23. 0	29·742	69·0	60·9	8·1	..	..	SSW	0 to ½	7
	1	29·738	75·4	62·8	12·6	..	..	S by W	0 to ½	0
	2	29·727	76·5	62·7	13·8	..	..	SSW	½ to 2	0
	3	29·717	76·8	63·2	13·6	..	..	SW	½ to 1½	0
	4	29·703	76·0	63·4	12·6	57·0	19·0	SSW	½ to 2½	0
	5	29·695	74·0	62·7	11·3	..	..	SSW	½ to 2½	0
	6	29·687	72·3	60·9	11·4	..	..	SSW	½ to 3	0
	7	29·686	70·5	60·4	10·1	..	..	SSW	½ to 1½	0
	8	29·693	68·4	60·0	8·4	..	..	SSW	..	0
	9	29·752	64·4	59·6	4·8	..	..	SSW	..	0
	10	29·705	63·5	59·0	4·5	55·0	8·5	SSW	..	0
August	20. 18	29·564	59·8	59·6	0·2	..	..	N by E	..	10
	20	29·613	60·4	59·8	0·6	..	..	N by E	..	10
	22	29·647	61·6	59·7	1·9	57·8	3·8	N by E	..	10
	23	29·654	65·2	62·2	3·0	..	..	NNW	..	9
August	21. 0	29·661	65·9	61·9	4·0	..	..	N by W	..	10

REMARKS.	Observer.
A few stars are visible in various directions.	G
Dark cirro-stratus: the wind in gusts to $1\frac{1}{2}$.	
Cirro-stratus.	
Overcast: at $14^h.10^m$ the sky became clear for a short time, but afterwards it was covered with cirro-stratus: the wind in gusts to 2.	
,,	
,,	
Overcast, but the cloud is evidently much thinner in some places than in others.	
Scud and loose cumuli are scattered over the sky.	
A few fleecy clouds are scattered over the sky.	G
Cumuli and loose scud are scattered in various directions.	L
,,	
Cirro-stratus towards the S. horizon: cumuli and loose scud in various directions.	L
Cirro-stratus, fleecy clouds, and scud: breaks in various directions.	C T
Cirro-cumuli: several extensive breaks in various directions.	C T
Cumuli, cumulo-strati, and scud.	G
Cirro-cumuli, cumuli, cumulo-strati, and scud, principally N. and E. of the zenith.	
Cirro-cumuli, cumuli, cirro-strati, and scud.	G
Cirro-stratus at a considerable elevation, extending from the S.S.W. horizon.	T D
The sky is nearly covered with a mottled cloud; a solitary star is visible near the zenith.	G
The sky is uniformly overcast.	
A few stars are dimly visible near the zenith; otherwise overcast.	G
Overcast: very dark.	T D
Cirro-stratus, broken in several directions: the stars are visible in the zenith and in the S. S. E.	
The sky is covered with dark cirro-stratus.	T D
Overcast: cirro-stratus and scud.	L
,, ,,	
,, ,,	L
Cirro-stratus and scud: a few small breaks, but to no numerical extent.	C T
A thin cirro-stratus covers the sky, through which the Sun occasionally shines.	
Cirro-stratus and scud, through which the Sun occasionally gleams.	C T
The sky is covered with cirro-stratus, and in some places it is so thin that blue sky is visible: there have been occasional gleams of sunshine.	G
A loose kind of cumuli is scattered near and around the zenith, to the distance of 60°, with large portions of blue sky, but below that it is cloudy.	G
Cirro-stratus in the S. horizon: a loose kind of cumuli and fleecy clouds are profusely scattered over the remainder of the sky.	T D
A few light clouds are scattered about, but to no numerical extent.	C T
A few lines of cirri in the N., but to no numerical extent; otherwise cloudless.	T D
A few light clouds, but to no numerical extent.	L
Cloudless.	L
,,	T D
,,	T D
,,	C T
,,	C T
There are a few cirro-cumuli near the S. E. horizon, and a few stratus clouds near the S.W. horizon, but to no numerical extent.	G
A few small clouds near the zenith; with that exception it is cloudless.	
Cirro-stratus and scud.	G
Cirro-stratus and scud: the clouds are less dense everywhere, and in some places they are very thin.	
Cirro-stratus and dense scud, the latter in slow motion from the N.: hazy.	
Within the last five minutes the clouds have become broken in every direction: the Sun is occasionally visible.	H B
Cirro-stratus and scud.	

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.	
August 21.	1	29·661	63·2	60·5	2·7	..	..	NNW	..	10
	2	29·688	67·0	62·3	4·7	..	..	NNW	..	10
	3	29·696	67·6	61·7	5·9	..	..	N by W	..	6
	4	29·702	67·6	60·7	6·9	56·5	11·1	N by W	½ steady	5
	5	29·719	67·6	61·2	6·4	..	..	N	½ to 1	9
	6	29·735	66·0	60·2	5·8	..	..	N	0 to ½	2
	7	29·758	64·5	60·2	4·3	..	..	N	0 to ½	6
	8	29·795	61·2	58·7	2·5	..	..	N	..	0
	9	29·817	59·2	57·7	1·3	..	..	NNE	..	0
	10	29·823	58·0	57·2	0·8	56·0	2·0	Calm	..	0
	11	29·829	57·7	57·2	0·5	..	..	Calm	..	0
	12	29·835	57·8	57·2	0·6	..	..	Calm	..	9½
	13	29·846	58·3	57·0	1·3	..	..	N	..	10
	14 •	29·851	58·2	57·2	1·0	..	..	N	..	10
	15	29·851	57·2	56·2	1·0	..	..	N	..	10
	16	29·848	57·0	55·9	1·1	54·0	3·0	Calm	..	10
	17	29·851	56·5	55·4	1·1	..	..	N	..	10
	18	29·852	56·5	55·4	1·1	..	..	N	..	10
	19	29·858	56·7	55·9	0·8	..	..	N	..	5
	20	29·866	58·5	57·3	1·2	..	..	N	..	10
	21	29·872	63·0	59·9	3·1	..	..	N	..	5
	22	29·882	64·0	60·7	3·3	58·7	5·3	N	..	10
	23	29·893	64·3	60·2	4·1	..	..	N by W	..	10
August 22.	0	29·887	68·0	63·0	5·0	..	..	N	..	9
	1	29·897	67·0	60·8	6·2	..	..	NNW	..	10
	2	29·897	67·0	60·7	6·3	..	..	N	..	10
	3	29·897	67·0	61·4	5·6	..	..	N	..	9
	4	29·893	66·3	60·7	5·6	56·0	10·3	N	..	8
	5	29·898	66·9	60·8	6·1	..	..	N	..	9
	6	29·899	67·2	60·3	6·9	..	..	N by E	..	5
	7	29·906	63·3	59·2	4·1	..	..	N by E	..	2
	8	29·913	60·7	57·7	3·0	..	..	NNE	..	1
	9	29·930	58·0	56·0	2·0	..	..	NNE	..	0
	10	29·941	56·7	55·7	1·0	54·0	2·7	Calm	..	0
August 28.	10	29·825	57·2	55·2	2·0	54·0	3·2	Calm	..	1
	11	29·826	58·3	57·7	0·6	..	..	Calm	..	0
	12	29·822	58·2	57·9	0·3	..	..	Calm	..	0
	13	29·810	58·5	58·2	0·3	..	..	NE	..	0
	14	29·810	59·3	58·7	0·6	..	..	NNE	..	8
	15	29·806	59·5	58·7	0·8	..	..	Calm	..	10
	16	29·798	59·4	58·7	0·7	57·5	1·9	NNE	..	10
	17	29·799	58·4	58·0	0·4	..	..	NNE	..	10
	18	29·800	57·8	57·7	0·1	..	..	NNE	..	7
	19	29·802	60·2	59·2	1·0	..	..	NNE	..	10
	20	29·807	62·2	60·6	1·6	..	..	NNE	..	10
	21	29·813	63·5	61·2	2·3	..	..	NNE	0 to ¼	9¾
	22	29·829	66·1	62·0	4·1	..	..	N by E	0 to ½	10
	23	29·823	68·4	63·0	5·4	..	..	N	0 to ½	7

REMARKS.	Observer.
Cirro-stratus and dense scud.	G
Cirro-stratus, nimbi, and scud; the cirro-stratus less dense than at the last observation.	
Cumuli, cirro-strati, and scud: the clouds became broken at $2^h.\ 40^m$: there are a few cirro-cumuli in the E. S. E.	
The sky near the zenith is clear: near the horizon there are ill-formed cumuli.	
There are a few small portions of blue sky, but the greater part is covered by scud.	
A few loose cumuli near the horizon.	
Cloudless.	
,,	
,,	
,,	
,, a dense haze prevails near the S. E. horizon; in other directions the stars shine dimly.	H B
Cirro-stratus nearly covers the sky.	
Cirro-stratus.	
,,	
,,	
,, a few stars are occasionally visible.	
,,	
,, a few breaks around the Sun's place. [the Sun's place.	
The sky to the N. of the zenith is nearly cloudless: several cirri are visible to the S.: light fleecy clouds and cirro-stratus near	
The clouds rapidly collected at $19^h.\ 30^m$, and at $19^h.\ 40^m$ every part of the sky was covered with cirro-stratus and dense scud.	
The clouds became extensively broken at $20^h.\ 25^m$, and since that time large masses of scud have been passing over from the N.: some cumuli near the W. horizon.	H B
Cirro-strati, cumulo-strati, and scud.	T D
Cirro-stratus and scud.	
Cirro-stratus and scud.	
,,	
,,	
Cirro-strati, scud, and fleecy clouds.	T D
Cumuli, cumulo-strati, and cirro-strati.	H B
Cirro-stratus and scud.	
Cumulo-strati S. of the zenith, cumuli near the horizon, and in other directions the clouds are gradually disappearing.	
Cirro-stratus, fleecy clouds, and vapour along the W. horizon: light cirri E. of the zenith.	
Cirro-cumuli directly N., and also a few to the S. of the zenith: cirro-stratus near the horizon.	
With the exception of a few fragments of white scud S. of the zenith, the sky is cloudless: foggy.	
Cloudless, but very hazy near the horizon.	H B
A few strati principally near that part of the horizon where the Moon sets; otherwise the sky is cloudless.	G
With the exception of a few dark clouds near the horizon, to no numerical extent, the sky is cloudless.	
Cloudless.	G
,,	T D
Cirro-stratus covers the greater portion of the sky: in the N. and S. S. W. it is clear near the horizon.	
Cirro-stratus and scud.	T D
,,	H B
,, Jupiter is seen through the clouds. [hour since.	
Cirro-cumuli are principally distributed over the sky: cirro-stratus around the horizon: the clouds became broken about half an	H B
A thin cirro-stratus covers the whole sky.	C T
Cirro-stratus and scud: the clouds are much more dense than at the last observation.	
,, there is a large break in the clouds N. of the zenith: a few cirri appear where the clouds are broken.	
The sky is covered with a white cloud of no definite modification; in addition to which, near the horizon in the N., are ill-formed cumuli, and to the S. there is much scud: the upper cloud is thin, and occasionally, as the scud passes, there are gleams of sunshine.	
Cumulo-stratus to the S., and scud and cirro-cumuli to the N., midway between the zenith and the horizon: fine white rocky cumuli near the N. horizon, with a black scud passing from the E. before them: stratus in the N. E.; a portion of clear sky near the zenith.	

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
August 29. 0	29·810	69·0	63·6	5·4	..	..	N	0 to ½	8
1	29·805	70·7	63·9	6·8	..	..	N	0 to ½	7
2	29·807	72·4	64·6	7·8	..	..	N	0 to 1	8
3	29·816	65·8	62·1	3·7	..	..	NNE	½ steady	10
4	29·810	64·5	63·2	1·3	61·5	3·0	N to NE	0 to ½	8
5	29·833	62·0	60·6	1·4	..	..	NE	..	9¾
6	29·835	63·6	61·9	1·7	..	..	NNE	..	8
7	29·847	62·0	60·2	1·8	..	..	NNE	..	10
8	29·861	61·0	58·7	2·3	..	..	NNE	..	8
9	29·884	59·7	58·3	1·4	..	..	NNE	..	7
10	29·894	58·7	57·8	0·9	57·0	1·7	Calm	..	3
Septem. 20. 18	29·390	54·3	53 0	1·3	..	..	Calm	..	10
19	29·401	54·6	53·2	1·4	..	..	Calm	..	10
20	29·423	57·0	55·0	2·0	..	..	Calm	..	9¾
21	29·441	59·9	57·2	2·7	..	..	Calm	..	10
22	29·457	62·0	57·9	4·1	54·0	8·0	ENE	½ to ¾	10
23	29·466	63·2	57·2	6·0	..	..	E	1 to 3	10
Septem. 21. 0	29·461	64·2	58·2	6·0	..	..	E by N	..	10
1	29·468	64·1	57·7	6·4	..	..	ESE	0 to 2	10
2	29·477	62·5	56·7	5·8	..	..	E	..	10
3	29·487	63·0	57·0	6·0	..	..	ENE	..	10
4	29·475	63·8	57·8	6·0	53·0	10·8	E by S	..	10
5	29·478	62·8	57·3	5·5	..	..	ESE	0 to ¾	10
6	29·484	60·0	56·6	3·4	..	..	E by N	..	10
7	29·481	59·2	55·7	3·5	..	..	E	..	10
8	29·488	58·2	55·0	3·2	..	..	Calm	..	10
9	29·494	57·5	54·9	2·6	..	..	Calm	..	9½
10	29·502	56·6	54·7	1·9	52·0	4·6	Calm	..	9
11	29·508	56·6	54·5	2·1	..	..	Calm	..	10
12	29·515	56·5	54·2	2·3	..	..	Calm	..	10
13	29·516	56·1	54·2	1·9	..	..	Calm	..	10
14	29·512	55·9	54·0	1·9	..	..	Calm	..	8
15	29·520	56·0	54·6	1·4	..	..	Calm	..	10
16	29·510	55·5	53·9	1·6	53·5	2·0	Calm	..	10
17	29·511	54·0	53·3	0·7	..	..	Calm	..	8
18	29·515	54·0	53·7	0·3	..	..	Calm	..	7
19	29·519	54·5	54·3	0·2	..	..	Calm	..	7
20	29·530	58·1	57·0	1·1	..	..	Calm	..	8
22	29·544	67·4	61·5	5·9	56·5	10·9	ESE	..	6
23	29·549	63·9	58·7	5·2	..	..	E	..	7
Septem. 22. 0	29·548	68·8	60·9	7·9	..	..	ENE	0 to 1	6
1	29·546	67·2	59·9	7·3	..	..	E	0 to ½	8
2	29·549	69·5	61·3	8·2	..	..	E	..	5

BAROMETER.

Aug. 29d. 9h. This reading was altered conjecturally from 29in·834 to 29in·884.

REMARKS.	Observer.
Cumuli, cumulo-strati, cirro-strati, and scud, in every direction: clear breaks of some extent N. E. of the zenith; some fine cumuli S. of the zenith.	C T
Cirro-cumuli, cirri, and clouds of no definite modification now prevail: cumuli are seen along the N. horizon.	
Cumuli, cirro-strati, and scud; the former chiefly in the N.: several breaks in every direction.	
Rain falling heavily: at $2^h.\ 35^m$ thunder was heard from a heavy cumulo-stratus in the S. E., which afterwards extended and covered the whole sky: at $2^h.\ 55^m$ heavy rain commenced falling.	
Heavy cumulo-stratus S. of the zenith, covering nearly the whole S. portion of the sky: cumuli around the horizon, and frequent showers of rain since the last observation.	
Cumuli in the N.; cirro-stratus elsewhere: an extensive break N. of the zenith: a heavy shower of rain commenced at $4^h.\ 35^m$, and continues, but not so heavily.	
Dense cumuli in the N. to a considerable altitude; cirro-strati, light fleecy clouds, and scud elsewhere: the rain ceased soon after the last observation.	
Cumuli, cumulo-strati, cirro-strati, and scud cover the sky: the clouds towards the N. have a very threatening aspect.	
Cirro-stratus, cumulo-stratus, and scud: some large breaks are exhibited in the S. W., and also in the N.	
Clouds are scattered over the sky, through which patches of blue are visible in different parts.	C T
The appearance of the sky is constantly varying: there is quickly passing scud of a very black appearance, and the clear parts of the sky are very brilliant.	G
Overcast: cirro-stratus and scud.	H B
" "	
Cirro-stratus and scud, the latter moving rapidly from the E.: the upper clouds are cumuli.	
Cirro-stratus and scud, the latter moving slowly from the E.	H B
Cirro-stratus and scud.	L
" the wind blowing in gusts to $\frac{3}{4}$.	L
Cirro-stratus and scud.	C T
"	
"	
"	C T
Cirro-stratus and scud; the latter in rapid motion.	H B
Overcast: cirro-stratus and scud: the wind blowing in gusts to $\frac{3}{4}$.	
" " " a few drops of rain commenced falling shortly after 5^h.	
" " the rain has ceased falling.	
" "	
" " several stars are visible in the S. E. and around the zenith.	
A thin cirro-stratus covers the sky: several stars have been visible at intervals.	
Cirro-stratus and scud: a few stars are visible S. of the zenith.	H B
Overcast: cirro-stratus: the clouds are much broken in the zenith.	C T
" "	
Cirro-stratus.	
The sky is entirely covered with cirro-stratus and haze.	
Overcast: cirro-stratus and scud.	
At $16^h.\ 30^m$ the clouds became much broken, and the stars shone brightly; at present the zenith and parts around it for some degrees are clear, but the stars look dim: the prevailing clouds are cirro-stratus and scud.	
Cirro-stratus and scud.	
Cirro-stratus in the horizon, and cirri and cirro-cumuli in every other part of the sky.	
" "	C T
Cumuli and fleecy clouds around the horizon, and loose scud in other directions: the wind blowing in gusts to $\frac{1}{2}$.	L
Cirro-stratus, dense scud, and fleecy clouds moving from the E.: the clouds to the S. are slightly broken.	H B
Cumuli, cirro-strati, fleecy clouds, and scud: the cirro-strati are very dark, and the fleecy clouds move from the E.N.E.: the wind blowing in gusts to 1.	
Cumuli, cirro-strati, fleecy clouds, and scud: the cumuli are principally to the N.	
Cumuli, cirro-strati, and cirro-cumuli are distributed over every part of the sky.	

Day and Hour, Göttingen Astronomical Reckoning.		Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.	
Septem. 22.	3	29·538	67·8	60·6	7·2	..	..	E	0 to ¼	3
	4	29·533	67·0	60·6	6·4	57·0	10·0	ENE	..	5
	5	29·521	64·0	59·6	4·4	..	..	ENE	..	7
	6	29·504	61·2	58·6	2·6	..	..	E	..	3
	7	29·513	58·5	57·0	1·5	..	..	ESE	..	2
	8	29·516	57·5	54·6	2·9	..	..	ESE	..	3
	9	29·507	57·8	56·8	1·0	..	..	ESE	..	6
	10	29·487	57·6	56·6	1·0	56·5	1·1	ESE	..	8
	11	29·476	57·2	56·6	0·6	..	..	ESE	..	0
	12	29·452	57·7	57·2	0·5	..	..	ESE	..	7
	13	29·416	58·7	58·0	0·7	..	..	SE	..	9
	14	29·396	59·2	58·2	1·0	..	..	SSE	..	3
	15	29·371	60·0	59·5	0·5	..	..	SSE	..	10
	16	29·356	60·5	60·2	0·3	60·0	0·5	S by E	..	10
	17	29·349	60·2	59·8	0·4	..	..	Calm	..	10
	18	29·347	60·0	59·5	0·5	..	..	Calm	..	10
	19	29·353	60·0	59·4	0·6	..	..	Calm	..	10
	20	29·352	60·2	59·4	0·8	..	..	Calm	..	10
	21	29·342	61·8	60·7	1·1	..	..	S by W	..	9
	22	29·352	58·4	57·3	1·1	56·5	1·9	SSW	..	10
	23	29·350	59·7	58·3	1·4	..	..	S by W	..	9
Septem. 23.	0	29·336	67·5	62·9	4·6	..	..	SSW	..	7
	1	29·332	66·8	61·4	5·4	..	..	SSW	..	4
	2	29·315	65·8	61·3	4·5	..	..	S by W	..	10
	3	29·302	67·9	61·8	6·1	..	..	SSW	..	6
	4	29·290	66·9	60·6	6·3	58·0	8·9	S by W	..	4
	5	29·287	64·7	59·4	5·3	..	..	SSW	..	3
	6	29·280	62·8	59·2	3·6	..	..	S by W	..	4
	7	29·275	60·0	58·0	2·0	..	..	S by W	..	1
	8	29·269	59·3	57·7	1·6	..	..	Calm	..	5
	9	29·266	56·4	54·7	1·7	..	..	Calm	..	2
	10	29·253	54·5	53·9	0·6	54·0	0·5	Calm	..	4
	11	29·237	55·7	54·7	1·0	..	..	Calm	..	10
	12	29·216	55·5	54·9	0·6	..	..	Calm	..	10
	13	29·190	56·2	56·0	0·2	..	..	Calm	..	10
	14	29·170	56·7	56·7	0·0	..	..	NNE	..	10
	15	29·159	56·8	56·7	0·1	..	..	N	..	10
	16	29·168	56·2	56·2	0·0	56·0	0·2	N	..	10
	17	29·189	56·5	56·3	0·2	..	..	NNW	..	10
	18	29·210	56·0	55·7	0·3	..	..	WNW	..	9¾
	19	29·240	54·6	54·7	−0·1	..	..	W	..	4
	20	29·262	55·8	55·2	0·6	..	..	W	..	9
	21	29·285	56·6	56·4	0·2	..	..	WSW	..	10
	22	29·316	58·5	57·6	0·9	56·5	2·0	WSW	..	10
	23	29·332	62·6	58·9	3·7	..	..	WSW	..	10
Septem. 24.	0	29·341	64·8	60·0	4·8	..	..	WSW	0 to 1	10
	1	29·355	66·1	59·4	6·7	..	..	WSW	..	6
	2	29·360	63·0	58·5	4·5	..	..	WSW	..	9
	3	29·374	64·7	59·0	5·7	..	..	WSW	..	9

REMARKS.	Observer.
Cumuli, cirro-strati, fleecy clouds, and scud are near the horizon in the S. W. and N. W.	H B
Cumuli, cirro-strati, and light clouds.	C T
Ill-formed cumuli, cirro-strati, cumulo-strati, and light clouds cover the greater portion of the sky.	
Ill-formed cumuli and light clouds in every part of the sky.	
Cirro-stratus in the N.; the other portion of the sky is clear.	C T
Cirro-strati round the horizon.	G
Cirro-stratus and scud: the stars look very dim.	C T
Cirro-stratus, scud, and vapour.	
Cloudless.	C T
Cirro-stratus covers the sky, except in the zenith, which is clear: flashes of lightning are visible at intervals.	L
The same as at the last observation.	
Cirro-stratus towards the horizon in the N. and E.; clear elsewhere.	
Overcast: cirro-stratus: about ten minutes since rain began falling heavily.	
,, ,, a fine rain is falling.	
,, ,, ,,	
,, ,, rain has been falling almost continually since the last observation.	
,, ,, the rain has ceased falling.	
,, ,, a few drops of rain are falling occasionally: the wind is blowing in gusts to $\frac{1}{2}$.	
Cirro-stratus, fleecy clouds, and scud: a few small breaks are towards the N.	L
Overcast: rain is falling slightly: heavy showers of rain have fallen during the last hour.	H B
The clouds have become extensively broken in the W. N. W. and S. W.: rain has continued falling since the last observation and nearly up to the present time.	
Cirro-stratus and dense scud: the clouds began to collect soon after the last observation.	
Cumuli, cirro-strati, fleecy clouds, and scud are around the horizon, with cumulo-strati near the N. W.	
Overcast: cumulo-strati, cirro-strati, and dense scud: a heavy shower of rain has fallen.	
Cumuli, cirro-cumuli, fleecy clouds, and cirro-strati cover the sky: the wind is blowing in gusts to 1.	
Cumuli and masses of white scud, the latter passing from the S.: the wind is blowing in gusts to $1\frac{1}{2}$.	H B
Cumuli, fleecy clouds, and scud round the horizon; clear elsewhere: the wind is blowing in gusts to $\frac{1}{2}$.	L
Cumuli, cirro-strati, and masses of brown scud: the wind is blowing in gusts to $\frac{3}{4}$.	
Cloudless, with the exception of cirro-stratus towards the horizon in the N. W.	
Cirro-stratus and scud S. of the zenith; the N. portion is clear.	
Cirro-stratus near the horizon in the N.; the other portion of the sky is clear.	L
Scud covers nearly the half of the southern sky, and there is a small quantity in the N.; the other parts of the sky are clear: about half an hour since a few drops of rain fell from passing scud.	G
Overcast: rain is falling.	
,, rain is falling steadily.	G
,, cirro-stratus: rain is falling heavily.	L
,, ,, rain is falling steadily.	
,, ,, rain is falling heavily.	L
,, ,, rain is falling in torrents.	H B
,, rain is falling slightly.	
Nearly overcast: cirro-stratus and scud: the clouds are broken near the S. horizon: Jupiter has been occasionally visible.	H B
Cirro-stratus, light clouds, and scud are in every part of the sky.	C T
A thin cirro-stratus covers nearly the whole sky, the zenith and the parts for a few degrees around it being clear: hazy.	
Cirro-stratus covers nearly the whole sky.	C T
Overcast: cirro-stratus.	G
Cumulo-strati towards the S. horizon; cirro-strati and large masses of scud in other parts of the sky.	L
Cumuli, cirro-stratus, fleecy clouds, and scud.	L
Cumuli in large masses in every part of the sky: white scud passing from the W. N.W.: the wind is blowing in gusts to 1.	H B
Imperfectly formed cumuli in the horizon: dark cirro-stratus and scud are in every part of the sky: extensive breaks in the clouds to the N. of the zenith: a few drops of rain have fallen occasionally from a black cloud in the zenith.	C T
The sky is covered with cirro-stratus and dense scud, the latter moving from the N.W.	H B

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER.		Amount of Clouds 0—10.
							Direction.	Pressure in pounds per square foot.	
d h	in.	°	°	°	°	°		from lbs. to lbs.	
Septem. 24. 4	29·380	65·6	59·0	6·6	55·5	10·1	WSW	½ to 1	4
5	29·393	62·5	56·8	5·7	..	..	WSW	..	4
6	29·408	61·0	57·0	4·0	..	..	WSW	..	8
7	29·433	58·5	55·5	3·0	..	..	Calm	..	7
8	29·456	58·0	55·8	2·2	..	..	Calm	..	10
9	29·463	57·8	55·8	2·0	..	..	Calm	..	10
10	29·481	57·5	55·9	1·6	55·0	2·5	Calm	..	10
12	29·511	57·1	55·6	1·5	..	..	Calm	..	10
14	29·525	56·6	54·6	2·0	..	..	Calm	..	9
15	29·542	54·6	53·2	1·4	..	..	Calm	..	0
16	29·551	52·9	51·7	1·2	50·5	2·4	WSW	..	0
17	29·561	53·1	51·8	1·3	..	..	WSW	..	10
18	29·567	53·4	52·3	1·1	..	..	WSW	..	10
19	29·589	54·0	53·0	1·0	..	..	Calm	..	9¾
20	29·599	55·3	54·1	1·2	..	..	WSW	..	9
22	29·628	60·4	56·5	3·9	53·0	7·4	WSW	..	4
23	29·636	62·0	57·4	4·6	..	..	WSW	..	8
Septem. 25. 0	29·645	62·7	57·9	4·8	..	..	WSW	¼ steady	9
2	29·648	64·7	59·2	5·5	..	..	Calm	..	10
4	29·649	62·2	57·9	4·3	55·5	6·7	Calm	..	5
5	29·653	61·5	57·7	3·8	..	..	Calm	..	9
6	29·661	61·0	57·3	3·7	..	..	Calm	..	9½
7	29·676	58·8	56·3	2·5	..	..	Calm	..	10
8	29·687	58·4	55·9	2·5	..	..	Calm	..	10
9	29·697	56·9	55·2	1·7	..	..	Calm	..	6
10	29·703	54·7	53·7	1·0	53·0	1·7	Calm	..	2
October 20. 18	29·165	49·7	48·7	1·0	47·5	2·2	S by W	1½ to 3½	10
19	29·086	49·8	48·1	1·7	..	..	S	2½ to 6	10
20	29·030	49·5	49·2	0·3	..	..	S by W	4½ to 8	10
21	28·971	51·0	50·7	0·3	..	..	SSW	2½ to 4½	10
22	28·977	53·0	52·0	1·0	51·0	2·0	SW	¾ to 1	10
23	28·969	54·8	50·7	4·1	..	..	S W	1½ to 3½	3
October 21. 0	28·952	56·3	51·1	5·2	..	..	SW	1½ to 4	5
1	28·934	55·9	49·6	6·3	..	..	SW	1½ to 4½	3
2	28·919	55·2	49·4	5·8	..	..	SW	1½ to 4½	7
3	28·902	54·0	49·0	5·0	..	..	SW	1½ to 3½	9
4	28·892	52·3	47·4	4·9	43·0	9·3	SW	2 to 4½	8
5	28·879	51·0	46·9	4·1	..	..	SW	2 to 4½	10
6	28·869	50·0	46·2	3·8	..	..	SW	3 to 7	10
7	28·857	49·0	45·6	3·4	..	..	SW	3 to 5	8
8	28·846	48·0	45·6	2·4	..	..	SW	3 to 5½	5
9	28·836	48·5	45·6	2·9	..	..	SW	1½ to 4	9

REMARKS.	Observer.
Soon after the last observation, the sky becme densely overcast with cirro-stratus and dark scud, which remained but for a short time, and since that time the clouds have been variable in amount; at present rocky cumuli and scud are distributed over the sky: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	H B
Imperfectly formed cumuli in the S. horizon: cirro-stratus in the horizon to the E. and W., cirri and light clouds in other directions.	C T
Cumuli, cirro-strati, and scud in the horizon, with cirri and light clouds in and round the zenith.	C T
Cirro-stratus, fleecy clouds, and scud: small breaks are in every direction.	L
Overcast: cirro-stratus.	L
,, ,,	G
,, ,,	G
,, ,, the wind is blowing in gusts to $\frac{3}{4}$.	H B
Cirro-stratus in various parts of the sky: a few stars are dimly visible in the W.	
Cloudless.	
,,	
Overcast: cirro-stratus and scud.	
,, ,, there are a few small breaks in the clouds but to no extent.	
Nearly overcast: cirro-stratus and scud.	
Cirro-strati, cirri, and a few cirro-cumuli, with low scud passing from the W. S.W.	H B
Detached cumuli, cirro-strati, and masses of white scud: breaks in the clouds in every direction.	L
Cirro-stratus, fleecy clouds, and scud: breaks in the clouds principally to the N. of the zenith.	
Cirro-stratus and large masses of scud: small breaks in the clouds principally to the N. of the zenith.	L
Cirro-stratus and scud cover the sky, excepting a few breaks, to no numerical extent.	C T
Cirro-stratus and scud, principally to the S. and S.W., and cirro-cumuli and light clouds in other directions: the clouds began to disperse about $3^h.\ 30^m$.	H B
Cirro-stratus and scud: the clouds are extensively broken in the E.	
Cirro-stratus, scud, and cumuli near the S.W. horizon: the clouds suddenly collected soon after the last observation.	
Overcast: cirro-stratus and scud.	
,, ,, a few stars are visible in the zenith.	
A thin cirro-stratus is in every part of the sky; several stars are visible.	
Cirro-stratus and scud in the S.W. and N. horizon: the clouds began to disperse at about $9^h.\ 20^m$.	H B
Overcast: dense cirro-stratus: rain falling.	T D
,, cirro-stratus: rain in squalls: the wind is blowing in gusts to $2\frac{1}{2}$ and 3.	
,, ,, very heavy rain in violent squalls: the wind is blowing in gusts to 3.	
,, ,, ,, ,, the wind is blowing in gusts to 2 and 3.	T D
,, ,, rain has been falling occasionally since the last observation: the wind is blowing in gusts to $1\frac{1}{2}$.	L
Cirro-stratus, and fleecy and light clouds round the horizon; the clouds dispersed soon after the last observation: the wind is blowing in gusts to 2.	
Cirro-stratus, detached cumuli, and large masses of scud in every direction: the wind is blowing in gusts to 2.	
Cumuli round the horizon: fleecy clouds and large masses of white scud are floating about in various directions: the wind is blowing in gusts to 2.	
Cirro-stratus, fleecy clouds, and large masses of scud: the wind is blowing in gusts to 2+.	L
Cirro-stratus and large masses of scud: the clouds are broken in the neighbourhood of the zenith: the wind is blowing in gusts to $2\frac{1}{2}$.	C T
,, fleecy clouds and masses of dark scud: several large clear breaks in the neighbourhood of the zenith: the wind is blowing in gusts to 2+.	T D
Overcast: cirro-stratus and scud: the wind is blowing in gusts to 2+.	
,, ,, the wind is blowing in gusts to 3.	
Cirro-stratus and masses of scud; some clear breaks in the zenith and also in the E., through which the stars are visible.	
Cirro-stratus in the horizon: the zenith and a considerable space round it is clear, and the stars are shining brightly; the sky was nearly covered by cloud till $7^h.\ 50^m$: the wind is blowing in gusts to $2\frac{1}{2}$.	
Cirro-stratus and scud: the appearance of the sky is very varied; at times it is quite overcast, and then in a few minutes nearly cloudless; it remains clear for a short time, when it again becomes cloudy.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
October 21. 10	28·828	48·5	46·0	2·5	44·0	4·5	SW	3 to 4	10
11	28·823	48·6	46·3	2·3	..	..	SW	3½ to 9	10
12	28·835	46·6	46·0	0·6	..	..	WSW	3 to 7	10
13	28·839	46·5	45·8	0·7	..	..	WSW	3 to 6	10
14	28·860	46·6	45·7	0·9	..	..	WSW	3½ to 4	10
15	28·873	47·0	45·4	1·6	..	..	WSW	3 to 5	10
16	28·884	46·7	44·8	1·9	43·0	3·7	WSW	3½ to 4½	10
17	28·896	46·3	44·2	2·1	..	..	WSW	3½ to 5	10
18	28·912	45·8	43·9	1·9	..	..	W	4½ to 5½	10
19	28·926	45·5	43·7	1·8	..	..	W	4 to 4½	10
20	29·042	45·8	43·6	2·2	..	..	WSW	4 to 4½	10
21	28·970	46·5	44·2	2·3	..	..	WSW	3½ to 6	9
22	28·987	46·6	44·2	2·4	42·0	4·6	WSW	3½ to 5	10
23	29·003	48·4	44·7	3·7	..	..	WSW	1½ to 4½	10
October 22. 0	29·007	47·0	44·8	2·2	..	..	WSW	3 to 7	10
1	29·033	46·7	44·0	2·7	..	..	WSW	2 to 4½	10
2	29·037	46·8	44·9	1·9	..	..	WSW	1½ to 3	10
3	29·059	48·9	45·9	3·0	..	..	WSW	2 to 4	10
4	29·093	49·0	46·0	3·0	44·0	5·0	WSW	2 to 4	10
5	29·123	48·2	45·5	2·7	..	..	WSW	1 to 3½	9
6	29·144	47·2	44·5	2·7	..	..	WSW	1 to 3½	10
7	29·171	47·5	44·7	2·8	..	..	WSW	1½ to 3½	10
8	29·193	47·6	44·4	3·2	..	..	WSW	½ to 3	10
9	29·226	46·3	43·6	2·7	..	..	WSW	½ to 1	6
10	29·250	45·6	43·2	2·4	41·0	4·6	WSW	¼ to ½	6
November 20. 18	29·506	46·4	44·5	1·9	..	..	SSW	..	0
19	29·520	46·5	44·7	1·8	..	..	S	..	10
20	29·532	46·5	44·9	1·6	..	..	S	..	10
22	29·538	47·4	45·7	1·7	44·0	3·4	S by E	..	7
23	29·549	49·0	47·1	1·9	..	..	SSW	..	7
November 21. 0	29·543	50·9	47·4	3·5	..	..	SSW	..	8
1	29·535	51·5	50·0	1·5	..	..	SW	0 to 1	9
2	29·533	52·0	48·0	4·0	..	..	SSW	..	7
3	29·524	51·6	48·2	3·4	..	..	SSW	..	7
4	29·522	50·1	46·7	3·4	44·0	6·1	SSW	..	1
5	29·518	47·6	46·6	1·0	..	..	S by W	..	1
6	29·509	46·0	44·2	1·8	..	..	S by W	..	0
7	29·490	46·0	44·9	1·1	..	..	S by W	..	0
8	29·479	46·8	45·7	1·1	..	..	S by W	..	0
9	29·456	48·0	46·6	1·4	..	..	SSW	0 to ½	9½
10	29·435	48·4	47·6	0·8	47·0	1·4	SSW	0 to 1½	10
11	29·408	48·0	47·1	0·9	..	..	SSW	..	8
12	29·383	48·0	46·9	1·1	..	..	SSW	..	10
22	29·327	44·5	42·8	1·7	43·0	1·5	SSW	0 to 1½	10
23	29·294	45·7	43·2	2·5	..	..	S by W	..	10
November 22. 1	29·264	46·4	44·2	2·2	..	..	SW	½ to 3	9

DRY THERMOMETER.

Oct. 22d. 1h. The recorded reading at this time was 44°·7; it has been altered conjecturally to 46°·7.

REMARKS.	Observer.
Overcast: a few stars are occasionally shining near the zenith. The reflexion of the London lights is unusually bright this evening.	D
Densely overcast: rain falling.	
Overcast: rain falling: frequent gusts of wind to 2.	D
,, rain has been falling without intermission since the last observation, and still continues: occasional gusts of wind to 2.	H B
,, cirro-stratus: the rain has ceased; it became less violent about $13^h.25^m$, when it gradually ceased: frequent gusts of wind to 2, and occasionally to 2+.	
Overcast: cirro-stratus: the wind is blowing in frequent gusts to 2 and $2\frac{1}{2}$.	H B
,, ,, the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	L
,, ,, the wind is blowing in gusts to $2\frac{1}{2}$.	
,, ,, the wind is blowing in gusts to 2.	L
,, cirro-stratus and scud: occasional squalls of rain: the wind is blowing in gusts to 2+.	T D
,, ,,	
Cirro-stratus, scud, and fleecy clouds: the Sun faintly seen occasionally through the clouds.	T D
Overcast: cirro-stratus and scud.	T
,, ,, the wind is blowing in frequent gusts to $2\frac{1}{2}$.	H B
Overcast: rain has just commenced falling: frequent gusts of wind to $2\frac{1}{2}$ and $2\frac{1}{2}$+.	H B
,, cirro-stratus and scud: the wind is blowing in gusts to $2\frac{1}{2}$+.	L
,, ,,	H B
,, cirro-stratus: the wind is blowing in gusts to $2\frac{1}{2}\pm$.	L
,, cirro-stratus and scud: the wind is blowing in gusts to $2\frac{1}{2}$.	L
The amount of cloud is momentarily changing: a large quantity of scud is rapidly passing from the W.: the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	G
Overcast and scud: the wind is blowing in gusts to $1\frac{1}{2}$ and 2.	G
Overcast: cirro-stratus and scud: a shower of rain fell at $6^h.35^m$ from dense scud, which was passing over the sky from the N. W.: the wind is blowing in gusts to $2\frac{1}{2}$.	H B
Overcast: cirro-stratus: gusts of wind to $1\frac{1}{2}$ and 2.	H B
Cirro-stratus around the horizon: some stars are visible in the zenith and in the S. E.: the wind is blowing in gusts to 2.	T D
Cirro-stratus in various directions, but more particularly in the S., where it extends from the horizon to the zenith.	T D
Cloudless: the stars look dim in the horizon.	G H
Overcast: cirro-stratus and scud: the sky became overcast soon after the last observation.	
The same as at the last observation.	G H
Cirro-stratus around the horizon: patches of blue sky and fleecy clouds in the zenith.	T D
Cirro-stratus, light patches of scud, and fleecy clouds.	
Cirro-stratus and fleecy clouds in every direction: small portions of blue sky here and there.	
The same as at the last observation.	
,,	
,,	T D
The sky is covered with haze: a few lines of cirri and a very small amount of light fleecy clouds.	G H
Cirro-strati distributed about the horizon: cumuli in the S. E.	
A bank of cirro-stratus in the S. W. horizon, so low down as to be of no numerical amount; with that exception it is cloudless.	G H
Cirro-strati: five minutes after this observation cirro-stratus covered the N. part of the sky.	L
A few lines of scud towards the S., of no numerical extent.	G H
Overcast, with a thick haze, through which Jupiter is dimly visible: the wind is blowing in gusts.	
Rain is falling heavily: the electrical instruments are much excited: the wind is blowing in gusts.	G H
The horizon is covered with cirro-stratus: some stars are visible in the zenith, but they are ill-defined: the rain ceased at $10^h.40^m$.	T D
Overcast: cirro-stratus and scud.	T D
Overcast, with hazy cirri: a few lines of cirro-strati towards the S. and S. W.	G H
Overcast: cirro-stratus and scud: a small break towards the S.	
Overcast: cirro-stratus and light electrical-looking clouds and scud: there was one flash of lightning and a clap of thunder at $0^h.10^m$, accompanied with hail and rain.	G H

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.	
November 22. 2	29·264	47·0	44·4	2·6	..	..	SW	½ to 2	7
3	29·269	45·7	41·8	3·9	..	..	SW	½ to 2	8
4	29·306	41·0	40·5	0·5	..	..	WSW	0 to 1½	4
5	29·341	41·0	39·9	1·1	..	..	WSW	0 to 1	2
6	29·374	41·5	39·5	2·0	..	..	SW	..	0
November 27. 10	29·244	43·2	42·2	1·0	40·5	2·7	NNW	..	10
11	29·251	42·8	41·7	1·1	..	..	NNW	..	10
12	29·257	42·6	41·4	1·2	..	..	NNW	..	10
13	29·257	42·4	41·0	1·4	..	..	NNW	..	10
14	29·259	41·7	40·2	1·5	..	..	NNW	..	10
15	29·259	40·5	39·9	0·6	..	..	NNW	..	10
16	29·258	39·7	38·0	1·7	37·0	2·7	NNW	..	10
17	29·267	38·3	37·2	1·1	..	..	NNW	..	10
18	29·273	38·0	37·2	0·8	..	..	NNW	..	10
19	29·275	37·0	35·7	1·3	..	..	NNW	..	10
20	29·281	36·3	35·2	1·1	..	..	NNW	..	9
22	29·298	36·5	35·2	1·3	33·0	3·5	NNW	..	10
23	29·310	37·5	36·4	1·1	..	..	NNW	..	9
November 28. 0	29·317	37·0	35·7	1·3	..	..	NNW	..	2
1	29·317	39·0	37·8	1·2	..	..	NNW	..	5
2	29·316	39·8	37·6	2·2	..	..	NNW	..	3
3	29·320	39·8	37·7	2·1	..	..	NNW	..	7
4	29·338	38·0	36·2	1·8	34·0	4·0	NNW	..	8
5	29·358	38·2	37·4	0·8	..	..	Calm	..	8
6	29·369	37·1	35·8	1·3	..	..	Calm	..	9¾
7	29·385	36·6	35·2	1·4	..	..	Calm	..	2
8	29·394	35·6	34·3	1·3	..	..	Calm	..	0
9	29·409	34·5	33·2	1·3	..	..	Calm	..	0
10	29·435	33·2	32·2	1·0	31·0	2·2	Calm	..	0
December 20. 18	29·238	47·0	46·3	0·7	..	..	S by W	1 to 4	10
19	29·190	47·2	46·4	0·8	..	..	S by W	1 to 3	10
20	29·147	47·2	46·4	0·8	..	..	S by W	1 to 3½	10
21	29·100	47·8	47·2	0·6	..	..	S by W	½ to 2½	10
22	29·066	48·0	47·2	0·8	46·0	2·0	S	0 to 2½	10
23	29·034	49·0	47·6	1·4	..	..	SSW	0 to 2	10
December 21. 0	28·997	49·0	47·2	1·8	..	..	SSW	½ to 2	10
1	28·954	49·4	47·7	1·7	..	..	SSW	0 to 2	10
2	28·915	49·5	47·9	1·6	..	..	SW	½ to 2	10
3	28·899	49·0	47·2	1·8	..	..	SW	½ to 2	9
4	28·897	48·3	45·7	2·6	43·5	4·8	WSW	1½ to 2	7
5	28·907	46·5	44·2	2·3	..	..	WSW	1½ to 2	6
6	28·918	45·2	43·2	2·0	..	..	SW	0 to ½	7
7	28·910	43·5	42·2	1·3	..	..	SW	..	0
8	28·906	43·2	42·2	1·0	..	..	SW	0 to 1	2
9	28·879	41·5	40·5	1·0	..	..	WSW	..	0
10	28·897	40·2	39·5	0·7	39·0	1·2	SW	..	0
12	28·867	38·8	38·2	0·6	..	..	WSW	..	4

REMARKS.	Observer.
Cirro-strati in various directions: masses of white scud.	L
The same as at the last observation.	T D
The sky has been gradually clearing during the last quarter of an hour: cirro-strati are near the horizon and W. of the zenith, the sky to the W. being nearly cloudless.	H B
A few detached cirri in the S. S. W., and haze in the horizon.	T D
Cloudless.	G H
Cirro-stratus and dense scud: the Moon occasionally breaks through the clouds.	H B
Overcast: cirro-stratus and scud: a few breaks took place in the clouds soon after the last observation.	
,, ,,	H B
,, ,,	G H
,, ,,	
,, ,,	G H
,, cirro-stratus.	L
,, ,,	
,, ,,	L
,, ,, at $18^h.\ 20^m$ a shower of sleet and rain fell.	T D
Cirro-stratus and scud all around: the zenith and some small portion of the sky near it are free from cloud.	T D
Overcast: cirro-stratus and scud: the clouds are very thin in some places: the Sun is occasionally shining.	H B
Cirro-stratus and scud: the clouds are extensively broken along the N. horizon. The upper arc of a fine solar halo is visible; its radius by measurement is 23°.	H B
The S. E. portion of the horizon is covered with cirro-stratus and scud.	G H
Cirri, cirro-strati, and scud in various directions.	
Cirri, cirro-strati, and a few patches of scud in various directions, but more particularly in the S. E. part of the horizon.	G H
The S. half of the sky is covered with cirro-stratus, fleecy clouds, and scud; light clouds in various other directions.	L
Cirro-stratus and scud in every direction: breaks in the zenith.	T D
Cirro-stratus and fleecy clouds.	T D
A large portion of the sky was clear at $5^h.\ 30^m$; soon after which cirro-stratus and fleecy clouds suddenly came up from the E. S. E., and soon covered nearly every portion.	H B
With the exception of fleecy clouds in the S. W., and cirro-stratus around the horizon, the sky is cloudless.	H B
Cloudless.	G H
,,	
,,	G H
Overcast: cirro-stratus and scud: wind is blowing in gusts to $1\frac{1}{2}$ and 2.	L
Cirro-stratus and scud.	
,, wind is blowing in gusts to 2.	
Wind is blowing in gusts to 2: rain is falling.	L
Cirro-stratus and scud: rain is falling heavily.	T D
,, the rain ceased at $22^h.\ 45^m$.	
Overcast: cirro-stratus and scud: it has not rained since the last observation.	
Cirro-stratus and scud: a thin rain has just commenced falling.	
,, rain is falling heavily.	T D
Cirro-stratus and dense masses of scud: there are several breaks in various directions: the rain has ceased falling.	C T
Cirro-stratus, fleecy clouds, and scud.	C T
,, stratus clouds in the S.W.	C
Dense cirro-stratus, clouds, and scud: it is clear in the S.W.	C
Cloudless.	G H
A heavy bank of scud towards the S. part of the horizon; the remaining parts of the sky are clear.	G H
Cloudless.	C
,,	C
Cirro-stratus all around the horizon: the stars are bright in the zenith.	T D

Day and Hour, Göttingen Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.	
Dec. 21. 13. 0	28·849	37·0	36·6	0·4	..	..	WSW	..	6
14. 0	28·833	35·8	35·1	0·7	..	..	SSW	..	4
15. 0	28·824	34·8	34·2	0·6	..	..	SSW	..	5
16. 0	28·826	33·5	32·8	0·7	32·0	1·5	WSW	..	3
17. 0	28·831	33·5	33·4	0·1	..	..	W by S	..	3
18. 0	28·842	34·2	34·1	0·1	..	..	W by S	..	4
19. 0	28·873	33·5	33·2	0·3	..	..	W by S	..	8
20. 0	28·883	33·0	32·7	0·3	..	..	WSW	..	6
21. 0	28·916	33·0	32·2	0·8	..	..	SW	..	2
22. 0	28·923	33·0	32·8	0·2	32·0	1·0	SW	..	10
23. 10	28·949	34·2	33·9	0·3	..	..	W by S	..	6
Dec. 22. 0. 0	28·967	35·3	34·9	0·4	..	..	WSW	..	10
1. 0	28·975	37·4	36·7	0·7	..	..	W by S	..	10
2. 0	28·985	38·9	37·7	1·2	..	..	WNW	..	7
4. 0	29·020	38·5	37·2	1·3	35·0	3·5	WSW	..	5
5. 0	29·024	37·5	36·4	1·1	..	..	WSW	..	8
6. 0	29·024	36·2	35·4	0·8	..	..	SW	..	3
7. 0	29·031	35·2	34·7	0·5	..	..	SW	..	2
8. 0	29·013	35·6	35·1	0·5	..	..	SW	..	3
9. 0	28·995	35·5	34·8	0·7	..	..	SSW	..	10
10. 0	28·977	35·4	34·7	0·7	34·0	1·4	SSW	..	8
12. 0	28·894	34·9	34·2	0·7	..	..	Calm	..	10
13. 0	28·795	35·1	34·5	0·6	..	..	Calm	..	10
14. 0	28·790	35·3	34·5	0·8	..	..	Calm	..	10
15. 0	28·741	35·8	35·0	0·8	..	..	Calm	.	10
16. 0	28·698	36·4	35·7	0·7	34·0	2·4	SE	.	10
17. 0	28·653	36·0	35·3	0·7	..	..	ENE	..	10
18. 0	28·582	35·8	35·4	0·4	..	..	ENE	..	10
19. 0	28·551	37·2	36·7	0·5	..	..	ENE	..	10
20. 0	28·536	37·2	36·7	0·5	..	..	E by N	.	10
22. 0	28·545	37·1	36·6	0·5	36·5	0·6	NE	..	10
22. 10	28·548	..	..	..	..	..	NE	..	..
22. 50	28·554	..	..	..	..	..	E by N	..	10
23. 0	28·558	37·8	37·2	0·6	..	..	E by N	..	10
23. 15	28·558	..	..	..	..	..	E by N	..	..
23. 30	28·559	..	..	..	..	..	E by N	..	..
Dec. 23. 0. 0	28·562	38·1	37·3	0·8	..	..	E by N	..	10
0. 25	28·578	..	..	..	..	..	E by N	..	..
0. 45	28·585	..	..	..	..	..	NNE	..	..
1. 0	28·595	39·0	38·2	0·8	..	..	N by E	..	10
1. 25	28·615	..	..	..	..	..	NNE	..	..
2. 0	28·628	39·0	38·0	1·0	..	..	NNE	..	10
2. 30	28·648	..	..	..	..	..	NNE	..	..
2. 50	28·659	..	..	..	..	..	N by E	..	..
3. 0	28·665	39·2	38·4	0·8	..	..	N by E	..	10
4. 0	28·721	38·3	37·5	0·8	36·0	2·3	N	..	10
5. 0	28·749	37·2	36·7	0·5	..	..	N by W	..	10
6. 0	28·802	34·6	33·2	1·4	..	..	N by W	..	10
7. 0	28·844	34·5	33·9	0·6	..	..	N by W	..	10
8. 0	28·879	34·9	33·2	1·7	..	..	N by W	..	10
9. 0	28·901	35·2	34·7	0·5	..	..	N by W	..	10
10. 0	28·921	34·7	33·8	0·9	32·0	1·8	N by W	..	10

REMARKS.	Observer.
Cirro-stratus all around: the stars are visible in the zenith, but they are ill defined.	T D
Cirro-stratus all around the horizon: the zenith and for some distance around is clear.	
Cirro-stratus and haze all around the horizon.	
,,	
,,	
Cirro-stratus and haze all around: no change since 15^h.	
With the exception of a break E. of the zenith, the sky is overcast. [prevails.	
There are several breaks in the zenith and E. N. E.: every other portion of the sky is covered with cirro-stratus: a thick haze	T D
A few cirri in the S.: it is very hazy.	C
Overcast: cirro-stratus.	G H
The clouds have become extensively broken since the last observation, and at present the N. hemisphere is nearly cloudless: [foggy.	H B
Overcast, thin cirro-stratus, and fleecy clouds.	G H
,,	
Cirro-strati, cirri, light fleecy clouds, and scud in various directions.	G H
,, ,,	T D
,, ,,	
,, ,,	
Cirro-stratus and haze low in the horizon. [sky is clear.	
Cirro-stratus in the horizon, of a thin character, with the exception of a slight haze in the N. and N. E.; the other portion of the	
The sky is covered with cirro-stratus of a thin character, some of the stars in the zenith being visible through it.	
Cirro-stratus all around, extending nearly to the zenith, except in the E., where the stars are bright.	T D
Overcast: cirro-stratus and scud.	G H
,, thin cirro-stratus and scud, through which a few stars are dimly seen.	
,, cirro-stratus and scud.	
,, ,, rain has just commenced falling.	
Heavy rain is falling.	
,,	
,,	
,,	
,,	G H
Overcast: cirro-stratus and scud.	H B
,, ,,	
,, ,,	
,, cirro-stratus: very gloomy.	
,, ,,	
,, ,,	
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,, no change whatever.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	H B
,, cirro-stratus and scud: a few drops of rain are falling.	C
Cirro-stratus and scud: a few drops of rain are falling.	C
,, ,,	G H
,, rain is falling heavily.	
,, the rain is not so heavy as at the last observation.	
,, rain is still falling.	
,, a light rain is falling.	G H
,, ,,	G

ROYAL OBSERVATORY, GREENWICH.

EXTRAORDINARY

METEOROLOGICAL OBSERVATIONS.

1846.

Observations on April 4; May 17 and 18.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.	
April 4. 3. 20	29·160	43·4	42·7	0·7	41·5	1·9	SSE	..	10
3. 40	29·142	..	..	..	..	..	SSE	0 to 2	..
3. 50	29·117	..	..	..	..	..	SSE	1 to 2	..
4. 10	29·104	..	..	..	..	..	S by E	0 to ½	..
5. 20	29·058	52·0	50·9	1·1	..	..	WSW	3 to 6	10
5. 40	29·054	..	..	..	..	..	WSW	3 to 4	..
5. 50	29·056	..	..	..	..	..	WSW	4 to 5	..
6. 20	29·056	..	..	..	..	..	WSW	3 to 3½	..
7. 10	29·065	..	..	..	..	..	WSW	3 to 3½	..
7. 20	29·074	51·3	49·2	2·1	..	..	WSW	3 to 4½	10
8. 20	29·086	..	..	..	..	..	WSW	2¼ to 3	..
May 17. 21. 20	28·945	48·4	47·9	0·5	47·0	1·4	WSW	..	10
22. 10	28·910	..	..	..	..	..	S by W	1½ to 3½	..
22. 25	28·907	..	..	..	..	..	S by W	1½ to 3½	..
22. 53	28·913	..	..	..	..	..	S by W	1½ to 3½	..
23. 10	28·913	..	..	..	..	..	S by W	0 to ½	..
23. 20	28·902	52·2	51·4	0·8	..	..	S by W	1½ to 4	10
23. 35	28·899	..	..	..	..	..	SSW	1½ to 4	..
23. 50	28·898	..	..	..	..	..	S	1½ to 4	..
May 18. 0. 5	28·901	..	..	..	..	..	S by W	1½ to 3½	..
0. 34	28·907	..	..	..	..	..	S by W	1 to 4	..
1. 7	28·905	..	..	..	..	..	S by W	½ to 4	..
1. 20	28·915	59·5	53·0	6·5	..	..	S by W	½ to 2	8
1. 50	28·910	..	..	..	..	..	S by W	½ to 2	..
2. 15	28·910	..	..	..	..	..	S by W	1 to 3½	..
3. 20	28·893	56·3	52·6	3·7	49·0	7·3	S	½	10
3. 40	28·886	..	..	..	..	..	S by W	½	..
3. 58	28·881	..	..	..	..	..	S by W	½ to 3	..
4. 25	28·878	..	..	..	..	..	SSW	0 to ½	..
5. 4	28·878	..	..	..	..	..	SSW	½ to 1	..
5. 20	28·878	54·7	51·6	3·1	..	..	SSW	0 to ½	8
5. 50	28·883	..	..	..	..	..	SSW	½ to 3	..
6. 15	28·891	..	..	..	..	..	SSW	1 to 2½	..
6. 40	28·904	..	..	..	..	..	SSW	½ to 3	..
7. 20	28·914	50·8	48·7	2·1	..	..	SSW	½ constant	4
7. 45	28·924	..	..	..	..	..	SSW	½ constant	..
8. 55	28·962	..	..	..	..	..	SW	¾ constant	..
9. 10	28·965	..	..	..	..	..	SW	½ constant	..
9. 20	28·975	51·5	48·1	3·4	45·0	6·5	SW	½ constant	10
11. 20	29·040	48·8	47·2	1·6	..	..	WSW	0 to 1½	10
11. 35	29·053	..	..	..	..	..	WSW	½ to 3	..
11. 50	29·065	..	..	..	..	..	WSW	1 to 3	..
12. 10	29·078	..	..	..	..	..	WSW	½ to 1½	..
12. 30	29·093	..	..	..	..	..	WSW	2 to 3½	..
13. 0	29·119	..	..	..	..	..	WSW	1½ to 2	..
13. 20	29·125	48·3	46·5	1·8	..	..	WSW	1 constant	2
13. 40	29·133	..	..	..	..	..	WSW	1 to 4	..
14. 10	29·163	..	..	..	..	..	WSW	¾ constant	..
14. 40	29·187	..	..	..	..	..	WSW	½ to 2½	..
15. 20	29·206	47·7	46·2	1·5	44·0	3·7	WSW	½ to 1	2
16. 0	29·223	..	..	..	..	..	WSW	½ constant	..
16. 35	29·247	..	..	..	..	..	WSW	½ constant	..

REMARKS.	Observer.
Overcast: rain falling heavily.	H B
,, cirro-stratus and scud: the rain ceased at $4^h.\ 5^m$: the wind is blowing in gusts to 2.	
,, ,, occasional gusts of wind to $2\frac{1}{2}$: at $6^h.\ 20^m$ the sky was nearly cloudless, but the clouds began to collect rapidly ten minutes afterwards.	
Overcast: cirro-stratus and scud: rain falling heavily.	H B
,, ,, rain falling slightly.	
The sky S. of the zenith is covered with cirro-stratus and dense scud: cumuli towards the N. horizon.	H B
Overcast: cirro-stratus and scud.	L
Cumuli and cumulo-strati round the horizon; the sky is elsewhere covered with cirro-stratus and scud.	
Cirro-stratus and large masses of scud in every direction.	
,, ,, Occasional rain is falling.	L H B
Cirro-stratus near the horizon.	
,, a few cirro-cumuli in the S.W.	

Observations on May 18; Oct. 13 and 14.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.	
May 18. 16. 55	29·259	..	..	..	..	..	WSW	½ constant	..
17. 20	29·278	49·8	48·2	1·6	..	..	SW	½ constant	10
18. 0	29·290	..	..	..	..	..	SW	½ constant	..
18. 25	29·306	..	..	..	..	..	SW	½ constant	..
19. 0	29·332	..	..	..	..	..	SW	..	..
19. 20	29·346	53·7	51·4	2·3	..	..	SSW	..	9
19. 55	29·360	..	..	..	..	..	SW	..	..
Oct. 13. 21. 20	29·330	48·8	47·9	0·9	..	..	S	..	10
23. 20	29·181	49·0	48·4	0·6	..	..	S	1 to 2	10
23. 50	29·154	..	..	..	..	..	S	1 to 3	..
Oct. 14. 0. 10	29·136	..	..	..	..	..	S	1 to 3	..
0. 27	29·116	..	..	..	..	..	S	1½ to 2½	..
1. 20	29·051	51·2	50·8	0·4	..	..	S	½ to 3	10
2. 30	28·987	..	..	..	..	..	S	0 to 2	..
2. 58	28·971	..	..	..	..	..	S	0 to 1½	..
3. 20	28·961	53·5	53·2	0·3	52·5	1·0	S	..	10
3. 36	28·957	..	..	..	..	..	S	..	..
3. 58	28·945	..	..	..	..	..	S	..	..
4. 10	28·941	..	..	..	..	..	S	..	..
4. 35	28·937	..	..	..	..	..	S	..	..
4. 58	28·931	..	..	..	..	..	S	..	..
5. 20	28·925	53·0	52·2	0·8	..	..	S	..	8
5. 55	28·920	..	..	..	..	..	S	..	..
6. 20	28·917	..	..	..	..	..	S	..	..
6. 57	28·907	..	..	..	..	..	S	..	..
7. 20	28·897	52·5	51·5	1·0	..	..	S	..	10
8. 0	28·886	..	..	..	..	..	S	¼ constant	..
8. 40	28·882	..	..	..	..	..	S	¼ constant	..
9. 1	28·878	..	..	..	..	..	S	¼ constant	..
9. 20	28·875	51·2	50·3	0·9	49·0	2·2	S	¼ constant	3
11. 20	28·863	48·6	48·2	0·4	..	..	S	..	2
12. 20	28·853	..	..	..	..	..	S by W	..	..
12. 45	28·848	..	..	..	..	..	S by W	..	..
13. 20	28·846	49·5	48·7	0·8	..	..	S by W	..	1
13. 40	28·844	..	..	..	..	..	S by W	..	..
14. 40	28·834	..	..	..	..	..	S by W	..	..
14. 55	28·835	..	..	..	..	..	S by W	..	..
15. 20	28·833	48·7	48·0	0·7	47·0	1·7	S by W	..	7
15. 50	28·832	..	..	..	..	..	S by W	..	..
16. 30	28·829	..	..	..	..	..	S by W	..	..
16. 45	28·827	..	..	..	..	..	S by W	..	..
17. 20	28·826	48·2	47·4	0·8	..	..	S by W	..	7
17. 40	28·824	..	..	..	..	..	S by W	..	..
18. 20	28·827	..	..	..	..	..	S by W	..	..
18. 38	28·829	..	..	..	..	..	S by W	..	..
19. 4	28·842	..	..	..	..	..	S by W	..	..
19. 20	28·835	49·6	48·7	0·9	..	..	S by W	..	7
19. 40	28·839	..	..	..	..	..	S by W	..	..
21. 20	28·836	49·8	49·2	0·6	49·0	0·8	S by W	..	10
21. 35	28·836	..	..	..	..	..	S by W	..	..
21. 43	28·836	..	..	..	..	..	S by W	..	..
21. 55	28·839	..	..	..	..	..	S by W	..	..

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and scud.	H B
Overcast: rain is falling.	H B
,, the wind is blowing in gusts to 1: rain is falling heavily.	
,, fine rain is falling.	
Overcast: a steady rain is falling.	H B
The rain has ceased: the clouds are broken in the North.	T D
Clouds are gathering in every direction: portions of clear sky in the S. and S. W.	
Cirro-stratus and masses of dark scud: portions of clear sky in the S. and S. W.	
Overcast.	
Cirro-stratus near the horizon; clear elsewhere.	T D
,, ,,	L
Cirro-stratus near the South horizon.	
Clear sky towards the N. and W.	
Clear towards the West.	
Cirro-stratus and scud in every direction, except in the neighbourhood of the zenith.	L
Overcast: rain is falling.	H B

Observations on October 14 and 15; November 19 and 20.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.	
Oct. 14. 22. 20	28·840	..	..	..	..	..	S by W	..	..
22. 35	28·851	..	..	..	..	..	S by W	..	..
22. 46	28·857	..	..	..	..	..	S by W	..	..
23. 5	28·859	..	..	..	..	..	S by W	..	..
23. 20	28·860	49·9	49·2	0·7	..	..	S by W	..	10
23. 36	28·855	..	..	..	..	..	S by W	..	..
23. 57	28·850	..	..	..	..	..	S by W	..	..
Oct. 15. 0. 10	28·850	..	..	..	..	..	S by W	..	..
0. 23	28·860	..	..	..	..	..	S by W	0 to $1\frac{1}{2}$	..
0. 50	28·862	..	..	..	..	..	S by W	$\frac{1}{2}$ constant	..
1. 5	28·861	..	..	..	..	..	S by W	$\frac{1}{2}$ constant	..
1. 20	28·860	52·5	50·8	1·7	..	..	S by W	$\frac{1}{2}$ constant	9
1. 35	28·862	..	..	..	..	..	S by W	$\frac{1}{2}$ constant	..
1. 50	28·869	..	..	..	..	..	S by W	$\frac{1}{2}$ constant	..
2. 15	28·879	..	..	..	..	..	S by W	..	..
2. 45	28·885	..	..	..	..	..	S by W	..	..
3. 0	28·881	..	..	..	..	..	S by W	..	..
3. 20	28·896	52·8	51·2	1·6	50·0	2·8	S by W	..	8
Nov. 19. 15. 20	29·555	50·0	48·7	1·3	46·0	4·0	SSW	0 to $\frac{1}{2}$	7
17. 20	29·454	50·1	48·4	1·7	..	..	S by W	0 to 2	5
18. 49	29·419	..	..	..	..	..	S by W	0 to 3	..
19. 20	29·365	49·6	47·7	1·9	..	..	S by W	0 to $3\frac{1}{2}$	4
19. 50	29·355	..	..	..	..	..	S by W	0 to $3\frac{1}{2}$	..
21. 20	29·314	51·3	48·8	2·5	46·1	5·2	S by W	0 to 3	10
21. 50	29·285	50·5	48·9	1·7	..	..	S	0 to 4	..
22. 10	29·273	50·2	48·7	1·5	..	..	S	3 to $4\frac{1}{2}$	..
22. 20	29·275	50·2	48·7	1·5	..	..	S	3 to $4\frac{1}{2}$	..
22. 35	29·275	50·0	48·7	1·3	..	..	S	3 to $4\frac{1}{2}$	..
22. 50	29·255	50·0	48·7	1·3	..	..	S	3 to 5	..
23. 5	29·249	49·7	48·6	1·1	..	..	S	3 to $3\frac{1}{2}$	..
23. 20	29·244	49·9	48·6	1·3	..	..	S	3 to $4\frac{1}{2}$	10
23. 35	29·230	51·0	49·1	1·9	..	..	S	3 to $3\frac{1}{2}$	..
23. 50	29·208	51·5	49·3	2·2	..	..	S	3 to 6	..
Nov. 20. 0. 5	29·200	51·8	49·6	3·2	..	..	S	$2\frac{1}{2}$ constant	..
0. 20	29·196	51·2	49·7	1·5	..	..	S	4 to 5	..
0. 35	29·191	51·4	50·2	1·2	..	..	S	3 to 5	..
0. 50	29·191	52·6	50·7	0·8	..	..	S by W	$2\frac{1}{2}$ to 4	..
1. 20	29·192	53·0	50·7	2·3	..	..	S by W	$1\frac{1}{2}$ to 3	$9\frac{1}{2}$
1. 45	29·190	53·3	50·4	2·9	..	..	S by W	$1\frac{1}{2}$ to 4	..
2. 15	29·180	53·2	50·2	3·0	..	..	S by W	$1\frac{1}{2}$ to 5	..
2. 35	29·180	53·8	49·7	4·1	..	..	S by W	$1\frac{1}{2}$ to 5	..
3. 5	29·188	..	..	..	..	..	S by W	$1\frac{1}{2}$ to 4	..
3. 20	29·193	52·8	48·3	4·5	44·0	8·8	SSW	$1\frac{1}{2}$ to 6	3
3. 45	29·194	51·0	47·8	3·2	..	..	SSW	$1\frac{1}{2}$ to $7\frac{1}{2}$	..
3. 55	29·197	..	..	..	..	..	SSW	3 to 5	..
4. 5	29·198	..	..	..	..	..	SSW	2 to 5	..
4. 20	29·200	..	..	..	..	..	SSW	$1\frac{1}{2}$ to $3\frac{1}{2}$	..
4. 30	29·200	..	..	..	..	..	SSW	2 to $4\frac{1}{2}$	..
5. 10	29·209	..	..	..	..	..	SSW	2 to 4	..
5. 20	29·213	50·2	46·5	3·7	..	..	SSW	2 to $3\frac{1}{2}$	9
5. 32	29·225	..	..	..	..	..	SSW	2 to 3	..

REMARKS.	Observer.
	H B
Overcast: rain is falling.	
Cirro-stratus and scud.	
	H B
	T D
,,	T D
Cirro-stratus and scud.	H B
,, the wind is blowing in gusts to 2.	
,, ,,	H B
Overcast: the wind is blowing in gusts from ½ to 1.	G H
	G H
	C T
,, the wind is blowing in gusts to 1 +	G H
The wind is blowing in gusts to 1½ and 2.	
Rain is falling.	
The rain has ceased.	
Nearly overcast: cirro-stratus and scud.	G H
	C T
	C T
Cirro-stratus near the horizon: the wind is blowing in gusts to 2½.	H B
Cirro-strati and dark scud nearly cover the sky: the wind is blowing in gusts to 2½.	

Observations on November 20.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry.	Dew Point.	Dew Point below Dry Therm.	WIND. FROM OSLER'S ANEMOMETER. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	Amount of Clouds 0—10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.	
Nov. 20. 5. 50	29·229	..	..	..	..	..	SSW	2 to 4½	..
6. 7	29·231	..	..	..	..	..	SSW	2 to 4½	..
7. 20	29·250	49·5	46·5	3·0	..	..	SSW	2 to 4½	½
8. 20	29·271	49·5	46·7	2·8	..	..	SSW	2 to 4½	..
9. 20	29·310	49·2	46·5	2·7	43·0	6·2	SSW	1 to 3½	0
9. 35	29·316	..	..	..	..	..	SSW	1 to 4½	..
11. 20	29·370	49·0	46·2	2·8	..	..	SSW	1 to 3	0
11. 40	29·381	48·8	46·2	2·6	..	..	SSW	1½ to 3½	..
12. 0	29·384	48·3	46·0	2·3	..	..	SSW	1½ constant	..
12. 20	29·411	47·8	45·7	2·1	..	..	SSW	1 to 2	..
12. 35	29·416	47·5	45·6	2·1	..	..	SSW	½ to 1½	..
12. 55	29·422	47·5	45·5	2·0	..	..	SSW	½ to 2	..
13. 5	29·430	47·5	45·6	1·9	..	..	SSW	½ constant	..
13. 20	29·430	47·5	45·6	1·9	..	..	SSW	½ to 2	0

REMARKS.	Observer.
Nearly cloudless: flashes of lightning are occasionally seen in the S. W.: the wind is blowing in gusts to 2 and $2\frac{1}{2}$.	H B
Cloudless: the wind is blowing in gusts to 2.	H B
,, the wind is blowing in gusts to $1\frac{1}{2}$.	G H
,,	G H

OBSERVATIONS OF METEORS ON AUGUST 12 AND NOVEMBER 11.

Greenwich Mean Solar Time, Astronomical Reckoning.	COURSE AND DESCRIPTION OF THE METEORS.	Observer.
d h m s		
Aug. 12. 8. 43. 0	A brilliant meteor was seen passing from N. to S., leaving a fine train.	H B
8. 43. 32	A faint meteor passing between ζ and λ Cassiopeiæ, and moving a few degrees southward.	
8. 53. 20	A faint meteor passing across the zenith, between γ and β Lyræ, and moving towards the constellation Vulpecula.	
9. 10. 25	A faint meteor passing from below α Cygni, near γ Cygni, and towards Vulpecula; duration $0^s{\cdot}3$.	
9. 24. 27	A faint meteor passing π Sagittarii, to a point about 5° above the horizon.	
9. 37. 58	A bright meteor passing through the constellation Lacerta, and disappearing near Delphinus.	
9. 41. 35	A faint meteor passing through Sagittarius to a point near the horizon.	
9. 51. 51	A meteor passing from λ Cassiopeiæ to α Pegasi.	H B
Nov. 11. 5. 30. 10	A bright meteor passing from α Lyræ to α Aquilæ.	H B
6. 10. 0	A faint meteor passing below the constellation Cassiopeia.	
6. 25. 32	A bright meteor passing from α Draconis to a point between α and β Ursæ Majoris; duration $0^s{\cdot}3$.	
6. 50. 50	A bright meteor passing from the Pleiades to a point above Castor, leaving a train; duration 1^s.	
7. 0. 25	A faint meteor passing from ϵ Ursæ Majoris towards α Ursæ Majoris.	
7. 3. 38	A faint meteor passing near Polaris.	
7. 6. 33	A faint meteor passing from the N. E. to E. above Castor.	
7. 49. 18	A faint meteor passing from α Capricorni to the horizon.	
8. 23. 0	A faint meteor passing near the constellation Delphinus.	
8. 38. 10	A faint meteor passing from a point about 5° above Fomalhaut to the horizon; duration $0^s{\cdot}2$.	H B
9. 30. 0	A faint meteor passing from a point a little above the S. horizon towards Orion.	L
9. 40. 0	A faint meteor passing from the S. to S.W.	
9. 55. 0	A meteor near the Pleiades passing towards the S. E.	
10. 20. 0	A meteor passing from Jupiter to the zenith.	
10. 35. 0	A meteor passing from E. to W. near the zenith.	L
11. 11. 20	A faint meteor descending towards the S.W. part of the horizon.	G H
11. 51. 30	A bright meteor passing from Polaris downwards, and disappearing at a point 25° above the horizon.	
12. 6. 15	A bright meteor passing from E. to W. between Polaris and the horizon.	
12. 20. 25	A bright meteor, of long duration, passing from Cassiopeia to Polaris.	
12. 24. 0	A bright meteor passing from α Orionis to Procyon.	G H

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1846.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays or in the Shade.	Readings of the Graduated Scale. Initial A	Readings of the Graduated Scale. Terminal B	Change in One Minute. B−A.	Apparent Effect of the Sun's Radiation in Parts of the Scale.	Mean Result of each Group in Parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	GENERAL REMARKS.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°		
Feb. 5	22. 40. 0	Sun	−1·0	16·1	+17·1					The glass off.	G
	41. 30	Shade	17·1	18·1	+ 1·0	15·1				A whitish blue sky, but the Sun shines brightly.	
	43. 0	Sun	18·9	34·0	+15·1	14·2					
	44. 30	Shade	34·3	35·2	+ 0·9	14·4					
	46. 0	Sun	35·1	50·5	+15·4	15·0				A gentle air.	
	47. 30	Shade	50·7	50·6	− 0·1	15·5	15·1	22. 48. 45	21		
	49. 0	Sun	50·5	65·8	+15·3	15·8					
	50. 30	Shade	65·2	64·3	− 0·9	15·5					
	52. 0	Sun	64·0	77·8	+13·8	15·1					
	53. 30	Shade	77·9	76·2	− 1·7	15·3					
	55. 0	Sun	75·8	89·1	+13·3	14·8					
	56. 30	Shade	0·0	−1·2	− 1·2						
Feb. 5	22. 59. 0	Sun	2·5	17·2	+14·7					The glass on.	
	23. 0. 30	Shade	23·6	25·0	+ 1·4	13·4					
	2. 0	Sun	25·0	39·8	+14·8	13·8	14·0	23. 2. 30	22		
	3. 30	Shade	40·6	41·3	+ 0·7	14·7					
	5. 0	Sun	41·2	57·2	+16·0						
Feb. 5	23. 7. 0	Sun	63·2	77·5	+14·3					The glass off.	
	8. 30	Shade	77·0	75·2	− 1·8	15·1					
	10. 0	Sun	74·8	87·0	+12·2	14·4	14·8	23. 9. 45	22		
	11. 30	Shade	86·0	83·4	− 2·6						
Feb. 5	23. 23. 0	Sun	32·5	43·0	+10·5					The glass on.	
	25. 30	Shade	44·8	44·0	− 0·8	11·5				Light clouds occasionally passing over the Sun.	
	27. 0	Sun	44·5	55·3	+10·8	12·1					
	28. 30	Shade	55·7	54·0	− 1·7	12·1					
	30. 0	Sun	54·5	64·5	+10·0	11·6					
	31. 30	Shade	63·5	62·0	− 1·5	12·4	12·3	23. 32. 0	22		
	33. 0	Sun	61·2	72·8	+11·8	13·6					
	34. 30	Shade	72·3	70·3	− 2·0	13·3					
	36. 0	Sun	69·3	80·0	+10·7	12·2					
	37. 30	Shade	79·0	78·0	− 1·0	12·2					
	39. 0	Sun	76·5	88·2	+11·7						
Feb. 5	23. 49. 0	Sun	0·0	12·0	+12·0						
	50. 30	Shade	11·8	10·0	− 1·8	11·7					
	52. 0	Sun	9·8	17·5	+ 7·7	10·7	12·3	23. 51. 45	22	The Sun is obscured by cloud.	
	53. 30	Shade	18·8	14·7	− 4·1	14·4					
	55. 0	Sun	16·0	28·8	+12·8	15·5					
	56. 30	Shade	28·0	26·8	− 1·2	15·5					
	58. 0	Sun	26·0	41·8	+15·8	17·3					
	59. 30	Shade	41·6	39·8	− 1·8	18·0					
Feb. 6	0. 1. 0	Sun	39·0	55·5	+16·5	18·2	16·5	0. 1. 30	23	Light clouds around the Sun.	
	2. 30	Shade	55·0	53·4	− 1·6	17·0					
	4. 0	Sun	53·0	67·3	+14·3	16·2					
	5. 30	Shade	67·0	64·8	− 2·2	14·1					
	7. 0	Sun	64·0	73·6	+ 9·6						G
Feb. 20	23. 1. 0	Sun	29·2	59·2	+30·0						HB
—	2. 30	Shade	61·8	64·7	+ 2·9	28·1					
	4. 0	Sun	33·1	65·0	+31·9	29·8					
	5. 30	Shade	67·1	68·5	+ 1·4	30·9					

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OBSERVATIONS WITH THE ACTINOMETER.

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	h m s		div.	div.	div.	div.	div.	h m s	°		
Feb. 20	23. 7. 0	Sun	17·6	50·2	+32·6	30·8					
	8. 30	Shade	52·6	54·8	+ 2·2	29·7	30·0	23. 9. 0	26	Gusts of wind.	HB
	10. 0	Sun	22·3	53·5	+31·2	29·2					
	11. 30	Shade	56·0	57·8	+ 1·8	30·1					
	13. 0	Sun	26·4	59·0	+32·6	30·8					
	14. 30	Shade	61·2	63·0	+ 1·8	30·4					
	16. 0	Sun	15·5	47·4	+31·9						
Feb. 20	23. 22. 0	Sun	32·0	58·5	+26·5					Light clouds.	
	23. 30	Shade	59·5	60·7	+ 1·2	25·1					
	25. 0	Sun	19·0	45·0	+26·0	25·4					
	26. 30	Shade	45·8	45·8	0·0	25·7	25·3	23. 27. 0	26	Clouds over the Sun.	
	28. 0	Sun	34·2	59·5	+25·3	25·4					
	29. 30	Shade	60·0	59·9	− 0·1	25·1					
	31. 0	Sun	32·5	57·2	+24·7					The Sun partly obscured for three seconds.	
Feb. 20	23. 42. 0	Sun	33·0	52·2	+19·2						
	43. 30	Shade	52·8	49·8	− 3·0	23·1	23·1	23. 44. 0	27	The Sun in a light cloud for ten seconds.	HB
	45. 0	Sun	49·0	70·0	+21·0						
Apr. 24	22. 55. 0	Sun	5·0	30·0	+25·0						G
	56. 30	Shade	31·2	32·8	+ 1·6	23·4					
	58. 0	Sun	33·2	57·3	+24·1	22·5	22·7	22. 57. 45	49	The Sun in a thin cloud: a faint shadow cast.	
	59. 30	Shade	58·0	60·0	+ 2·0	22·1					
	23. 1. 0	Sun	60·8	65·0	+ 4·2	2·2					
	2. 30	Shade	65·2	65·6	+ 0·4	3·8	3·0	23. 3. 0	49	The Sun in a cloud of such density that a very faint shadow only was visible.	
	4. 0	Sun	65·8	90·0	+24·2						
Apr. 24	23. 5. 30	Shade	5·0	6·2	+ 1·2						
	7. 0	Sun	7·2	8·8	+ 1·6			23. 6. 45	49	The Sun is in a thick cloud: no shadow cast.	
Apr. 24	23. 28. 0	Sun	20·0	40·5	+20·5						
	29. 30	Shade	40·8	40·5	− 0·3	20·8					
	31. 0	Sun	40·2	59·0	+18·8	19·1	19·9	23. 30. 0	51	During ten seconds there was no shadow; with this exception there was a faint shadow cast.	
	32. 30	Shade	58·0	57·0	− 1·0						
Apr. 24	23. 43. 0	Sun	20·0	26·2	+ 6·2						
	44. 30	Shade	26·0	24·8	− 1·2			23. 44. 15	51	A faint shadow for thirty seconds, and no shadow during the remainder of the time.	
Apr. 24	23. 53. 0	Sun	10·0	21·0	+11·0						
	54. 30	Shade	20·8	20·0	− 0·8	11·8		23. 54. 15	51	A faint shadow the whole time.	
	56. 0	Sun	19·4	41·5	+22·1	22·9					
	57. 30	Shade	41·8	41·2	− 0·6	22·7	22·8	23. 57. 0	51	Between $23^h.\ 56^m.\ 0^s$ and $23^h.\ 57^m.\ 0^s$ the sky was clear; at other times it was cloudy.	
	59. 0	Sun	41·0	45·0	+ 4·0	4·6					
Apr. 25	0. 30	Shade	44·7	43·8	− 0·9			0. 0. 15	52		
Apr. 25	0. 20. 0	Sun	15·7	37·2	+22·2					Cloudless.	
	21. 30	Shade	37·0	36·2	− 0·8	11·5					
	23. 0	Sun	36·0	59·3	+23·3	12·1					
	24. 30	Shade	59·2	58·8	− 0·4	11·8	12·2	0. 23. 30	51		
	26. 0	Sun	58·5	84·6	+26·1	13·3				After this time the Sun was totally obscured by clouds.	
June 2	1. 12. 30	Shade	14·0	1·5	−12·5					Cloudless.	
	14. 0	Sun	11·0	38·2	+27·2	39·7					G

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	h m s		div.	div.	div.	div.	div.	h m s	°		
June 2	1. 15. 30	Shade	32·5	20·0	−12·5	40·0					TD
	17. 0	Sun	24·3	52·0	+27·7	39·1					
	18. 30	Shade	47·8	37·5	−10·3	39·2					
	20. 0	Sun	39·0	69·0	+30·0	40·3					
	21. 30	Shade	64·5	54·3	−10·2	40·0	39·5	1. 20. 30	55		
	23. 0	Sun	55·8	85·4	+29·6	39·5					
	24. 30	Shade	81·5	72·0	− 9·5	39·1					
	26. 0	Sun	6·2	35·8	+29·6	39·6					
	27. 30	Shade	31·7	21·2	−10·5	38·9					
	29. 0	Sun	23·8	51·0	+27·2	39·4					
	30. 30	Shade	48·8	35·0	−13·8	40·6					
	32. 0	Sun	36·8	63·2	+26·4	38·7					
	33. 30	Shade	57·7	47·0	−10·7	38·8					
	35. 0	Sun	45. 0	74·8	+29·8	40·5					
	36. 30	Shade	70·6	60·0	−10·6	39·7	39·9	1. 36. 15	55		
	38. 0	Sun	61·5	89·8	+28·3	38·8					
	39. 30	Shade	85·2	74·8	−10·4	39·8					
	41. 0	Sun	10·0	40·5	+30·5	41·5					
	42. 30	Shade	35·6	24·0	−11·6	41·2					
	44. 0	Sun	26·8	55·5	+28·7	40·2					
	45. 30	Shade	49·6	38·3	−11·3	39·9					
	47. 0	Sun	39·0	67·5	+28·5	40·1					
	48. 30	Shade	63·0	51·2	−11·8	41·1					
	50. 0	Sun	5·5	35·5	+30·0	41·9	40·9	1. 51. 15	53		
	51. 30	Shade	29·4	17·5	−11·9	41·1					
	53. 0	Sun	19·0	47·5	+28·5	40·2					
	55. 30	Shade	41·4	30·0	−11·4	41·2					
	57. 0	Sun	27·5	58·7	+31·2	42·3					
	58. 30	Shade	45·0	34·3	−10·7						TD
											HB
June 2	2. 46. 0	Sun	27·3	54·2	+26·9						
	47. 30	Shade	52·0	44·5	− 7·5	34·3					
	49. 0	Sun	45·1	71·7	+26·6	33·6					
	50. 30	Shade	68·7	62·3	− 6·4	33·5					
	52. 0	Sun	26·0	53·5	+27·5	34·0					
	53. 30	Shade	51·0	44·5	− 6·5	33·6	33·6	2. 54. 0	47		
	55. 0	Sun	45·2	71·8	+26·6	33·2					
	56. 30	Shade	69·5	62·9	− 6·6	33·5					
	58. 0	Sun	23. 5	50·7	+27·2	33·5					
	59. 30	Shade	47·8	41·9	− 5·9	32·9					
	3. 1. 0	Sun	41·5	68·2	+26·7						HB
June 2	6. 4. 0	Sun	0·0	21·8	+21·8					Cloudless.	L
	5. 30	Shade	22·5	19·5	− 3·0	24·1					
	7. 0	Sun	19·0	39·4	+20·4	23·0					
	8. 30	Shade	38·4	36·2	− 2·2	22·8					
	10. 0	Sun	35·2	56·0	+20·8	23·2	23·4	6. 9. 45	17		
	11. 30	Shade	55·0	52·5	− 2·5	22·8					
	13. 0	Sun	51·2	71·0	+19·8	22·5					
	14. 30	Shade	70·0	67·2	− 2·8	25·4					
	16. 0	Sun	65·8	91·2	+25·4	28·2					
	17. 30	Shade	90·8	88·0	− 2·8	25·5					
	19. 0	Sun	0·0	20·0	+20·0	23·0					
	20. 30	Shade	18·8	15·5	− 3·3	23·2	24·0	6. 21. 45	14		

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The "Apparent Effect of the Sun's Radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1846.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays or in the Shade.	Readings of the Graduated Scale. Initial A	Readings of the Graduated Scale. Terminal B	Change in One Minute. B−A.	Apparent Effect of the Sun's Radiation in Parts of the Scale.	Mean Result of each Group in Parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	GENERAL REMARKS.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°		
June 2	6. 22. 0	Sun	14·2	34·0	+19·8	23·3					L
	23. 30	Shade	32·6	29·0	− 3·6	22·6					
	25. 0	Sun	27·0	45·2	+18·2	22·1					
	26. 30	Shade	43·5	39·3	− 4·2						
June 2	23. 12. 30	Shade	5·0	3·8	− 1·2					Cloudless.	
	14. 0	Sun	3·2	37·2	+34·0	34·8				The glass off.	
	15. 30	Shade	36·8	36·5	− 0·3	33·1					
	17. 0	Sun	36·5	68·0	+31·5	32·2					
	18. 30	Shade	67·5	66·5	− 1·0	34·2					
	20. 0	Sun	25·0	59·8	+34·8	34·3					
	21. 30	Shade	60·5	62·5	+ 2·0	33·4	34·3	23. 21. 15	59		
	23. 0	Sun	0·0	36·0	+36·0	34·8					
	24. 30	Shade	36·8	37·2	+ 0·4	35·9					
	26. 0	Sun	37·5	74·0	+36·5	35·7					
	27. 30	Shade	75·0	76·2	+ 1·2	34·1					
	29. 0	Sun	14·0	48·0	+34·0						
June 3	2. 1. 0	Sun	0·0	35·6	+35·6					The glass on: cloudless.	
	2. 30	Shade	37·2	40·8	+ 3·6	32·2					
	4. 0	Sun	42·5	78·4	+35·9	32·4					
	5. 30	Shade	80·5	84·0	+ 3·5	33·3					
	7. 0	Sun	0·0	37·7	+37·7	34·0	33·3	2. 7. 30	47		
	8. 30	Shade	39·8	43·8	+ 4·0	33·8					
	10. 0	Sun	46·0	83·8	+37·8	33·8					
	11. 30	Shade	30·2	34·2	+ 4·0	33·7					
	13. 0	Sun	36·0	73·6	+37·6						L
June 3	2. 15. 0	Sun	6·0	44·9	+38·9					Cloudless.	TD
	16. 30	Shade	46·2	49·5	+ 3·3	36·3					
	18. 0	Sun	51·0	91·2	+40·2	36·7					
	19. 30	Shade	3·8	7·5	+ 3·7	36·4					
	21. 0	Sun	10·0	50·0	+40·0	36·5	36·3	2. 21. 30	47		
	22. 30	Shade	52·5	55·8	+ 3·3	36·4					
	24. 0	Sun	6·4	45·8	+39·4	36·1					
	25. 30	Shade	48·0	51·3	+ 3·3	35·5					
	27. 0	Sun	52·6	90·8	+38·2						
June 3	2. 34. 0	Sun	5·9	42·8	+36·9					Cloudless.	
	35. 30	Shade	43·7	44·8	+ 1·1	35·5					
	37. 0	Sun	3·0	39·3	+36·3	35·9					
	38. 30	Shade	39·0	38·8	− 0·2	36·3					
	40. 0	Sun	38·5	74·3	+35·8	36·3	36·4	2. 40. 30	47		
	41. 30	Shade	74·0	73·2	− 0·8	36·8					
	44. 0	Sun	6·0	42·3	+36·3	37·2					
	45. 30	Shade	41·9	40·9	− 1·0	36·8					
	47. 0	Sun	40·4	75·6	+35·2						TD
June 3	3. 46. 0	Sun	26·1	53·3	+27·2					Cloudless.	HB
	47. 30	Shade	51·0	46·8	− 4·2	30·8				Light airs from the East.	
	49. 0	Sun	45·8	71·7	+25·9	29·7					
	50. 30	Shade	70·6	67·2	− 3·4	29·8					
	52. 0	Sun	31·1	57·9	+26·8	29·9	29·6	3. 51. 45	31		
	53. 30	Shade	56·7	53·9	− 2·8	29·2					

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June 3d. 2h. 3m to June 3d. 2h. 12m. The times between this interval were all noted one minute earlier than the times as printed.

OBSERVATIONS WITH THE ACTINOMETER.

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	h m s		div.	div.	div.	div.	div.	h m s	°		
June 3	3. 55. 0	Sun	55·2	81·2	+26·0	28·9					HB
	56. 30	Shade	45·4	42·5	− 2·9	29·2					
	58. 0	Sun	42·3	68·8	+26·5	29·5					
	59. 30	Shade	67·8	64·7	− 3·1	29·3					
	4. 1. 0	Sun	25·1	51·0	+25·9	29·1					
	2. 30	Shade	50·3	47·0	− 3·3	29·9	30·5	4 3. 0	31		
	4. 0	Sun	20·3	47·5	+27·2	30·6					
	5. 30	Shade	46·2	42·8	− 3·4	32·0					
	7. 0	Sun	40·7	70·7	+30·0	33·1					
	8. 30	Shade	70·8	68·1	− 2·7	38·8					
	10. 0	Sun	26·2	58·3	+32·1	35·6					
	11. 30	Shade	57·5	54·3	− 3·2	34·6					
	13. 0	Sun	26·6	57·2	+30·6	34·2	34·3	4. 14. 15	30		
	14. 30	Shade	56·0	52·3	− 3·7	32·8					
	16. 0	Sun	50·5	78 0	+27·5	31·2					
	17. 30	Shade	76·5	72·8	− 3·7	32·8					
	19. 0	Sun	31·5	62·2	+30·7						
June 3	4. 28. 0	Sun	20·5	47·9	+27·4						
	29. 30	Shade	45·4	40·2	− 5·2	32·8					
	31. 0	Sun	43·8	71·6	+27·8	33·3					
	32. 30	Shade	68·7	63·0	− 5·7	33·8					
	34. 0	Sun	19·8	48·2	+28·4	34·2					
	35. 30	Shade	45·7	39·9	− 5·8	33·7	33·3	4. 34. 30	30		
	37. 0	Sun	37·7	65·0	+27·3	33·0					
	38. 30	Shade	62·2	56·6	− 5·6	32·9					
	40. 0	Sun	53·0	80·2	+27·2	33·1					
	41. 30	Shade	77·7	71·5	− 6·2	34·0					
	43. 0	Sun	49·9	78·2	+28·3	34·4					
	44. 30	Shade	75·2	69·2	− 6·0	34·7					
	46. 0	Sun	28·5	57·5	+29·0	35·1	34·4	4. 47. 15	27		
	47. 30	Shade	56·0	49·9	− 6·1	34·4					
	49. 0	Sun	22·6	50·2	+27·6	34·1					
	50. 30	Shade	47·2	40·3	− 6·9	34·4					
	52. 0	Sun	38·8	66·2	+27·4						
June 3	5. 35. 0	Sun	25·9	49·5	+23·6						
	36. 30	Shade	46·3	40·4	− 5·9	29·2					
	38. 0	Sun	40·5	63·4	+22·9	28·7					
	39. 30	Shade	60·9	55·2	− 5·7	28·7					
	41. 0	Sun	54·2	77·2	+23·0	28·4	29·0	5. 40. 45	25		
	42. 30	Shade	74·6	69·5	− 5·1	28·7					
	44. 0	Sun	19·0	43·2	+24·2	29·8					
	45. 30	Shade	41·0	35·0	− 6·0	29·6					
	47. 0	Sun	46·4	69·4	+23·0	28·4					
	48. 30	Shade	68·5	63·8	− 4·7	28·0					
	50. 0	Sun	17·7	41·2	+23·5	28·2					
	51. 30	Shade	39·0	34·4	− 4·6	28·3					
	53. 0	Sun	35·3	59·2	+23·9	28·7	28·4	5. 53. 30	25		
	54. 30	Shade	57·5	52·6	− 4·9	28·7					
	56. 0	Sun	51·8	75·4	+23·6	28·4					
	57. 30	Shade	73·0	68·3	− 4·7	28·3					
	59. 0	Sun	20·9	44·4	+23·5						HB

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	h m s		div.	div.	div.	div.	div.	h m s	°		
June 3	22. 30. 0	Sun	0·0	41·0	+41·0					The glass off: cloudless.	L
	31. 30	Shade	46·8	58·8	+12·0	29·4					
	33. 0	Sun	0·0	41·8	+41·8	29·4					
	34. 30	Shade	47·2	60·0	+12·8	29·3					
	36. 0	Sun	0·2	42·5	+42·3	29·8					
	37. 30	Shade	48·5	60·8	+12·3	29·7	30·1	22. 38. 0	54		
	39. 0	Sun	2·0	43·7	+41·7	30·0					
	40. 30	Shade	49·0	60·0	+11·0	31·0					
	42. 0	Sun	0·0	42·2	+42·2	31·1					
	43. 30	Shade	47·8	59·0	+11·2	31·1					
	45. 0	Sun	0·0	42·5	+42·5						
June 3	23. 36. 0	Sun	0·0	28·5	+28·5					The glass off: cloudless.	
	37. 30	Shade	29·2	29·2	0·0	29·0					
	39. 0	Sun	29·3	58·7	+29·4	29·2					
	40. 30	Shade	58·8	59·2	+ 0·4	28·9					
	42. 0	Sun	59·3	88·4	+29·1	28·6	29·4	23. 42. 30	58		
	43. 30	Shade	88·8	89·4	+ 0·6	29·5					
	45. 0	Sun	0·0	31·0	+31·0	30·5					
	46. 30	Shade	31·8	32·2	+ 0·4	29·9					
	48. 0	Sun	32·5	62·0	+29·5						L
June 4	0. 58. 0	Sun	0·0	31·0	+31·0					Cloudless: occasional light gusts.	HB
	59. 30	Shade	31·0	29·8	— 1·2	30·9					
	1. 1. 0	Sun	30·6	59·0	+28·4	31·6					
	2. 30	Shade	57·0	51·8	— 5·2	32·5					
	4. 0	Sun	52·3	78·4	+26·1	30·0	30·9	1. 3. 0	56	Frequent gusts of wind: the glass off.	
	5. 30	Shade	77·2	74·7	— 2·5	29·8					
	7. 0	Sun	26·3	54·7	+28·4	30·4					
	8. 30	Shade	54·4	52·9	— 1·5	30·0					
	10. 0	Sun	53·8	82·5	+28·7	30·8					
	11. 30	Shade	84·2	81·6	— 2·6	31·4	30·4	1. 12. 45	56		
	13. 0	Sun	33·7	62·6	+28·9	31·0					
	14. 30	Shade	62·2	60·7	— 1·5	29·0					
	16. 0	Sun	59·4	85·5	+26·1						HB
June 4	2. 6. 0	Sun	0·5	29·2	+28·7					The glass on.	L
	7. 30	Shade	32·0	31·2	— 0·8	29·4					
	9. 0	Sun	31·0	59·5	+28·5	29·1				Frequent light gusts of wind.	
	10. 30	Shade	59·5	59·2	— 0·3	28·1					
	12. 0	Sun	59·5	86·5	+27·0	27·4					
	13. 30	Shade	5·0	4·6	— 0·4	28·3	28·6	2. 14. 0	53		
	15. 0	Sun	4·0	32·8	+28·8	29·1					
	16. 30	Shade	33·5	33·3	— 0·2	28·8					
	18. 0	Sun	33·2	61·5	+28·3	28·3					
	19. 30	Shade	62·0	62·2	+ 0·2	28·9					
	21. 0	Sun	0·0	29·8	+29·8						L
June 15	2. 46. 30	Shade	82·0	82·2	+ 0·2						HB
	48. 0	Sun	21·3	49·5	+28·2	28·2	28·4	2. 49. 15	45		
	49. 30	Shade	49·8	49·6	— 0·2	28·6					
	51. 0	Sun	49·0	75·6	+26·6						
June 15	21. 48. 0	Sun	21·2	59·7	+38·5						

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	h m s		div.	div.	div.	div.	div.	h m s	°		
June 15	21. 49. 30	Shade	65·9	76·7	+10·8	28·1					HB
	51. 0	Sun	16·4	55·7	+39·3	27·9					
	52. 30	Shade	62·2	74·2	+12·0	27·3	27·8	21. 53. 0	53		
	54. 0	Sun	21·3	60·5	+39·2	27·6					
	55. 30	Shade	66·7	78·0	+11·3	28·1					
	57. 0	Sun	24·6	64·2	+39·6						
June 15	23. 28. 0	Sun	20·3	51·2	+30·9						
	29. 30	Shade	52·3	54·5	+ 2·2	29·5					
	31. 0	Sun	23·7	56·2	+32·5	29·9					
	32. 30	Shade	57·7	60·8	+ 3·1	30·0					
	34. 0	Sun	27·6	61·2	+33·6	30·1	29·8	23. 33. 45	58		
	35. 30	Shade	63·8	67·7	+ 3·9	29·6					
	37. 0	Sun	24·4	57·7	+33·3	29·2					
	38. 30	Shade	60·8	65·1	+ 4·3	30·0				Frequent gusts of wind.	
	40. 0	Sun	21·8	57·1	+35·3	31·6					
	41. 30	Shade	59·2	62·4	+ 3·2	31·7					
	43. 0	Sun	15·7	49·2	+33·5	31·0					
	44. 30	Shade	51·7	55·6	+ 3·9	30·5	31·2	23. 45. 0	62		
	46. 0	Sun	20·5	54·7	+34·2	31·1					
	47. 30	Shade	57·2	59·5	+ 2·3	31·6					
	49. 0	Sun	21·5	55·0	+33·5	31·2					
	50. 30	Shade	56·8	59·1	+ 2·3	30·8					
	52. 0	Sun	14·5	47·2	+32·7	30·2					
	53. 30	Shade	49·0	51·7	+ 2·7	30·6					
	55. 0	Sun	15·8	49·7	+33·9	31·9	30·9	23. 56. 15	62		
	56. 30	Shade	50·8	52·2	+ 1·4	31·6					
	58. 0	Sun	19·6	51·6	+32·0	30·9					
	59. 30	Shade	51·9	52·8	+ 0·9	30·6					
June 16	0. 1. 0	Sun	54·7	85·7	+31·0						HB
June 16	1. 29. 0	Sun	0·2	25·4	+25·2					Frequent gusts of wind.	TD
	30. 30	Shade	25·0	20·4	− 4·6	31·1					
	32. 0	Sun	18·0	45·8	+27·8	32·2					
	33. 30	Shade	45·0	40·8	− 4·2	31·0					
	35. 0	Sun	38·4	64·2	+25·8	29·4	30·3	1. 35. 30	58		
	36. 30	Shade	64·0	61·0	− 3·0	29·8					
	38. 0	Sun	9·4	37·2	+27·8	29·9					
	39. 30	Shade	36·0	35·8	− 0·2	28·5					
	41. 0	Sun	41·0	69·7	+28·7						
June 16	2. 25. 0	Sun	8·0	32·8	+24·8						
	26. 30	Shade	30·2	25·0	− 5·2	29·7					
	28. 0	Sun	23·3	47·4	+24·1	29·4					
	29. 30	Shade	35·4	40·7	− 5·3	29·4	29·6	2. 30. 0	45		
	31. 0	Sun	39·0	63·1	+24·1	29·3					
	32. 30	Shade	14·0	9·0	− 5·0	29·8					
	34. 0	Sun	6·2	31·7	+25·5	30·1					
	35. 30	Shade	29·6	25·4	− 4·2	29·1					
	37. 0	Sun	23·0	47·2	+24·2	28·4					
	38. 30	Shade	45·2	41·0	− 4·2	27·9					
	40. 0	Sun	39·2	62·4	+23·2	27·2	27·4	2. 41. 15	45		
	41. 30	Shade	60·7	56·9	− 3·8	26·5					
	43. 0	Sun	54·8	77·0	+22·2	26·0					

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	h m s		div.	div.	div.	div.	div.	h m s	°		
June 16	2. 44. 30	Shade	10·0	6·3	− 3·7	26·7					TD
	2. 46. 0	Sun	4·4	28·0	+23·6						
June 16	6. 10. 0	Sun	29·5	47·5	+18·0						
	11. 30	Shade	46·8	45·5	− 1·3	17·6					
	13. 0	Sun	44·8	59·4	+14·6	16·5					
	14. 30	Shade	58·5	56·0	− 2·5	16·5					
	16. 0	Sun	54·8	68·2	+13·4	15·9					
	17. 30	Shade	67·5	65·0	− 2·5	15·3	15·0	6. 16. 30	18		
	19. 0	Sun	63·8	76·0	+12·2	14·8					
	20. 30	Shade	74·6	72·0	− 2·6	12·7					
	22. 0	Sun	70·0	78·0	+ 8·0	10·7					
	23. 30	Shade	76·3	73·6	− 2·7	11·7					
	25. 0	Sun	54·0	64·0	+10·0	12·9					
	26. 30	Shade	63·0	60·0	− 3·0	12·9					
	28. 0	Sun	59·0	68·8	+ 9·8	12·9					
	29. 30	Shade	68·2	65·0	− 3·2	11·9	11·6	6. 30. 45	18		
	31. 0	Sun	63·2	70·8	+ 7·6	11·0					
	32. 30	Shade	69·0	65·5	− 3·5	10·5					
	34. 0	Sun	63·7	70·0	+ 6·3	10·0					
	35. 30	Shade	68·0	64·2	− 3·8	10·3					
	37. 0	Sun	62·4	69·0	+ 6·6						TD
June 17	3. 58. 0	Sun	43·5	73·5	+30·0						HB
	59. 30	Shade	74·8	76·7	+ 1·9	28·3					
	4. 1. 0	Sun	18·2	48·5	+30·3	28·7					
	2. 30	Shade	49·6	51·0	+ 1·4	28·2					
	4. 0	Sun	52·9	81·7	+28·8	27·6	28·3	4. 4. 30	36		
	5. 30	Shade	82·9	83·9	+ 1·0	28·4					
	7. 0	Sun	25·6	55·6	+30·0	28·9					
	8. 30	Shade	56·5	57·7	+ 1·2	28·0					
	10. 0	Sun	59·4	87·8	+28·4						
June 17	5. 33. 0	Sun	24·2	46·0	+21·8						
	34. 30	Shade	45·4	43·8	− 1·6	23·3					
	36. 0	Sun	45·1	66·6	+21·5	23·4					
	37. 30	Shade	65·9	63·8	− 2·1	23·9					
	39. 0	Sun	17·6	39·7	+22·1	24·2					
	40. 30	Shade	39·4	37·3	− 2·1	23·8	23·4	5. 41. 0	20		
	42. 0	Sun	40·2	61·5	+21·3	23·3					
	43. 30	Shade	60·6	58·8	− 1·8	22·9					
	45. 0	Sun	61·3	82·1	+20·8	22·7					
	46. 30	Shade	81·1	79·1	− 2·0	23·2					
	48. 0	Sun	29·7	51·2	+21·5						
June 17	6. 57. 0	Sun	26·2	36·6	+10·4					The Sun in a cirrus cloud.	
	58. 30	Shade	34·8	32·4	− 2·4	10·5					
	7. 0. 0	Sun	32·1	37·8	+ 5·7	8·5	9·1	7. 0. 30	11		
	1. 30	Shade	36·4	33·2	− 3·2	8·4					
	3. 0	Sun	27·9	32·6	+ 4·7						
Dec. 13	22. 53. 0	Sun	16·2	26·5	+10·3						
	54. 30	Shade	27·2	28·4	+ 1·2	8·9					
	56. 0	Sun	30·1	40·0	+ 9·9	9·2					

In every observation, whether in the Sun's rays or in the shade, the Terminal Reading was taken exactly one minute after the Initial Reading.

The "Apparent Effect of the Sun's Radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1846.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays or in the Shade.	Readings of the Graduated Scale. Initial A	Readings of the Graduated Scale. Terminal B	Change in One Minute. B−A.	Apparent Effect of the Sun's Radiation in Parts of the Scale.	Mean Result of each Group in Parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	GENERAL REMARKS.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°		
Dec. 13	22. 57. 30	Shade	40·5	40·8	+ 0·3	9·4					HB
	22. 59. 0	Sun	41·6	51·1	+ 9·5	9·4	9·2	22. 58. 0	14		
	23. 0. 30	Shade	51·7	51·7	0·0	9·2					
	2. 0	Sun	52·4	61·4	+ 9·0	9·1				Light cirri.	
	3. 30	Shade	61·7	61·5	− 0·2	9·2					
	5. 0	Sun	62·4	71·5	+ 9·1	9·4					
	6. 30	Shade	71·7	71·3	− 0·4	10·0					
	8. 0	Sun	23·7	33·9	+10·2	10·5	9·9	23. 9. 15	14		
	9. 30	Shade	33·9	33·7	− 0·2	10·1					
	11. 0	Sun	36·9	46·5	+ 9·6	10·0					
	12. 30	Shade	46·3	45·8	− 0·5	10·0					
	14. 0	Sun	46·5	56·0	+ 9·5						
Dec. 13	23. 48. 0	Sun	15·7	25·4	+ 9·7					A few fleecy clouds around the Sun.	
	49. 30	Shade	25·7	25·4	− 0·3	9·3					
	51. 0	Sun	25·6	33·8	+ 8·2	8·6					
	52. 30	Shade	33·9	33·3	− 0·6	8·8	9·0	23. 53. 0	15		
	54. 0	Sun	34·5	42·7	+ 8·2	8·8					
	55. 30	Shade	42·6	42·1	− 0·5	9·1					
	57. 0	Sun	43·5	52·5	+ 9. 0	9·5					
	23. 58. 30	Shade	52·4	51·8	− 0·6	9·5				Cloudless.	
Dec. 14	0. 0. 0	Sun	51·5	60·3	+ 8·8	9·3					
	1. 30	Shade	60·2	59·9	− 0·3	9·8					
	3. 0	Sun	20·8	31·0	+10·2	10·6	9·9	0. 4. 15	15		
	4. 30	Shade	31·2	30·7	− 0·5	10·2					
	6. 0	Sun	33·0	42·3	+ 9·3	9·8					
	7. 30	Shade	42·4	41·9	− 0·5	10·1					
	9. 0	Sun	45·0	55·0	+10·0						
Dec. 14	0. 35. 0	Sun	27·9	37·1	+ 9·2					Light clouds about the Sun.	
	36. 30	Shade	37·0	36·2	− 0·8	9·5					
	38. 0	Sun	36·5	44·7	+ 8·2	9·0					
	39. 30	Shade	44·4	43·7	− 0·7	9·0	9·3	0. 39. 15	15		
	41. 0	Sun	44·0	52·5	+ 8·5	9·3					
	42. 30	Shade	52·3	51·3	− 1·0	9·9					
	44. 0	Sun	52·8	62·1	+ 9·3	10·3					
	45. 30	Shade	61·7	60·7	− 1·0	10·4					
	47. 0	Sun	23·0	32·5	+ 9·5	10·4					
	48. 30	Shade	32·4	31·6	− 0·8	10·3	10·3	0. 49. 0	14		
	50. 0	Sun	32·8	42·4	+ 9·6	10·5					
	51. 30	Shade	42·3	41·3	− 1·0	10·1				Hazy.	
	0. 53. 0	Sun	42·5	51·1	+ 8·6						
Dec. 14	1. 21. 0	Sun	27·2	35·7	+ 8·5					The glass on.	
	22. 30	Shade	35·6	34·8	− 0·8	9·0					
	24. 0	Sun	36·4	44·3	+ 7·9	8·8	8·8	1. 24. 30	14		
	25. 30	Shade	44·1	43·1	− 1·0	8·6					
	27. 0	Sun	44·0	51·2	+ 7·2						
Dec. 14	1. 31. 0	Sun	33·5	38·7	+ 5·2					The glass off.	
	32. 30	Shade	37·2	32·9	− 4·3	9·7					
	34. 0	Sun	32·3	36·9	+ 5·6	9·7	9·5	1. 34. 30	13		
	35. 30	Shade	35·9	32·0	− 3·9	9·2					
	37. 0	Sun	32·3	36·2	+ 3·9						

In every observation, whether in the Sun's rays or in the shade, the Terminal Reading was taken exactly one minute after the Initial Reading.
The "Apparent Effect of the Sun's Radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °		div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Jan. 23. 2.47 to 23. 3.37	Neg. & Pos.	5 to 40	..	0 to out of range	0 to out of range	0 to 12	Instantly to 16^s	3. 9	3. 7. 0	0·03	2 in 1
									3. 8. 0	0·04	3 in 1
									3.27. 0	0·01	A spark
25.23. 0 to 25.23.25	Neg.	0 to 40	..	0 to out of range	0 to out of range	0 to 25	Instantly	23.10	23. 0. 0	0·05	1 in 10
									23. 1.15	0·10	2 in 1
									23. 4. 0	0·10	1 in 2
									23. 4.20	0·10	2 in 1
									23. 4.40	0·05	10 in 1
									23. 5. 0	0·10	A spark
									23. 6.53	0·10	3 in 2
									23. 7. 0	0·10	5 in 1
									23. 7.20	0·15	A spark
									23. 7.40	0·05	18 in 1
									23. 8. 0	0·08	25 in 1
									23. 9. 0	0·10	6 in 1
									23.10. 0	0·13	1 in 37, and then 4 in 1
									23.10.18	0·15	A volley
									23.10.30	0·15	A volley
									23.10.33	0·15	3 in 1
									23.10.46	0·15	A spark
									23.10.52	0·15	6 in 1
									23.12. 0	0·10	10 in 1
									23.12.30	0·13	1 in 28
									23.13.10	0·13	1 in 3
									23.20.10	0·08	1 in 10
									23.20.20	0·03	6 in 1
									23.20.40	0·05	1 in 5
									No sparks were shewn after this		time
Feb. 7. 1.22 to 7. 2. 0	Neg. & Pos.	0 to 40	..	0 to out of range	0 to out of range	0 to 22	5^s	1.45	1.22. 0	0·06	1 in 1
									1.40. 0	0·05	3 in 1
									1.43. 0	0·05	4 in 1
									1.52. 0	0·08	2 in 1
									1.53. 0	0·08	1 in 3
Mar. 4.21. 0 to 4.23. 0	Neg. & Pos.	0 to 40	..	0 to out of range	0 to out of range	0 to 20	Instantly to 15^s	22. 7	21.50. 0	0·03	Sparks
									21.54. 0	0·05	A spark
									21.55. 0	0·04	2 in 1
									21.57. 0	0·03	Sparks
									22. 0. 0	0·02	Sparks
									22. 2. 0	0·04	1 in 3
									22. 2.30	0·04	3 in 2
									22. 3. 0	0·05	1 in 5
									22. 5. 0	0·10	1 in 1
									22. 7. 0	0·10	3 in 2
									22.14. 0	0·05	3 in 5
									22.19. 0	0·07	2 in 5
									22.20. 0	0·09	3 in 5
									22.22. 0	0·05	2 in 5
									22.23.30	0·04	1 in 30

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
o o	o o		from lbs. to lbs.		
..	..	SW	..	Rain falling heavily. There were frequent changes from positive to negative.	H B
..	..	WSW	0 to $\frac{3}{4}$	Rain falling heavily: at $23^h.\ 13^m.\ 30^s$ the electricity became weak, but at $23^h.\ 20^m$ it was again strong; it again gradually decreased from $23^h.\ 21^m$, and by $23^h.\ 25^m$ nothing was shewn.	G
..	..	WSW to WNW, passing W	1 to 7	Rain falling generally.	H B
..	..	SSW and NW, passing W	..	Rain falling.	H B

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
March 6. 22. 53	Neg.	10	12	8	6	..	..	..	..	..	..
13. 17. 40 to 13. 18. 0	Neg.	40	..	20 to 40	20 to 40	..	2m	18. 0	..	..	..
19. 21. 34 to 20. 0. 0	Pos.	5 to 40	5 to 80	2 to 30	0 to 50	..	..	21. 55	..	..	..
21. 7. 10 to 21. 7. 30	Neg. & Pos.	5 to 40	..	0 to out of range	0 to 200	0 to 10	5s	7. 15 to 7. 20	7. 10. 0	0·05 0·04	1 in 40 1 in 10
22. 1. 25 to 22. 1. 42	Neg. & Pos.	40	50 to out of range	out of range	30 to 300	3 to 12	..	1. 25	1. 25. 0 1. 27. 0 1. 40. 0	0·06 0·02 0·05	1 in 3 Sparks Sparks plentiful
23. 23. 15 to 24. 2. 38	Neg. & Pos.	5 to 40	5 to out of range	10 to out of range	10 to out of range	0 to 15	Instantly	2. 6	2. 8. 0	0·08 0·09	1 in 3 1 in 4
25. 5. 26 to 25. 5. 42	Neg.	40	30 to out of range	15 to out of range	0 to out of range	0 to 15	10s	5. 37	5. 28. 0 5. 34. 0 5. 35. 0	0·02 0·08 0·09	A spark 3 in 1 1 in 10
25. 9. 31 to 25. 9. 37	Neg.	..	..	..	30 to out of range	0 to 15	..	9. 31	9. 31. 0 9. 34. 0	0·10 0·03	3 in 1 1 in 10
27. 0. 3 to 27. 0. 53	Neg. & Pos.	40	..	..	10 to out of range	0 to 12	Instantly	0. 5	0. 5. 0 0. 6. 0 0. 7. 0 0. 8. 0 to 0. 9. 40 0. 12. 0 0. 13. 0 0. 14. 0 0. 15. 0 0. 16. 0 0. 17. 0	0·10 0·05 0·08 0·06 0·08 0·08 0·08 0·08 0·09 0·10 0·09 0·08 0·08 0·06 0·05 No sparks at any distance	1 in 1 3 in 1 2 in 1 3 in 1 2 in 3 2 in 1 1 in 1 3 in 2 1 in 2 1 in 4 1 in 1 3 in 2 2 in 1 3 in 1 1 in 25 2 in 1 3 in 2 2 in 2 None 1 in 5 3 in 5 None A spark A spark
27. 2. 45 to 27. 2. 54	Neg.	40	..	out of range	50 to out of range	8 to 22	Instantly to 3s	2. 48	2. 45. 0 2. 47. 0	0·12 0·13	3 in 1 No spark

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° ′	° ′		from lbs. to lbs.		
..	..	SSW	..	Slight rain falling.	L
..	..	SW	..	Rain falling heavily.	G H
..	..	Calm	..	Cloudless, but gloomy.	H B
..	..	S by E	$\frac{1}{4}$ to $2\frac{1}{2}$	Rain falling.	
3 to 4	..	SW	$\frac{1}{2}$ to $2\frac{1}{2}$	A large cumulo-stratus around the zenith: squally.	
..	..	SSW	0 to $\frac{1}{2}$	Rain falling generally: a cumulo-stratus in the South.	
..	..	WSW	..	Rain falling.	
..	..	SW	0 to 1	Rain falling heavily.	
..	..	SW	..	Cumuli in the horizon, and large cumulo-strati S. of the zenith: slight rain was falling after $0^h.48^m$.	
2 to 3	..	NW to W by S passing W	..	A large cumulo-stratus S. of the zenith.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
March 27. 2. 45 to 27. 2. 54	Neg.	40	..	out of range	50 to out of range	8 to 22	Instantly to 3^s	2. 48	2. 48. 0	0·12	1 in 5
									2. 51. 0	0·12	1 in 5
									2. 52. 0	0·13	No spark
									2. 53. 0	0·12	1 in 10
									2. 54. 0	0·03	A spark
28. 7. 0 to 28. 7. 35	Neg.	40	..	..	100 to out of range	8 to 16	Instantly	7. 24	7. 2. 0	0·07	1 in 4
									7. 3. 0	0·09	A spark
									7. 4. 0	0·03	A spark
									from	0·09	1 in 5
									7. 6. 0	0·10	1 in 3
										0·10	1 in 2
										0·11	None
									to	0. 10	1 in 3
										0. 11	None
										0·10	1 in 2
									7. 13. 0	0·11	None
									7. 16. 0	0·11	3 in 1
									7. 19. 0	0·12	4 in 1
									7. 20. 0	0·14	3 in 1
									7. 22. 0	0·15	2 in 1
									7. 24. 0	0·16	1 in 10
									7. 28. 0	0·12	1 in 3
April 1. 19. 5 to 1. 19. 14	Neg.	0 to 40	..	..	..	0 to 30	..	19. 8	19. 5. 0	0·10	4 in 1
									19. 8. 0	0·13	5 in 1
									19. 14. 0	0·08	1 in 30
1. 21. 58 to 1. 22. 9	Neg.	40	..	..	30 to out of range	3 to 20	Instantly	22. 5	21. 58. 0	0·07	4 in 1
									22. 0. 0	0·10	4 in 1
									22. 1. 0	0·13	None in 30
									22. 2. 0	0·10	2 in 1
									22. 5. 0	0·10	2 in 1
										0·12	1 in 10
										0·13	No spark
									22. 6. 0	0·12	1 in 3
									22. 7. 0	0·12	1 in 3
										0·15	1 in 5
2. 1. 10 to 2. 1. 14	Neg.	40	..	..	200 to out of range	10	..	1. 11	1. 11. 0	0·05	1 in 7
2. 23. 50 to 2. 23. 51	Neg.	40	..	out of range	out of range	..	..	..	..	..	...
3. 2. 25 to 3. 2. 38	Neg.	40	..	30 to out of range	50 to 200	0 to 8	..	..	..	..	...
20. 1. 2 to 20. 1. 16	Neg.	40	..	out of range	out of range	15 to 20	Instantly	1. 8	1. 5. 0	0·08	2 in 1
									1. 10. 0	0·09	2 in 3
									1. 12. 0	0·10	Sparks
									1. 15. 0	0·05	A spark
23. 16. 40 to 23. 17. 5	Neg.	40	..	..	..	10 to 25	Instantly	16. 47	16. 40. 0	0·10	1 in 2
									16. 45. 0	0·12	1 in 1
									16. 47. 0	0·12	1 in 4
									17. 0. 0	0·04	Sparks

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer.			
		Direction.	Pressure in lbs. per square foot.		
° °	°		from lbs. to lbs.		
2 to 3	..	NW to W by S passing W	..	A large cumulo-stratus S. of the zenith.	H B
3 to 6	..	S by E to W passing S	..	Rain falling.	H B
..	..	S by W	0 to $\frac{1}{2}$	Rain falling: at $19^h.\ 10^m$ a clap of thunder was heard in the West.	T D
3	..	SSW	1 to $3\frac{1}{2}$	A squall: very gloomy: rain falling heavily.	H B
..	..	SSW	1 to 3	Rain falling.	
3	..	WSW	3	A shower of hail.	
..	..	WbyN to WbyS	..	A shower of hail.	H B
..	..	NE	..	Rain and hail falling.	L
..	3	Calm	..	Rain falling.	H B

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
April 25. 0. 48 to 25. 2. 0	Neg.	40	..	out of range	25 to out of range	4 to 40	Instantly	1. 40	0. 48. 0	0·06	1 in 3
									0. 51. 0	0·07	1 in 4
									0. 53. 0	0·09	1 in 5
									0. 54. 0	0·10	1 in 4
									0. 55. 0	0·10	1 in 6
									0. 56. 0	0·11	No spark
									1. 0. 0	0·10	3 in 1
									1. 1. 0	0·10	None
									1. 2. 0	0·10	5 in 2
									1. 3. 0	0·11	None
									1. 4. 0	0·11	3 in 1
									1. 5. 0	0·10	2 in 1
									1. 7. 0	0·15	1 in 15
									1. 16. 0	0·06	No spark
									1. 28. 0	0·12	3 in 1
									1. 29. 0	0·13	2 in 1
									1. 30. 0	0·13	2 in 1
									1. 33. 0	0·14	2 in 1
									1. 34. 0	0·14	2 in 1
									1. 38. 0	0·15	1 in 10
									1. 40. 0	0·13	3 in 1
									1. 43. 0	0·10	No spark
									1. 45. 0	0·13	2 in 3
									1. 48. 0	0·05	No spark
									1. 54. 0	0·11	2 in 3
									1. 57. 0	0·12	2 in 1
May 5. 22. 20 to 6. 0. 38	Neg.	40	..	out of range	70 to out of range	0 to 30	Instantly	0. 34	22. 20. 0	0·12	2 in 1
									22. 23. 0	0·14	A spark
									23. 18. 0	0·10	1 in 3
									23. 24. 0	0·13	1 in 2
									23. 25. 0	0·13	1 in 3
									23. 26. 0	0·13	1 in 4
									23. 27. 0	0·13	1 in 4
									23. 28. 0	0·13	1 in 2
									23. 30. 0	0·13	No spark
									23. 33. 0	0·12	A spark
									23. 34. 0	0·10	1 in 5
									23. 55. 0	0·10	1 in 2
									23. 56. 0	0·10	1 in 4
									23. 57. 0	0·10	1 in 8
									0. 33. 0	0·18	2 in 1
									0. 34. 0	0·20	3 in 1
									0. 36. 0	0·18	1 in 5
											1 in 16
											1 in 8
											1 in 4
									to		1 in 4
											1 in 3
											1 in 2
									0. 38. 0		1 in 4
											None afterwards

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
1 to 5	3 to 5	SSW & Calm	..	Rain falling: at $0^h.57^m$ there was a galvanic current of 3° towards B; at $1^h.1^m$ there was a current of 5° towards B; and at $1^h.30^m$ and $1^h.35^m$ there were currents of 3° and 5° respectively towards A; the electricity at each of the latter times being negative.	H B
..	0 to 5	SSW & Calm	..	Rain falling.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
May 6. 2.23 to 6. 2.53	Neg.	40	..	out of range	out of range	0 to 32	Instantly	2.43	2.24. 0	0·12	A spark
									2.33. 0	0·10	A spark
									2.34. 0	0·10	2 in 3 and afterwards 2 in 1
									2.35. 0	0·12	2 in 1
									2.38. 0	0·12	1 in 3
									2.38. 0	0·12	1 in 5
									2.40. 0	0·14	2 in 1
									2.43. 0	0·15	3 in 2
									2.50. 0	0·10	Sparks
13. 2. 8 to 13. 2.20	Neg.	40	..	out of range	75 to out of range	0 to 10	Instantly	2.11	2. 9. 0	0·06	1 in 3 and afterwards 2 in 1
									2.11. 0	0·07	A spark
18.23.15 to 18.23.36	Neg. & Pos.	40	..	out of range	out of range	15 to 40	Instantly	23.26	23.15. 0	0·02	4 in 1
									23.18. 0	0·15	Sparks
									23.24. 0	0·02	Sparks
									23.26. 0	0·18	A volley
									23.27. 0	0·09	Sparks
									23.29. 0	0·15	7 in 1
									23.31. 0	0·16	4 in 1
									23.33. 0	0·15	10 in 1
19. 1.15 to 19. 1.52	Neg. & Pos.	0 to 40	..	0 to out of range	0 to out of range	0 to 45	Instantly	1.37	1.15. 0	0·15	2 in 3
									1.20. 0	0·08	1 in 5
									1.36. 0	0·13	3 in 1
									1.37. 0	0·15	7 in 1
									1.40. 0	0·14	Sparks
									1.42. 0	0·13	4 in 1
									1.48. 0	0·13	Sparks
									1.50. 0	0·13	12 in 1
19.22. 5 to 19.22.10	Neg.	0 to 40	..	0 to out of range	0 to out of range	0 to 20	..	22. 5	22. 5. 0	0·13	2 in 1
19.23.40 to 20. 0.57	Generally Neg.	40	..	out of range	out of range	8 to 28	Instantly	23.49 and 0.40	23.40. 0	0·14	3 in 1
									23.41. 0	0·06	3 in 1
									23.44. 0	0·12	1 in 1
									23.45. 0	0·13	3 in 2
									23.49. 0	0·15	2 in 1
									23.52. 0	0·15	1 in 3
									0. 0. 0	0·15	3 in 2
									0. 2. 0	0·15	Sparks
									0.40. 0	0·15	2 in 1
									0.43. 0	0·15	1 in 3
									0.46. 0	0·14	A spark
									0.56. 0	0·15	A spark
									0.57. 0	0·15	A spark
20. 1.34 to 20. 1.36	Neg.	40	..	out of range	out of range	50	..	1.35	1.35. 0	0·18	2 in 1

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
		From Osler's Anemometer.			
The Head of the Needle towards A.	The Head of the Needle towards B.	Direction.	Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	1 to 5	From SSW to NW, passing by W	..	The sky is covered with a dense cumulo-stratus: distant thunder was heard occasionally.	H B
..	2 to 3	ENE	..	Rain falling heavily.	H B
0 to 15	..	SSW	0 to ½	Rain falling heavily: hail was falling from $23^h.25^m$ to $23^h.27^m$: the electricity changed suddenly to positive, when the hail began to fall; but turned again to negative, when it ceased: the rain ceased at $23^h.36^m$, and by $23^h.38^m$ nothing was shewn.	L
0 to 6	0 to 27	SSW	½ to 2	Rain falling: at $1^h.47^m$ all the instruments went suddenly to zero, but the former tension was recovered before $1^h.48^m$: the electricity was positive from $1^h.40^m$ to $1^h.44^m$.	L
..	2	SSW	0 to ½	Rain falling.	H B
2 to 10	15	SSW, WSW, and S by W	0 to 2	Rain falling: a galvanic current towards B was shewn at $23^h.57^m$, and towards A at $23^h.49^m$, at $0^h.38^m$, and at $0^h.56^m$: positive electricity was shewn between $0^h.38^m$ and $0^h.41^m$.	
..	30	SSW	1½	Rain falling in very large drops.	H B

May $20^d.0^h.38^m$. It is stated that the electricity at this time was positive, and that a galvanic current was shewn, the head of the needle of the Galvanometer being turned towards A. During this year there are several such instances recorded. Within my own experience I have never known such cases. At all times when the electricity has been positive the head of the needle of the Galvanometer has moved towards B, and whenever the electricity has been negative it has moved towards A. In all cases where one of these indications is reversed I think the observer has committed an error.—G.

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °		div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
June 22. 11. 35 to 22. 12. 50	Neg.	0 to 40	..	0 to out of range	0 to out of range	0 to 60	Instantly	11. 58	11. 39. 0	0·13	3 in 1
									11. 43. 0	0·10	5 in 1
									11. 45. 0	0·13	Sparks
									11. 52. 0	0·14	Sparks
									11. 55. 0	0·15	Sparks
									11. 58. 0	0·14	Sparks
									11. 59. 0	0·15	Sparks
									12. 3. 0	0·11	Sparks
									12. 5. 0	0·10	Sparks
									12. 20. 0	0·09	Sparks
									12. 35. 0	0·04	Sparks
22. 22. 55 to 22. 23. 3	Neg.	40	..	out of range	out of range	18	..	23. 1	22. 56. 0	0·10	3 in 1
									22. 57. 0	0·09	1 in 2
									22. 58. 0	0·11	1 in 2
									22. 59. 0	0·12	3 in 1
									23. 1. 0	0·13	4 in 1
23. 1. 32 to 23. 2. 0	Pos.	40	..	out of range	out of range	10 to 22	..	1. 34	1. 34. 0	0·20	Several sparks
									1. 37. 0	0·19	A volley: it continued for 55s
									1. 44. 0	0·10	A spark
									1. 50. 0	0·15	Sparks
24. 23. 8 to 24. 23. 19	Neg.	0 to 40	..	0 to out of range	0 to out of range	0 to 17	..	23. 15	23. 9. 0	0·14	A spark
									23. 10. 0	0·13	2 in 1
									23. 12. 0	0·14	A spark
									23. 15. 0	0·14	1 in 10
									23. 16. 0	0·08	A spark
26. 22. 32 to 26. 23. 3	Generally Neg.	40	..	out of range	100 to out of range	2 to 15	3s to 4s	22. 55	22. 33. 0	0·09	3 in 1
									22. 34. 0	0·10	1 in 1
											2 in 1
											3 in 1
									22. 35. 0	0·10	1 in 30
											2 in 3
									22. 37. 0	0·10	3 in 1
									22. 38. 0	0·10	Irregular intervals
									22. 41. 0	0·08	1 in 5
									22. 42. 0	0·08	1 in 4
									22. 44. 0	0·09	1 in 1
									22. 45. 0	0·10	3 in 1
									22. 46. 0	0·10	1 in 1 and 3 in 1
									22. 50. 0	0·09	1 in 2
									22. 53. 0	0·10	1 in 1
									22. 54. 0	0·11	1 in 1
									22. 55. 0	0·13	2 in 3
									22. 57. 0	0·13	1 in 2
									22. 59. 0	0·12	1 in 2
									23. 1. 0	0·09	1 in 1

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	0 to 5	SSE to SW passing S	0 to 4	A thunder-storm: at $11^h.40^m$ there was a bright flash of lightning, followed by thunder after an interval of five seconds: at $11^h.45^m$ there was a flash, followed by thunder after an interval of sixteen seconds: at $11^h.50^m$ there was a flash, followed by thunder after an interval of seven seconds: at $11^h.53^m$ there was a flash, followed by thunder after an interval of eleven seconds: at $11^h.57^m$ a very brilliant flash was seen; a very loud clap of thunder sixteen seconds afterwards: at $11^h.58^m$ there was a flash of lightning; thunder seventeen seconds afterwards: at $12^h.2^m$ a flash was seen; thunder eighteen seconds afterwards: at $12^h.5^m$ there was a flash; thunder twenty-two seconds afterwards; no lightning was seen after this time: at $11^h.56^m$ the instruments went suddenly to zero, but they recovered their former position in forty seconds.	L
1 to 12	..	WSW	$\frac{1}{2}$ to 4	Rain falling heavily.	H B
..	23	WSW	$\frac{1}{2}$ to $3\frac{1}{2}$	Rain falling in large drops: thunder was heard at $1^h.45^m$ and at $1^h.59^m$: at $1^h.34^m$ a strong galvanic current was shewn; the head of the needle was towards B.	G
6 to 10	..	SW	$\frac{3}{4}$ to $2\frac{1}{2}$	Cumuli, cumulo-strati, and scud: a few drops of rain are falling.	H B
..	3 to 4	SSW	..	Rain falling: thunder heard occasionally.	H B

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m ′ s	in.	sp. sec.
June 30. 7. 5 to 30. 7. 20	Pos.	40	..	30 to out of range	45 to out of range	0 to 15	..	7. 7	7. 5. 0	0·10	3 in 1
									7. 7. 0	0·13	3 in 1
									7. 9. 0	0·05	5 in 1
									7. 10. 0	0·04	3 in 1
July 5. 14. 5 to 5. 14. 14	Neg.	40	..	out of range	out of range	9 to 20	..	14. 7	14. 7. 0	0·12	3 in 1
									14. 11. 0	0·10	2 in 1
5. 21. 35 to 5. 22. 20	Neg.	0 to 40	..	0 to out of range	0 to out of range	0 to 60	..	22. 2	21. 35. 0	0·14	Sparks
									21. 46. 0	0·13	Sparks
									21. 54. 0	0·08	Sparks
									22. 2. 0	0·15	A volley
									22. 8. 0	0·07	1 in 2
									22. 10. 0	0·07	1 in 1
									22. 16. 0	0·04	Sparks
									22. 20. 0	0·02	Sparks
7. 23. 25 to 7. 23. 31	Neg.	30 to 40	..	15 to out of range	25 to out of range	0 to 8	..	23. 27	23. 27. 0	0·04	1 in 15
									23. 30. 0	0·03	A spark
9. 20. 53 to 9. 21. 28	Neg.	40	..	out of range	out of range	15 to 23	..	21. 13	20. 54. 0	0·12	3 in 1
									20. 55. 0	0·13	2 in 1
									20. 56. 0	0·14	3 in 1
									20. 57. 0	0·14	1 in 1
									20. 58. 0	0·15	3 in 1
									21. 0. 0	0·14	2 in 1
									21. 3. 0	0·09	2 in 1
									21. 5. 0	0·11	3 in 1
									21. 6. 0	0·12	2 in 1
									21. 7. 0	0·15	3 in 1
									21. 8. 0	0·15	3 in 1
									21. 9. 0	0·16	No spark
									21. 12. 0	0·17	1 in 10
									21. 13. 0	0·18	3 in 1
									21. 28. 0	0·11	Sparks
10. 2. 15 to 10. 3. 8	Neg.	40	..	out of range	out of range	4 to 33	..	2. 41	2. 15. 0	0·04	A spark
									2. 25. 0	0·09	1 in 1
									2. 28. 0	0·11	2 in 1
									2. 30. 0	0·14	3 in 2
									2. 31. 0	0·15	1 in 31
									2. 32. 0	0·12	3 in 2
									2. 35. 0	0·12	3 in 2
									2. 37. 0	0·13	6 in 2
									2. 39. 0	0·15	2 in 1
									2. 40. 0	0·16	1 in 15
									2. 41. 0	0·15	5 in 1
									2. 43. 0	0·14	3 in 2
									2. 44. 0	0·14	1 in 1
									2. 46. 0	0·13	2 in 1
									2. 47. 0	0·15	3 in 2
									2. 48. 0	0·15	1 in 5
									2. 49. 0	0·16	3 in 1
									2. 50. 0	0·16	None
									2. 51. 0	0·15	3 in 1

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
		From Osler's Anemometer.			
The Head of the Needle towards A.	The Head of the Needle towards B.	Direction.	Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	3 to 5	SW	..	Rain falling heavily.	T D
5	..	SW	0 to ½	Rain falling.	H B
..	0 to 5	SSW	0 to ½	Rain falling: at about $22^h.\ 2^m$ the electricity went down suddenly to zero, but it became very strong again in twenty seconds, when Henley read 60°, and there was a volley of sparks at the distance of $0^{in}.15$; a clap of thunder was also heard at this time from clouds in the E., but no lightning was seen.	L
..	3	Calm	..	Rain falling.	H B
25	6 to 23	Calm	..	Rain falling: galvanic currents towards B were shewn at $20^h.\ 53^m$, $20^h.\ 57^m$, and $21^h.\ 6^m$; and a galvanic current towards A was shewn at $21^h.\ 10^m$: a clap of thunder was heard at $21^h.\ 27^m$.	
0 to 16	0 to 10	WSW to N, passing W	..	Rain falling heavily: thunder was heard at $2^h.\ 20^m$, and a flash of lightning was seen at $2^h.\ 32^m$: galvanic currents were frequently shewn: the electricity changed suddenly to positive at $2^h.\ 34^m$, but was again negative, with strong tension, at $2^h.\ 36^m$.	H B

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
July 10. 2. 15 to 10. 3. 8	Neg.	40	..	out of range	out of range	4 to 33	..	2. 41	2. 52. 0	0·16	2 in 1
									2. 53. 0	0·16	3 in 1
									2. 55. 0	0·15	3 in 1
									2. 56. 0	0·16	None
									2. 57. 0	0·15	2 in 1
									2. 58. 0	0·15	1 in 3
									3. 3. 0	0·14	1 in 1
24. 1. 10 to 24. 1. 23	Neg.	40	..	out of range	out of range	5 to 15	..	1. 12	1. 10. 0	0·15	10 in 1
									1. 17. 0	0·05	4 in 1
									1. 20. 0	0·06	3 in 1
									1. 23. 0	0·04	1 in 1
d h m s											
Aug. 1. 2. 55. 0	Neg.	..	..	..	..	..	..	..	2. 55. 0	0·08	5 in 1
2. 57. 0	Neg.	..	..	..	..	10 to 15	..	..	2. 57. 0	0·05	A volley
3. 0. 0	Neg.	..	..	..	..	30	..	..	3. 0. 0	0·13	6 in 1
3. 1. 30	Pos.	..	..	..	..	..	..	..	3. 1. 30	0·10	A volley
3. 3. 0	Pos.	..	..	..	..	..	..	..	3. 3. 0	0·13	10 in 1
3. 5. 0	Pos.	..	..	..	..	25	..	..	3. 5. 0	0·14	5 in 1
3. 7. 30	Pos.	..	..	..	..	..	..	..	3. 7. 30	0·15	3 in 1
3. 10. 0	Pos.	..	..	..	..	29	..	..	3. 10. 0	0·14	3 in 1
3. 12. 0	Pos.	..	..	..	..	35	..	..	..	..	..
3. 15. 0	Neg.	..	..	..	..	30 to 35	..	..	3. 15. 0	0·18	3 in 1
3. 23. 0	..	..	..	..	..	..	..	..	..	..	..
3. 25. 0	Neg.	..	..	..	..	35 to 40	..	..	3. 25. 0	0·15	3 in 1
3. 27. 0	Pos.	..	..	..	..	40 to 45	..	..	..	..	..
3. 29. 0	..	..	..	..	..	..	..	..	..	..	..
3. 30. 0	Neg.	..	..	..	..	40	..	..	3. 30. 0	0·18	5 in 1
3. 32. 0	..	..	..	..	..	..	..	..	..	..	..
3. 35. 0	..	..	..	..	..	..	..	..	..	..	..
3. 35. 0 to 1. 3. 50	..	..	..	..	..	..	..	..	..	..	..
3. 38. 0	..	0	..	0	0	..	..	..	..	..	..
3. 40. 0	Neg.	..	..	..	..	20	..	..	3. 40. 0	0·10	10 in 1
3. 44. 0	Neg.	..	..	..	..	40	..	..	3. 44. 0	0·18	6 in 1
3. 55. 0	..	..	..	..	..	..	..	..	..	..	..
3. 59. 0	Neg.	..	..	..	..	20	..	..	3. 59. 0	0·10	5 in 1
4. 3. 0	Neg.	..	..	..	..	..	..	..	..	..	..
4. 10. 0	Neg.	..	..	..	..	5	..	..	..	..	..
4. 41. 0	Neg.	..	..	..	..	10	..		4. 41. 0	0·10	5 in 1
4. 42. 0	Pos.	..	..	..	..	..	..	..	..	..	..
4. 44. 0	..	..	..	..	..	..	..	..	..	..	..
4. 46. 0	Neg.	..	..	..	..	5	..	..	..	..	..
4. 48. 40	..	..	..	..	..	..	..	..	..	..	..

Aug. 1d. Between 3h. 30m and 5h. 50m the amount of rain recorded by Osler's Anemometer-gauge was 0in·67.

Aug. 1d. 4h. 10m. The wind continued to blow lightly from the West till 4h. 15m, when it suddenly changed to the S. S. W.; at 4h. 19m it was S. W., and it continued at this direction till 4h. 30m, when it gradually veered to the S. by E., which direction it reached at 4h. 33m.

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
					TD
..	0 to 7	Calm	..	Rain falling heavily.	
..	..	ESE	..	Commencement of a very violent thunder-storm.	
..	..	ESE	0 to ¼	No rain falling: thunder heard in the W.	
7	..	ESE	..		
5	..	ESE	..	Frequent claps of thunder heard in the W.	
5	..	ESE	..		
0	..	ESE	..		
10	..	E by S	..	No rain has as yet fallen: very loud claps of thunder in the N.W.	
5	..	E by S	..	Rain has just commenced falling.	
..	..	E by S	..	Rain falling more heavily.	
11	..	E by S	..	Thunder frequently heard.	
..	..	E by N	..	A vivid flash of lightning, followed by thunder after an interval of four seconds; this was the first flash that was seen.	
..	..	E by N	..	Rain falling heavily: thunder heard in the N. N. E.: immediately after this observation the electricity changed to positive.	
15	..	E by N	..		
..	..	E by N	..	Rain falling heavily: a flash of lightning, followed by thunder after an interval of eight seconds; after this the electricity changed to negative.	
15	..	E by N	..	Rain falling in torrents: thunder heard in the N. N.W.	
..	..	ESE	..	A very vivid flash of lightning; a loud clap of thunder three seconds afterwards.	
..	..	S	..	Another very vivid flash; thunder one second afterwards.	
..	..	S to SSW	..	Between these times the lightning and thunder were almost incessant: rain mingled with hail began to fall at $3^h.\ 40^m$: very large hailstones fell from $3^h.\ 41^m$ to $3^h.\ 46^m$.	
..	..	SSW	..	All the instruments went down to zero.	
5	..	SSW	..	Rain mixed with hail falling in torrents.	
22	..	SSW	..	,,	
..	..	W by S	..	A faint flash of lightning, followed by thunder after an interval of five seconds: rain falling heavily.	
0	..	W	..	A faint flash: the thunder has become more distant, and the rain less violent.	
..	..	W	..	A flash of lightning, and thunder two seconds afterwards in the N. N. W.	
..	..	W	..	A flash of lightning, and thunder one second and a half afterwards. The temperature of the air at the commencement of the storm was 77°·4; at present it is 67°·7; the temperature of evaporation, as shewn by the Wet Bulb Thermometer, was at the commencement of the storm 71°·8, and at present it is 65°·0: the barometer reading was nearly constant throughout.	
12	..	S by E	..	A flash of lightning; another ten seconds afterwards: the thunder is now very distant: rain falling in large drops.	
..	..	S by E	..	A flash of lightning, and thunder two seconds afterwards.	
..	..	S by E	..	All the instruments are now at zero.	
..	..	S by E	..	No rain is falling.	
..	..	S by E	..	A very loud clap of thunder; no lightning was seen to precede it.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m s		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Aug. 1. 4. 52. 5	..	..	..	..	..	..	..	..	..	..	..
4. 53. 0	..	..	..	..	..	..	..	..	..	..	..
4. 54. 7	..	..	..	..	..	..	..	..	..	..	..
4. 56. 10	Neg.	..	..	..	..	25	..	..	4. 56. 10	0·15	7 in 1
5. 0. 0	Neg.	..	..	..	..	20	..	..	5. 0. 0	0·10	A volley
5. 10. 0	Neg.	..	..	..	..	20	..	..	5. 10. 0	0·10	A volley
5. 30. 27	..	0	0	0	0	..	..	..	..	..	..
5. 48. 10	Neg.	..	..	..	..	..	..	..	..	..	..
5. 49. 20	Neg.	..	..	..	..	..	..	..	..	..	..
5. 53. 27	Neg.	..	..	..	..	5	..	..	..	..	No spark
5. 56. 0	Neg.	..	..	..	..	..	..	..	..	..	..
6. 0. 0	..	0	..	0	0	..	..	..	..	..	..
6. 13. 10	Neg.	..	..	..	..	20	..	..	6. 13. 10	0·10	6 in 1
6. 27. 0	Neg.	..	..	..	..	..	..	..	..	..	..
6. 30. 0	Neg.	..	..	..	..	5	..	..	..	..	No spark
21. 10. 0	Neg.	..	..	..	..	15	..	..	21. 10. 0	0·09	3 in 1
21. 11. 10	Neg.	..	..	..	..	20	..	..	21. 11. 10	0·10	A volley
21. 12. 30	..	..	..	..	..	..	..	..	..	..	..
21. 15. 30	Neg.	..	..	..	..	20	..	..	21. 15. 30	0·13	10 in 1
21. 20. 50	Neg.	..	..	..	..	18	..	..	21. 20. 50	0·10	A volley
21. 25. 10	Neg.	..	..	..	..	25 to 30	..	..	21. 25. 10	0·13	A volley
21. 30. 0	Neg.	..	..	..	..	25	..	..	21. 30. 0	0·15	4 in 1
21. 34. 12	..	..	..	..	..	..	..	..	..	..	..
21. 40. 0	Pos.	..	..	..	..	20 to 40	..	..	21. 40. 0	0·14	5 in 1
21. 45. 0	..	0	0	0	0	..	..	..	..	..	..
Aug. 4. 18. 0. 0	Pos.	..	..	..	..	8	..	..	18. 0. 0	0·03	A spark
18. 2. 0	Neg.	..	..	50	..	7	..	..	18. 2. 0	0·06	A spark
18. 5. 0	Neg.	..	..	..	..	15	..	..	..	..	..
18. 6. 0	Neg.	..	..	..	..	20	..	..	18. 6. 0	0·09	A spark
18. 8. 0	..	..	..	..	..	..	..	..	..	..	..
18. 12. 0	Neg.	..	..	..	..	3	..	..	..	..	..
18. 13. 0	Neg.	..	..	..	..	3	..	..	..	..	..
18. 14. 0	Neg.	..	..	..	..	..	..	..	..	..	..
18. 15. 0	Pos.	..	..	..	..	..	..	..	..	..	..
18. 16. 0	Neg.	..	..	..	..	10	..	..	18. 16. 0	0·08	1 in 5
18. 18. 0	Neg.	..	..	..	..	..	..	..	18. 18. 0	0·09	2 in 1
18. 19. 0	Neg.	..	..	..	..	15	..	..	18. 19. 0	0·10	No spark
18. 23. 0	Neg.	..	..	..	..	15	..	..	18. 23. 0	0·08	2 in 1
18. 25. 0	Pos.	..	..	..	..	..	..	..	18. 25. 0	0·08	1 in 10
18. 28. 0	Pos.	..	..	..	..	8	..	..	..	..	..
18. 29. 0	Pos.	..	..	..	..	10	..	..	18. 29. 0	0·08	1 in 10
18. 31. 0	Neg.	..	..	..	..	5	..	..	..	..	..
18. 33. 0	Neg.	..	..	..	..	..	..	..	18. 33. 0	0·09	3 in 1
18. 35. 0	Neg.	..	..	..	..	..	..	..	18. 35. 0	0·13	3 in 1

Aug. $1^d.\ 5^h.\ 30^m.\ 27^s$. The direction of the wind was N. E.; at $5^h.\ 31^m$ it suddenly changed, passing the E. and S., and reached the W. by S. at $5^h.\ 37^m$, in which direction it remained till after 6^h.

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
		From Osler's Anemometer.			
The Head of the Needle towards A.	The Head of the Needle towards B.	Direction.	Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	..	S by E	..	A flash of lightning, followed by thunder after an interval of three seconds.	T D
..	..	E	..	Another flash, more vivid than the last, followed by a loud clap of thunder after an interval of two seconds and a half.	
..	..	E	..	A vivid flash of lightning, followed by thunder after an interval of two seconds; this peal lasted fourteen seconds: rain is falling in torrents.	
20	..	E	..	A vivid flash of lightning; thunder followed after an interval of one second.	
0	..	E by S	..	Rain falling heavily.	
..	..	NE	..	A faint flash of lightning, and thunder two seconds afterwards.	
..	..	NE	..	All the instruments are now at zero: rain falling heavily.	
..	..	N by W	..	A very vivid flash of lightning, and thunder two seconds afterwards.	
..	..	N by W	..	Another flash, but less vivid, and thunder three seconds afterwards.	
0	..	NNW	..	Two flashes of lightning, the one immediately following the other; thunder followed after an interval of five seconds: the rain has nearly ceased.	
..	..	NNW	..	A vivid flash; thunder four seconds afterwards; the duration of the thunder was eight seconds.	
..	..	NNW	..	The instruments are at zero: the rain has ceased.	
10	..	NNW	..	A vivid flash of lightning; thunder followed instantly: rain is again falling heavily.	
..	..	..	..	The rain has now ceased: thunder frequently heard.	
0	..	ENE	..		
5	..	SW	..	A loud clap of thunder was heard: rain falling heavily	
10	..	SW	..	A flash of lightning; thunder followed instantly.	
..	..	SW	..	Another flash; thunder followed instantly.	
0	..	SW	..		
7	..	SW	..	A faint flash of lightning, followed by thunder after an interval of one second and a half: rain falling in torrents: the thunder proceeds from the S.W.	
10	..	W	..	A vivid flash of lightning, followed by thunder after an interval of two seconds: rain falling in torrents.	
12	..	W by S	..	Rain falling in torrents: loud peals of thunder.	
..	..	..	..	All the instruments are at zero: the rain is falling with less violence than before.	
7	..	S by W	..	Rain falling, but not very heavily.	
..	..	S by W	..	The instruments are now at zero: the rain has nearly ceased.	T D
..	..	SW	..	A thunder-storm: thunder was frequently heard between $16^h.50^m$ and 18^h, but the electrical instruments were not affected till the latter time.	H B
2	..	SW	..		
..	..	W	..	A flash of lightning.	
..	..	W	..	Rain has just commenced falling.	
..	..	W	..	A flash of lightning.	
..	..	WNW	..	Rain falling heavily: thunder frequently heard.	
..	..	WNW	..	A flash of lightning; thunder nineteen seconds afterwards: rain falling in torrents.	
..	..	WNW	..		
2	..	W	..		
..	..	WSW	..		
..	..	WSW	..	A flash of lightning; thunder twelve seconds afterwards.	
..	..	WSW	..	The rain is not so violent.	
2	..	WSW	..		
..	..	WSW	..		
..	..	W by S	..	A loud peal of thunder.	
..	..	W	..	,, the rain has ceased.	
..	..	WNW	..	A flash of lightning; thunder eleven seconds afterwards.	
..	..	NW	..	A flash of lightning; thunder eight seconds afterwards.	
8	..	NW	..		

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS. Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.	Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER. Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m s		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Aug. 4. 18. 36. 0	Neg.	..	..	..	..	..	..	..	18. 36. 0	0·14	2 in 1
18. 37. 0	Neg.	..	..	..	..	30	..	..	..	..	..
18. 38. 0	Neg.	..	..	..	..	35	..	..	18. 38. 0	0·14	Sparks
18. 39. 0	Neg.	..	..	..	..	..	..	..	18. 39. 0	0·14	4 in 1
18. 40. 0	Neg.	..	..	..	..	20	..	..	..	..	..
18. 41. 0	Neg.	..	..	..	..	..	..	..	18. 41. 0	0·10	2 in 1
18. 43. 0	Neg.	..	..	..	..	15	..	..	18. 43. 0	0·06	Sparks
18. 45. 0	Pos.	..	..	..	..	8	..	..	18. 45. 0	0·06	1 in 5
18. 48. 0	Neg.	..	..	..	..	..	..	..	18. 48. 0	0·07	3 in 1
18. 50. 0	Neg.	..	..	..	..	5	..	..	18. 50. 0	0·07	2 in 1
18. 52. 0	Neg.	..	..	..	..	6	..	..	18. 52. 0	0·08	A spark
18. 53. 0	Neg.	..	..	..	..	12	..	..	18. 53. 0	0·08	3 in 1
18. 53. 30	Neg.	..	..	..	..	..	..	..	18. 53. 30	0·11	2 in 1
18. 54. 0	Neg.	..	..	..	..	..	..	..	18. 54. 0	0·11	3 in 1
18. 55. 0	Neg.	..	..	..	..	..	Instantly	..	18. 55. 0	0·13	1 in 3
18. 56. 0	Pos.	..	..	..	..	12	..	..	..	..	..
18. 57. 0	Pos.	..	..	..	..	30	..	..	18. 57. 0	0·12	2 in 1
18. 58. 0	Neg.	..	..	..	..	..	..	..	18. 58. 0	0·13	2 in 1
18. 59. 0	Neg.	..	..	..	..	2	..	..	..	..	..
19. 0. 0	Neg.	..	..	..	..	..	..	..	..	..	..
19. 1. 0	Neg.	..	..	..	..	..	..	..	19. 1. 0	0·15	3 in 1
19. 2. 0	Neg.	..	..	..	..	..	..	..	19. 2. 0	0·25	2 in 1
19. 3. 0	Neg.	..	..	..	..	..	Instantly	..	19. 3. 0	0·30	3 in 1
19. 5. 0	..	0	0	0	0	..	..	..	..	..	..
19. 6. 30	Neg.	..	..	..	..	15	..	..	19. 6. 30	0·17	1 in 2
19. 9. 0	Neg.	..	..	..	..	15	..	..	19. 9. 0	0·17	2 in 3
19. 10. 0	Neg.	..	..	..	..	..	..	..	19. 10. 0	0·17	2 in 1
19. 11. 0	Neg.	..	..	..	..	..	..	..	19 11. 0	0·19	Sparks
19. 15. 0	Neg.	..	..	..	..	..	..	..	19. 15. 0	0·19	2 in 3
19. 25. 0	Neg.	..	..	..	..	..	..	..	19. 25. 0	0·21	A volley
19. 30. 0	Neg.	..	..	..	..	7	..	..	..	..	..
19. 33. 0	Neg,	..	..	..	..	..	..	..	19. 33. 0	0·06	3 in 1
										0·08	2 in 1
										0·09	2 in 1
19. 34. 0	Neg.	..	..	..	..	..	..	..	..	0·10	3 in 1
19. 35. 0	Neg.	..	..	..	..	18	..	..	..	..	..
19. 40. 0	Neg.	..	..	..	..	9	..	..	19. 40. 0	0·07	Sparks
19. 45. 0	Pos.	..	..	..	..	5	..	..	..	..	..
19. 50. 0	Pos.	..	..	20	..	3	..	..	..	..	..
19. 53. 0	Pos.	..	..	..	..	12	..	..	19. 53. 0	0·07	3 in 1
										0·10	3 in 1
19. 55. 0	Pos.	..	..	..	..	..	Instantly	..	19. 55. 0	0·12	2 in 1
										0·13	1 in 1
19. 57. 0	Neg.	..	..	..	..	..	..	..	19. 57. 0	0·14	3 in 1
19. 58. 0	Neg.	..	..	..	..	..	..	..	19. 58. 0	0·16	3 in 1
19. 59. 0	Neg.	..	..	..	..	38	..	..	19. 59. 0	0·17	Occasionally
20. 0. 0	Neg.	..	..	..	..	25	..	..	20. 0. 0	0·15	3 in 1
20. 2. 0	Neg.	..	..	..	..	25	..	..	..	..	..
20. 4. 0	Neg.	..	..	..	..	10	..	..	20. 4. 0	0·06	3 in 1
20. 7. 0	Neg.	..	..	..	..	..	..	..	20. 7. 0	0·09	3 in 1
										0·12	2 in 1
20. 8. 0	Neg.	..	..	..	..	18	..	..	20. 8. 0	0·13	2 in 3

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer.			
		Direction.	Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
8	..	NW	..		
..	..	NW	..	A flash of lightning; thunder six seconds afterwards: rain falling heavily.	H B
..	..	NW	..		
..	..	NW	..		
..	..	NW	..		
3	..	NW	..	A flash of lightning; thunder after an interval of eleven seconds and a half.	
..	..	NW	..		
..	..	NW	..	Thunder heard in the N.E.: very gloomy.	
..	..	NW	..	A flash of lightning, followed by thunder in eleven seconds and a half.	
..	..	NW	..		
..	..	NW	..		
..	..	NW	..		
..	..	NW	..	Rain falling steadily.	
..	..	NW	..		
5	..	NW	..	Thunder was heard: rain falling heavily.	
..	..	NW	..	,,	
..	..	NW	..		
..	..	NW	..	A flash of lightning; thunder eight seconds afterwards.	
..	..	NW	..	Rain still falling heavily.	
4	..	NW	..		
..	..	NW	..		
..	..	NW	..		
5	..	NW	..		
..	..	NW	..	All the instruments are now at zero.	
..	..	NW	..		
..	..	W by S	..		
..	..	W by S	..		
..	..	W by S	..	A flash of lightning; thunder eleven seconds afterwards.	
..	..	W by S	..	The rain still continues.	
..	..	W by S	..	A flash of lightning occurred at this time, followed by thunder after an interval of three seconds; the instruments then went to zero.	
..	..	W by S	..	The rain still continues.	
..	..	W by S	..	A flash of lightning; thunder fifteen seconds afterwards.	
5	..	W by S	..	Occasional rolling of thunder: rain still falling.	
..	..	W by S	..		
..	..	W by S	..		
..	..	W by S	..		
0	..	WSW	..		
..	..	WSW	..		
5	..	WSW	..		
..	..	S	..		
..	..	SSE	..		
..	..	SSE	..	Rain falling heavily.	
..	..	SSE	..		
4	..	SSE	..	Rain falling in torrents.	
..	..	SSE	..		
..	..	S	..		
..	..	SSE	..		

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m s h m s		° °		div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Aug. 4. 20. 9. 0	Neg.	..	..	..	..	18	..	..	20. 9. 0	0·09	Sparks
20. 15. 0	Neg.	..	..	..	..	3	..	..	..	..	..
20. 20. 0	Pos.	..	..	..	..	5	..	..	..	..	..
20. 27. 0	Neg.	..	..	..	..	9	Instantly	..	..	..	..
20. 33. 0	Pos.	..	..	..	..	5	..	..	20. 33. 0	0·08	2 in 1
20. 40. 0	Neg.	..	..	..	..	13	Instantly	..	20. 40. 0	0·12	2 in 1
20. 48. 0	Neg.	..	..	..	..	15	..	..	20. 48. 0	0·12	3 in 1
20. 50. 0	Neg.	..	..	..	..	..	..	..	20. 50. 0	0·10	2 in 1
21. 0. 0	..	..	..	..	..	..	..	..	..	..	..
21. 7. 0	Neg.	..	..	..	..	17	..	..	21. 7. 0	0·18	A volley
21. 8. 0	Neg.	..	..	..	..	..	Instantly	..	..	..	..
21. 9. 0	Neg.	..	..	..	..	..	..	..	21. 9. 0	0·15	5 in 1
21. 9. 50	Neg.	..	..	..	..	..	..	..	21. 9. 50	0·15	2 in 1
21. 11. 21 to 21. 11. 29	Neg.	..	..	..	..	..	..	..	..	..	..
21. 12. 0	Neg.	..	..	..	..	22	..	..	..	..	..
21. 12. 52	Neg.	..	..	..	..	..	..	..	21. 12. 52	0·15	A volley
21. 13. 50	Neg.	..	..	..	..	..	..	..	21. 13. 50	0·15	3 in 1
21. 13. 58	Neg.	..	..	..	..	..	..	..	21. 13. 58	0·15	2 in 1
21. 19. 2	Neg.	..	..	..	..	..	..	..	21. 19. 2	0·15	A volley
21. 20. 0	Neg.	..	..	..	..	..	..	..	21. 20. 0	0·15	A volley
21. 21. 0	Neg.	..	..	..	..	5	..	..	..	..	..
21. 21. 17	Neg.	..	..	..	..	..	..	..	21. 21. 17	0·15	A volley
21. 22. 2	Neg.	..	..	..	..	..	..	..	21. 22. 2	0·15	A volley
21. 23. 0	Neg.	..	..	..	..	11	Instantly	..	..	..	..
21. 23. 43	Neg.	..	..	..	..	..	..	..	21. 23. 43	0·15	A volley
21. 23. 55	Neg.	..	..	..	..	..	..	..	..	..	..
21. 25. 10	Neg.	..	..	..	..	25	..	..	..	..	..
21. 25. 26	Neg.	..	..	..	..	..	..	..	21. 25. 26	0·15	A volley
21. 26. 33	Neg.	..	..	..	..	22	..	..	21. 26. 33	0·15	A volley
21. 28. 55	Neg.	..	..	..	..	25	..	..	21. 28. 55	0·15	A volley
21. 29. 23	Neg.	..	..	..	..	..	..	..	21. 29. 23	0·15	2 sparks
21. 29. 49	Neg.	..	..	..	..	..	..	..	21. 29. 49	0·15	A volley
21. 31. 45	Neg.	..	..	..	..	28	..	..	21. 31. 45	0·15	A volley
21. 33. 29	Neg.	..	..	..	..	..	..	..	21. 33. 29	0·15	A volley
21. 34. 0	..	0	..	0	0	..	..	..	..	..	..
21. 34. 20	..	..	..	..	..	..	..	..	..	..	..
21. 35. 0	Neg.	..	..	..	..	12	..	..	21. 35. 0	0·15	A volley
21. 36. 8	Neg.	..	..	..	..	..	..	..	21. 36. 8	0·15	A volley
21. 40. 0	Neg.	..	..	..	..	..	..	..	..	..	..
21. 46. 0 to 22. 15. 0	Neg.	..	..	..	..	5 to 11	..	..	21. 46. 0	0·15	None
22. 19. 0 to 22. 45. 0	Neg.	..	..	..	..	10	Instantly	..	..	..	..
22. 50. 0 to 23. 49. 0	Pos. & Neg.	..	..	..	..	..	..	..	..	..	..

ELECTROMETER OBSERVATIONS.

GALVANOMETER. The Head of the Needle towards A.	GALVANOMETER. The Head of the Needle towards B.	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in lbs. per square foot. from lbs. to lbs.	REMARKS.	Observer.
o o	o o				
..	2	SSE	..	Thunder is frequently heard.	H B
..	..	SE	..	The rain has nearly ceased.	
..	..	S	..		
0	..	N by E passing W & N	..	Thunder is frequently heard.	
..	..	NE	..		
..	5	ENE	..		
5	..	ENE	..	Thunder heard.	
..	..	E	..	A flash of lightning; thunder heard in the N.W. five seconds afterwards.	H B
..	..	ESE	..	There were several flashes of lightning, and thunder was frequently heard between $20^h.50^m$ and $21^h.0^m$.	G
..	..	E	..		
10	..	E	..		
..	..	E	..		
10	..	E	..	Lightning constantly seen; thunder five seconds afterwards: a volley of sparks occurred at $9^h.15^m$, being simultaneous with the appearance of lightning.	
..	..	E	..	Incessant lightning, but no sparks were emitted at the spark-measurer.	
..	..	E	..		
..	..	E	..	A flash of lightning: thunder nineteen seconds afterwards.	
..	..	E	..	At the appearance of lightning there was a volley of sparks at $0^{in}.15$, but all the instruments then went to zero.	
..	..	E	..		
..	..	E by S	..	A flash of lightning; thunder eleven seconds afterwards: the volley of sparks occurred at the appearance of lightning: heavy rain falling.	
..	..	ESE	..	A loud and long rolling peal of thunder occurred five seconds after the volley of sparks.	
0	..	ESE	..		
..	..	ESE	..	A flash of lightning; a volley of sparks occurred at the same time; distant thunder heard in the E. fifteen seconds afterwards.	
..	..	ESE	..	A flash of lightning, the volley of sparks occurring at the same time; thunder heard in	
4	..	ESE	..	the N. E. twenty-one seconds afterwards.	
..	..	ESE	..		
..	..	ESE	..	Loud crackling thunder in the E. and E. S. E.; it continued without intermission till $21^h.25^m.0^s$, being, therefore, sixty-five seconds in duration.	
..	..	ESE	..		
..	..	ESE	..	A slight volley of sparks; thunder was heard in the E. fifteen seconds afterwards: rain still falling.	
4	..	ESE	..	Thunder was heard in the E. eleven seconds after the volley took place.	
..	..	ESE	..	Thunder was heard six seconds after the volley took place.	
..	..	ESE	..		
..	..	ESE	..	A long volley of sparks; thunder thirteen seconds afterwards, which was continuous till $21^h.31^m.40^s$, being, therefore, $1^m.38^s$ in duration.	
..	..	ESE	..	A volley of sparks, after which there were several single sparks, following each other in quick succession: thunder was heard at $21^h.32^m.3^s$.	
..	..	E	..	Thunder was heard in the E. thirteen seconds after the volley of sparks commenced.	
..	..	E by N	..	All the instruments are now at zero.	
..	..	E by N	..	Loud thunder.	
3	..	E by N	..	Thunder was heard nineteen seconds after the volley of sparks had commenced.	
..	..	E by N	..	Thunder was heard thirteen seconds after the volley of sparks had commenced.	
..	..	E by N	..	A loud deep roll of thunder, which continued for some time.	
..	..	E by N	..	Clouds broken to the N. of the zenith: distant thunder occasionally heard in the S. E.	
0	..	Variable	..	Distant thunder occasionally heard in the S. E.	
..	..	Variable	..	Thunder occasionally heard: there were frequent changes of electricity from positive to negative, at about $23^h.43^m$: between $23^h.5^m$ and $23^h.43^m$ there were extensive breaks in the clouds, but at $23^h.48^m$ the sky became very dark, and heavy rain began to fall.	

Aug. $4^d.22^h.28^m$ to 45^m. The direction of the wind was S.E. till $22^h.28^m$, when it shifted to N. by E., in which direction it continued till $22^h.45^m$; it then became N.E., and continued so till $23^h.20^m$, when it changed towards the E., and, going round in the same direction to S.S.W. at $23^h.45^m$, it finally returned to N.E. at $23^h.50^m$, having again passed the E.

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m s		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Aug. 4. 23. 50. 45	Neg.	..	..	..	..	..	..	..	..	..	..
23. 52. 20	Neg.	..	..	..	..	..	..	..	23. 52. 20	0·10	A volley
23. 52. 56	Neg.	..	..	..	..	25	..	..	23. 52. 56	0·10	A volley
23. 55. 0	Neg.	..	..	..	..	..	..	..	23. 55. 0	0·10	A volley
23. 58. 0	Pos.	..	..	..	..	..	..	..	23. 58. 0	0·10	A volley
5. 0. 0. 7	Neg.	..	..	..	..	..	..	..	0. 0. 7	0·10	A volley
0. 1. 50	..	..	..	..	..	..	..	..	..	..	..
0. 3. 0	Neg.	..	..	..	..	..	..	..	..	..	..
0. 3. 20	Neg.	..	..	..	..	..	..	..	0. 3. 20	0·10	A volley
0. 5. 0	Pos.	..	..	..	..	..	..	..	..	..	..
0. 20. 0	..	..	..	..	..	..	..	..	..	..	..
0. 20. 21	Neg.	..	..	..	..	..	..	..	0. 20. 21	0. 10	A volley
0. 21. 7	Neg.	..	..	..	..	..	..	..	0. 21. 7	0·10	A volley
0. 23. 24	Neg.	..	..	..	..	..	..	..	0. 23. 4	0·10	A volley
0. 23. 50	Neg.	..	..	..	..	20 to 30	..	..	..	..	..
0. 24. 29	Neg.	..	..	..	..	..	..	..	..	..	..
0. 26. 0	Neg.	..	..	..	..	20 to 30	Instantly	..	0. 26. 0	0·10	3 in 1
0. 27. 0	Neg.	..	..	..	..	20	..	..	..	..	..
0. 29. 0	..	0	0	0	0	..	..	..	..	..	..
0. 29. 30	Neg.	..	..	..	..	20	..	..	..	..	..
0. 31. 0	Neg.	..	..	..	..	..	..	..	0. 31. 0	0·10	A volley
0. 34. 0	Neg.	..	..	..	..	20	..	..	..	..	..
0. 36. 0	Neg.	..	..	..	..	10	..	..	0. 36. 0	0·10	A spark
0. 40. 0	Neg.	..	..	..	..	9	Instantly	..	0. 40. 0	0·05	Sparks
d h m											
11. 12. 45. 0 to 11. 12. 55	Pos.	40	..	25 to out of range	..	6 to 20	..	..	12. 45. 0	0·05	2 in 3
13. 1. 0. 0 to 13. 1. 3	Neg.	40	..	..	..	5 to 15	20^s	..	1. 0. 0	0·10	Sparks
									1. 2. 0	0·05	No spark
1. 51. 0 to 1. 58	Neg.	..	..	5 to out of range	..	0 to 30	Instantly	..	1. 51. 0	0·10	3 in 2
									1. 52. 0	0·13	3 in 2
									1. 53. 0	0·15	4 in 1
									1. 54. 0	0·10	1 in 4
Aug. 19. 2. 47. 10	Neg.	..	..	..	..	20	..	..	2. 47. 10	0·09	2 in 1
2. 49. 15	..	0	0	0	0	..	..	..	..	..	..
2. 50. 30	Pos.	..	..	..	..	15	..	..	2. 50. 30	0·10	3 in 1
2. 51. 40	Neg.	..	..	..	..	20	..	..	2. 51. 40	0·10	2 in 1
2. 53. 25	Pos.	..	..	..	..	18	..	..	2. 53. 25	0·12	2 in 1
2. 55. 30	Pos.	..	..	..	..	10	..	..	2. 55. 30	0·05	1 in 1
2. 58. 30	Neg.	..	..	..	..	18	..	..	2. 58. 30	0·13	A spark
3. 1. 0	Neg.	..	..	..	..	..	..	..	3. 1. 0	0·07	A spark
3. 3. 0	Neg.	..	..	..	..	5	5^s	..	..	..	..

August 4^d. Between 18^h. 30^m and 22^h. 0^m the amount of rain registered by Osler's Anemometer-gauge was 0^{in}·56; and between August 4^d. 23^h. 50^m and August 5^d. 0^h. 45^m the amount of rain registered by the same gauge was 0^{in}·40.

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	..	ENE	1	A flash of lightning occurred; thunder followed three seconds afterwards: the wind is S.W.	G
..	..	ENE	2	A flash of lightning; thunder was heard two seconds afterwards.	
..	..	ENE	1½	A slight volley of sparks; thunder was heard one second and a half after the volley had commenced.	
5	..	ENE	1½	Thunder was heard twenty-four seconds after the volley had commenced.	
..	..	ENE	2	A flash of lightning; the volley occurred at the same time; thunder was heard five seconds after the lightning: heavy rain falling.	
..	..	ENE	1½	A flash of lightning, the volley occurring at the same time; thunder was heard six seconds afterwards.	
..	..	ENE	1½	There was a galvanic current towards A, but no note was made stating the extent.	
..	..	ENE	1	Thunder was heard.	
..	..	ENE	¾	A long volley of sparks; thunder was heard ten seconds after the volley had commenced.	
..	..	ENE	¾		
..	..	ENE	½ to 1½	Occasional thunder was heard till $0^h.20^m$, at which time a sudden volley of sparks occurred; thunder following after an interval of twenty seconds.	
..	..	ENE	1½	A flash of lightning, the volley of sparks occurring at the same time; very loud thunder was heard in the zenith one second afterwards.	
..	..	ENE	½	A volley of sparks; thunder was heard fifteen seconds afterwards: rain falling very heavily.	
0	..	ENE	½	A fine and long volley of sparks; thunder was heard thirteen seconds afterwards.	
..	..	ENE	½	A flash of lightning, the volley of sparks occurring at the same time; thunder was heard in the N. E. two seconds afterwards.	
3	..	ENE	½		
0	..	ENE	½		
..	..	ENE	½	All the instruments are at zero.	
..	..	ENE	½		
..	..	ENE	½	A slight volley; thunder was heard thirty-five seconds afterwards.	
..	..	ENE	½	Rain still falling, but not so heavily.	
..	..	ENE	½	The rain has ceased: the clouds appear much lighter.	
..	..	ENE	½	Upwards of $0^{in}.6$ of rain fell between $21^h.20^m$ and $0^h.30^m$, as shown by Crosley's Rain-gauge.	G
..	5	Calm	..	During a shower of rain.	H B
0	..	SSW	1	Overcast: dense cirro-stratus and scud.	
1	..	SSW	½ to 1¾	Rain falling.	H B
..	..	W	3	Thunder heard in the N.	T D
..	..	NNW	1½	All the instruments went suddenly to zero.	
5	..	NNW	..	A loud peal of thunder.	
..	5	NNW	½	,, rain has just commenced falling.	
3	..	NNW	..		
0	..	NNW	..	Rain still falling.	H B
..	..	NNW	..	No rain is falling.	
..	..	Calm	..	A peal of thunder.	
..	1	Calm	..	Massive cumulo-strati in the S. E.; thunder is also heard in the S. E.: a slight rain is falling.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m s		o o	o o	div. div.	div. div.	o o		h m	h m s	in.	sp. sec.
Aug. 19. 3. 4. 30	Pos.	..	..	..	..	..	..	..	..	..	..
3. 8. 0	..	..	..	..	..	..	..	..	..	..	..
3. 9. 30	Neg.	..	..	..	..	6	20s	..	..	..	..
3. 15. 0	Pos.	40	..	20	20	2	..	..	..	..	..
h m											
Aug. 29. 1. 55. 0 to 3. 12	Neg.	25 to 40	..	10 to out of range	10 to out of range	0 to 10	..	2. 48	2. 45. 0	0·05	Sparks
									2. 48. 0	0·08	3 in 1
									2. 55. 0	0·04	2 in 1
									3. 0. 0	0·05	1 in 1
									3. 6. 0	0·06	1 in 1
3. 55. 0 to 4. 37	Neg.	40	..	out of range	200 to out of range	8 to 18	..	..	3. 58. 0	0·14	3 in 1
									4. 0. 0	0·15	1 in 5
									4. 3. 0	0. 12	3 in 2
									4. 5. 0	0·05	Sparks
									4. 7. 0	0·08	3 in 2
									4. 9. 0	0·02	1 in 1
									4. 16. 0	0·02	3 in 1
									4. 32. 0	0·02	Sparks
Sep. 6. 0. 40. 0	..	..	..	..	..	..	..	..	..	..	..
1. 45. 0	Neg.	..	..	..	..	10	..	..	1. 45. 0	0·04	Sparks
1. 47. 0	Neg.	..	..	..	..	15	..	..	1. 47. 0	0·05	Sparks
1. 51. 0	Neg.	..	..	..	..	..	..	..	..	..	..
1. 55. 0	Pos.	..	..	..	..	15	..	..	1. 55. 0	0·08	2 in 1
1. 57. 0	Neg.	..	..	..	..	10 to 12	..	..	1. 57. 0	0·04	Sparks
2. 0. 0	Neg.	..	..	..	..	8	..	..	2. 0. 0	0·05	2 in 1
2. 3. 0	Neg.	..	..	..	..	10 to 15	..	..	2. 3. 0	0·06	5 in 1
2. 5. 0	Neg.	..	..	..	..	10 to 20	..	..	2. 5. 0	0·08	3 in 1
2. 7. 0	Neg.	..	..	..	..	23	..	..	2. 7. 0	0·12	Sparks
2. 11. 0	Neg.	..	..	..	..	20	..	..	2. 11. 0	0·10	3 in 1
2. 15. 0	Neg.	..	..	..	..	18	..	..	2. 15. 0	0·09	2 in 1
2. 20. 0	..	0	0	0	0	..	..	..	..	..	..
2. 30. 0	..	0	0	0	0	..	..	..	..	..	..
2. 35. 0	Neg.	..	..	..	..	17	..	..	2. 35. 0	0·05	2 in 1
2. 37. 0	Neg.	..	..	..	..	12	..	..	2. 37. 0	0·04	3 in 1
2. 40. 0	Neg.	..	..	..	..	..	..	..	..	..	..
2. 41. 0	Neg.	..	..	..	..	20	..	..	2. 41. 0	0·10	3 in 1
2. 42. 0	Neg.	..	..	..	..	20 to 30	..	..	2. 42. 0	0·13	2 in 1
2. 44. 0	Neg.	..	..	..	..	20	..	..	2. 44. 0	0·10	Sparks
2. 45. 0	Neg.	..	..	..	..	18	..	..	2. 45. 0	0·06	4 in 1
2. 48. 0	Neg.	..	..	..	..	30	..	..	2. 48. 0	0·15	2 in 1
2. 52. 0	..	0	0	0	0	..	..	..	..	..	..
2. 54. 0	..	..	..	..	..	..	..	..	..	..	..
2. 55. 0	..	0	0	0	0	..	..	..	..	..	..
2. 57. 0	..	..	..	..	..	..	..	..	..	..	..
2. 59. 0	Neg.	..	..	..	..	7	..	..	2. 59. 0	0·04	Sparks

From September 6d. 1h. 45m to September 6d. 3h. 17m the direction-pencil of Osler's Anemometer was off the rackwork.

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
		From Osler's Anemometer.			
The Head of the Needle towards A.	The Head of the Needle towards B.	Direction.	Pressure in lbs. per square foot.		
o o	o o		from lbs. to lbs.		
..	..	Calm	..	The cumulo-strati are now in the S. S. E.: the clouds are extensively broken to the N. of the zenith.	H B
..	..	Calm	..	The cumulo-strati are now in the S.S.E., S., and S. S.W.: thunder occasionally heard.	
..	2	Calm	..		
..	..	Calm	..	The sky was mostly covered with cumulo-strati till 4 P.M., but no electricity of any amount was shewn after $3^h.\ 15^m$.	
..	3 to 15	N	$1\frac{1}{2}$	Thunder occasionally heard in the S. E.: rain falling heavily.	
..	..	NNE	..	Rain falling.	H B
..	..	..	..	A thunder-storm: the clouds began to gather principally in the N. and N.N.E. at about $0^h.\ 40^m$ P.M., consisting of cirro-strati and massive cumuli of a strong electrical character: thunder was first heard at $0^h.\ 50^m$, but the electrical instruments were not much affected till $1^h.\ 45^m$.	T D
0	..	..	..	Peals of thunder heard in the N. E. at intervals of three seconds.	
0	..	..	..		
..	..	..	..	A flash of lightning; thunder was heard five seconds afterwards.	
..	5	..	..	Constant peals of thunder in and towards the N. E. of the zenith.	
0	..	..	..	The thunder is nearly continuous.	
..	..	..	..	The thunder still continues in the N. and N. N. E.	
0	..	..	..	,,	
0	..	..	..	Constant peals of thunder in the E. N. E.	
0	..	..	..		
..	..	..	..	The thunder is not so frequent.	
..	..	..	..	The instruments are now at zero: thunder occasionally heard.	
..	..	..	..	The instruments are still at zero.	
0	..	..	..	A loud peal of thunder.	
..	..	..	..	A loud peal of thunder heard in the E.N.E.	
0	..	..	..	A flash of lightning; thunder was heard six seconds afterwards.	
..	..	..	..	A loud peal of thunder heard in the E.N.E.	
..	..	..	..	,,	
..	..	..	..	A flash of lightning, followed, after an interval of two seconds and a half, by the loudest clap of thunder that was heard during the storm.	
..	..	..	..	At $2^h.\ 47^m$ a clap of thunder was heard, but no lightning was seen to precede it.	
..	..	..	..	The instruments are now at zero: a long continued peal of thunder heard in the E.N.E.; there was a perpetual roll for twelve seconds.	
..	..	..	..	Rain falling in large drops.	
..	..	..	..	The instruments are still at zero.	
..	..	..	..	Rain falling in torrents.	
..	..	..	..	The rain has ceased: distant thunder heard.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m		° °		div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Sep. 6. 3. 0	Neg.	..	..	..	..	10	..	..	3. 0. 0	0·05	3 in 1
3. 1	..	0	0	0	0	..	..	..	..	..	..
3. 3	Pos.	..	.	..	..	7	..	..	3. 3. 0	0·04	Sparks
3. 5	..	0	0	0	0	..	..	..	..	..	..
3. 14	Pos.	..	..	..	..	12	..	..	3. 14. 0	0·06	Sparks
3. 17	..	0	0	0	0	..	..	..	..	..	..
d h m											
Sep. 22. 14. 14 to 22. 14. 24	Neg.	10 to 40	..	10 to out of range	..	0 to 15	1ˢ to 2ˢ	14. 18	14. 16. 0	0·06	1 in 1
									14. 18. 0	0·09	2 in 1
									14. 20. 0	0·04	Sparks
Sep. 22. 21. 30 to 22. 21. 44	Neg.	..	..	out of range	50 to out of range	6 to 25	Instantly	..	21. 42. 0	0·10	1 in 6
Sep. 29. 0. 44	Neg.	40	..	100	100	..	..	..	..	..	..
29. 1. 21	Pos.	..	..	out of range	out of range	12	..	..	..	..	..
Oct. 6. 21. 55 to 6. 21. 58	Neg.	40	..	40	40	..	..	..	21. 55. 0	0·03	2 in 1
Oct. 9. 0. 48 to 9. 0. 57	Neg.	..	..	8 to out of range	..	0 to 12	..	..	0. 50. 0	0·02	3 in 1
									0. 53. 0	0·04	1 in 1
Oct. 14. 21. 5 to 14. 21. 7	Neg.	..	..	..	..	5 to 20	..	..	21. 5. 0	0·09	2 in 1
14. 22. 57 to 14. 23. 33	Neg.	40	..	..	..	2 to 20	Instantly	23. 10	22. 57. 0	0·07	3 in 1
									22. 58. 0	0·07	1 in 5
									23. 0. 0	0·02	2 in 1
									23. 2. 0	0·01	2 in 1
									23. 8. 0	0·08	2 in 1
									23. 9. 0	0·09	3 in 1
									23. 10. 0	0·12	2 in 1
									23. 11. 0	0·10	1 in 1
									23. 13. 0	0·07	A spark
									23. 28. 0	0·11	2 in 1
									23. 30. 0	0·08	1 in 10
Oct. 15. 18. 30	Neg.	..	..	50	200	..	..	..	18. 30. 0	0·05	2 in 1
Oct. 20. 3. 7 to 20. 3. 12	Neg.	40	..	60 to out of range	200 to out of range	0 to 10	Instantly	..	3. 10. 0	0·08	1 in 2
Oct. 21. 23. 50	Neg.	..	..	..	..	..	..	..	..	..	..
Oct. 23. 0. 3 to 23. 0. 8	Neg.	40	..	..	100 to out of range	5 to 10	..	0. 3	0. 4. 0	0·05	1 in 1
									0. 5. 0	0·05	1 in 1
									0. 6. 0	0·05	3 in 2
									0. 6. 4	0·05	3 in 2

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer. Direction.	From Osler's Anemometer. Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
..	..	..	..	A vivid flash of lightning; thunder heard eight seconds afterwards.	T D
..	..	..	..	The instruments are at zero.	
..	..	..	..	A flash of lightning; thunder heard seven seconds afterwards: rain is falling.	
..	..	..	..	A flash of forked lightning was seen; thunder was heard seven seconds afterwards: the instruments are at zero.	
..	..	..	..	Rain falling steadily.	
..	..	..	..	The rain has ceased: all the instruments are at zero. At the commencement of the storm the temperature of the air and that of evaporation were 76° ·7 and 65° ·0 respectively; and at the termination they were 66° ·3 and 62° ·2 respectively: the reading of the barometer was nearly constant.	T D
..	..	SSE	..	Rain falling.	L
..	..	SSW	..	Rain falling.	
..	..	Calm	..	The instruments became suddenly charged with negative electricity, without any apparent cause; they returned almost immediately to zero.	
..	..	SW	..	A sudden charge of positive electricity.	L
..	..	SSW	..	Rain falling heavily.	H B
..	..	SSW	1 to 2½	Rain falling.	L
..	..	Calm	..	Rain falling heavily.	H B
..	0 to 4	Calm	..	Rain falling.	
..	..	S	..	During a shower of rain.	
..	..	SW	..	Overcast, with cumulo-strati and dense scud.	
..	..	WSW	4	Active negative electricity was exhibited during a squall of rain.	
..	..	W	0 to 1½	A squall of rain.	

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1846.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	Time of Maximum Tension.	RONALDS' SPARK-MEASURER.		
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.			Time of Observation or Occurrence of Spark.	Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	div. div.	div. div.	° °		h m	h m s	in.	sp. sec.
Oct. 24. 3. 5 to 24. 3. 25	Neg.	40	..	out of range	..	5 to 7	..	..	3. 15. 0	0·05	1 in 1
Oct. 25. 21. 0 to 26. 2. 0	Pos.	40	..	15 to 50	20 to 70	0 to 2	1m	21. 0	..	..	..
Oct. 26. 21. 0 to 27. 2. 0	Pos.	40	..	30 to 40	40	0 to 1	3m to 8m	..	..	..	..
Oct. 28. 23. 0	Neg.	40	..	50	50	..	..	..	..	..	..
28. 23. 30 to 29. 0. 45	Pos. & Neg.	40	..	20	20	..	..	..	..	..	..
Nov. 21. 8. 50 to 21. 9. 35	Neg.	40	..	30 to out of range	30 to out of range	0 to 8	Instantly	9h.3m.10s	8. 55. 0	0·03	3 in 1
									9. 0. 0	0·01	2 in 1
									9. 1. 30	0·04	1 in 1
									9. 2. 20	0·03	1 in 2
									9. 3. 0	0·03	3 in 1
									9. 3. 10	0·05	1 in 1
									9. 10. 0	0·01	Sparks
									9. 12. 0	0·01	Sparks
									9. 14. 0	0·01	Sparks
									9. 27. 0	0·03	Sparks
Nov. 24. 22. 17 to 24. 22. 30	Neg.	20 to 40	..	10 to 30	15 to 30	..	Instantly to 2s	22. 26	..	..	..
Nov. 25. 4. 30 to 25. 5. 0	Neg.	40	..	30 to 80	50 to 100	..	1m	5. 0	..	..	..
Dec. 12. 3. 23 to 12. 3. 55	Neg. & Pos.	5 to 40	..	5 to out of range	5 to 200	0 to 5	..	3. 30	3. 23. 0	0·04	2 in 1

ELECTROMETER OBSERVATIONS.

GALVANOMETER.		WIND.		REMARKS.	Observer.
The Head of the Needle towards A.	The Head of the Needle towards B.	From Osler's Anemometer.			
		Direction.	Pressure in lbs. per square foot.		
° °	° °		from lbs. to lbs.		
0	..	SW	..	Rain falling heavily.	H B
..	..	NNW to WNW	..	During a fog.	G
..	..	Calm	..	During a fog.	
..	..	Calm	..	Rain falling.	
..	..	N	..	The electricity changed suddenly to negative at $23^h.\ 26^m$.	G
0	0	SSW	0 to 2	During a violent squall of wind and rain.	G H
..	..	Calm	..	Rain falling.	T D
..	..	SSW	..	Rain falling heavily.	G H
..	..	NNE	..	Snow falling from $3^h.\ 25^m$ to $3^h.\ 40^m$: the electricity changed to positive at $3^h.\ 33^m$.	H B

ROYAL OBSERVATORY, GREENWICH.

ABSTRACTS

OF THE

RESULTS

OF THE

MAGNETICAL OBSERVATIONS.

1846.

TABLE I.—Mean Westerly Declination, as deduced from the 12 Observations taken on every Civil Day (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	22.51.50	*S*	*S*	22.49.20	22.53.17	22.52.32	22.48.31	22.47.16	22.48.31	22.47.32	*S*	22.47. 6
2	52.24	22.51. 2	22.51. 8	52.14	52.21	51.53	47.42	*S*	49.15	46.45	22.48.10	47.26
3	51.37	50.15	50.51	51. 4	*S*	52.30	50.24	48.36	50. 8	48.21	49. 4	47.24
4	*S*	50.21	51. 2	50.27	51.50	52.33	49.52	48.53	50.52	*S*	47.38	49.19
5	51.15	49.52	51.27	*S*	49.30	53.10	*S*	48.57	51.38	48.18	47.48	49. 1
6	50.55	50.43	51. 4	51.28	36.11	51.45	49.31	49. 9	*S*	47. 8	47.56	*S*
7	50.37	50.38	50.54	49.32	31.45	*S*	48.16	53.12	49. 3	46.39	45.54	48.45
8	51.35	*S*	*S*	50. 5	33. 3	52. 1	47.44	51.24	50.24	48.44	*S*	48.14
9	50.52	50.31	(50.43)	50.20	41. 3	51.24	49.10	*S*	50.29	48.28	48. 0	46.21
10	50.10	49.46	(52.11)	Good Friday	*S*	52. 6	49.16	50.23	48.45	50.29	48.27	47.10
11	*S*	50. 4	(51. 7)	50.46	43.12	52.27	49.45	50. 1	47.58	*S*	47.27	48.30
12	51.31	49.59	(49. 1)	*S*	50.48	51.30	*S*	48.46	49.30	49.23	47.53	48. 6
13	50.39	49.49	(53.19)	52.22	53.19	52.28	50.52	50.49	*S*	47.59	47.28	*S*
14	49.38	50.27	(49.43)	51.54	52.21	*S*	49.18	50.28	49.37	47.18	46.56	49.28
15	51. 5	*S*	*S*	52.26	52.59	52.23	51.27	50.55	50. 3	48. 9	*S*	49. 0
16	50.28	49.37	(47.53)	52.26	52.25	53.36	48.35	*S*	49. 3	47.52	47.49	49. 4
17	51. 5	50.52	(46. 1)	53. 8	*S*	53. 4	49.43	50.51	49.38	47.36	47.45	48.21
18	*S*	50.25	(44.16)	52.42	52.12	52.11	50.33	49.31	48.47	*S*	48.45	48.26
19	51.10	50.36	(42.27)	*S*	53.21	52.24	*S*	48.29	49.12	47.22	47.39	47.56
20	51.16	49.35	(43.24)	51.18	52.21	52. 5	48.33	49. 1	*S*	47.47	47. 9	*S*
21	51.20	49.58	(44.39)	52.31	53.21	*S*	50.16	49. 6	46.50	47.47	47.10	48. 9
22	51. 8	*S*	*S*	53.11	52.53	53.30	50.13	50.33	44.11	47.31	*S*	47.13
23	50.25	49.44	(44.23)	53. 0	53.53	51.46	51. 5	*S*	50. 3	48. 5	47.45	48.22
24	51.59	50.10	(42.56)	52.40	*S*	50.49	49. 6	48.30	46.58	46.56	47.15	48.15
25	*S*	50.29	(47.50)	53.20	53. 3	50.33	47.29	49. 8	48.38	*S*	47.42	Christ. Day.
26	50.48	50.28	53.21	*S*	53.20	49.36	*S*	48.55	48.58	48. 9	46.19	47.47
27	50.49	50.49	52.59	52.56	51.53	49.39	49.27	48.18	*S*	48. 2	48.10	*S*
28	50.58	50.39	53.23	52.48	52.15	*S*	48.48	49.54	47.53	48.17	47.49	45.13
29	49.26		*S*	52.18	52.33	49.23	50.11	48.31	47.36	47.57	*S*	46.11
30	50. 6		53.31	52.10	52.40	49.30	49.23	*S*	47.39	47.57	47. 1	46.40
31	50.34		53.20		*S*		48.38	48.44		47.26		46.31

The letter *S* denotes that the day was Sunday.

There is one instance in this table in which the difference between the numbers on two consecutive days is greater than 13′, viz., between the 5th and 6th of May; there is one instance in which the difference has amounted to 8′, viz., between the 8th and 9th of May; there is one instance in which the difference has exceeded 7′ and is less than 8′, viz., between the 11th and 12th of May; there are two instances of differences exceeding 5′ and less than 6′, viz., between March 25 and 26, and September 22 and 23; there are three instances of differences exceeding 4′ and less than 5′, viz., between March 12 and 13, 24 and 25, and May 6 and 7; there is one instance of difference amounting to 4′, viz., between March 31 and April 1; there are two instances of differences exceeding 3′ and less than 4′, viz., between March 13 and 14, and September 23 and 24; and there are eleven instances of differences exceeding 2′ and less than 3′, viz., between March 11 and 12; April 1 and 2; May 4 and 5 and 12 and 13; July 2 and 3, 14 and 15, and 15 and 16; August 12 and 13; September 21 and 22; October 7 and 8, 9 and 10; and November 6 and 7; all the remaining differences are less than 2′, and include all in the months of January, February, June, and December.

Between March 9 and March 25, both days inclusive, workmen were engaged with a number of iron tools, boring the ground for the reception of the Ground Thermometers, at the distance of about 30 feet South of the Declination Magnet. It is supposed that the effect on the mean daily position of the magnet was small, but that no differential observations during this time are of any value.

							′ ″
In January	the greatest mean daily West Declination took place on the	2nd	day, and the least on the	29th	day; the difference is		2.58
February	,,	1st	,,	20th	,,		1.27
March	,,	30th	,,	19th	,,		11. 4
April	,,	25th	,,	1st	,,		4. 0
May	,,	23rd	,,	7th	,,		22. 8
June	,,	16th	,,	29th	,,		4.13
July	,,	15th	,,	25th	,,		3.58
August	,,	7th	,,	1st	,,		5.56
September	,,	5th	,,	22nd	,,		7.27
October	,,	10th	,,	7th	,,		3.50
November	,,	3rd	,,	7th	,,		3.10
December	,,	14th	,,	28th	,,		4.15

If the numbers in March between the 9th and 25th days be not used, the least mean daily declination will be on the 3rd day, and the difference between the greatest and least in the month will be 2′. 40″.

The mean position of the magnet was therefore subject to less variation in the months of January and February than in any other months. The variations in the months of April, June, July, October, November, and December, were small. In May the magnet was subject to the greatest change in its mean daily position. The mean of the monthly ranges thus estimated was 6′. 12″. The yearly range (similarly estimated) was 22′. 8″, being the difference between the mean West declination on May 7 and on May 23, and therefore the same as the range of this month.

	° ′ ″		° ′ ″		d h m s		d h m s	
In January the extreme West declinations from single observations were . .	22. 59. 21	and	22. 39. 38	and they took place at	23. 22. 0. 0	and at	24. 8. 14. 29	respectively.
February	22. 57. 46	,,	22. 38. 2	,,	16. 0. 0. 0	,,	16. 12. 0. 0	,,
March	23. 5. 51	,,	22. 30. 57	,,	30. 1. 50. 0 30. 2. 0. 0	,,	17. 9. 27. 49	,,
April	23. 5. 1	,,	22. 32. 37	,,	16. 1. 50. 0 16. 2. 0. 0	,,	1. 0. 0. 0	,,
May	23. 6. 49	,,	22. 22. 19	,,	4. 4. 0. 0	,,	6. 22. 0. 0	,,
June	23. 5. 28	,,	22. 41. 48	,,	13. 1. 50. 0	,,	29. 16. 0. 0	,,
July	23. 9. 22	,,	22. 35. 48	,,	11. 3. 3. 31	,,	1. 20. 0. 0	,,
August	23. 18. 59	,,	22. 35. 25	,,	6. 14. 37. 30	,,	27. 12. 0. 0	,,
September	23. 11. 35	,,	22. 7. 42	,,	22. 6. 10. 0 22. 6. 11. 0	,,	11. 6. 8. 0	,,
October	23. 9. 31	,,	22. 25. 1	,,	8. 2. 26. 0	,,	7. 8. 9. 0	,,
November	23. 3. 14	,,	22. 31. 40	,,	26. 6. 18. 0	,,	26. 9. 54. 0	,,
December	22. 54. 13	,,	22. 26. 12	,,	4. 2. 0. 0	,,	23. 9. 25. 30	,,

If the numbers in March between the 9th and 25th days be not used, the extreme smallest West declination will be 22°. 46′. 1″, as deduced from the observation taken at 4^{d}. 10^{h}.

The range of the magnet from the above numbers is, in the month of

	′ ″
January	19. 43
February	19. 44
March	34. 54
April	32. 24
May	44. 30
June	23. 40
July	33. 34
August	43. 34
September	63. 53
October	44. 30
November	31. 34
December	28. 1

The largest West declination in the year occurred in August, and was 23°. 18′. 59″, and the smallest, occurring in September, was 22°. 7′. 42″; the yearly range of the magnet in the year 1846 was therefore 1°. 11′. 17″, as deduced from all single observations made in the year.

If the numbers in March, before referred to, be omitted, the range of the magnet in that month will be 19′. 50″.

TABLE II.—Determination of the Mean Monthly Western Declination from the Means of the Two-hourly Observations.

Means rejecting days of great disturbance

1846, Month.	Mean Westerly Declination of the Magnet.	1846, Month.	Mean Westerly Declination of the Magnet.
January	° ′ ″ 22. 50. 56	July	° ′ ″ 22. 49. 24
February	22. 50. 17	August	22. 49. 33
March	22. 49. 21	September	22. 48. 55
April	22. 51. 51	October	22. 47. 55
May	22. 49. 32	November	22. 47. 38
June	22. 51. 48	December	22. 47. 51

22° 49′ 29″

22. 49. 27 ×
49. 4
48. 0
47. 42
47. 50

The mean westerly declination for the year 1846 was 22°. 49′. 35″. The mean for each month is less than the mean for the same month in the preceding year.

If the numbers in March between the 9th and 25th days be not used, the mean westerly declination for that month will be 22°. 52′. 5″; and the mean westerly declination for the year will then be 22°. 49′. 49″.

TABLE III.—Daily Range of the Declination Magnet on every Day of the Year (except Sundays, Good Friday, and Christmas Day), as deduced from all the Observations taken on that Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
1	7. 1	*S*	*S*	21.55	9.26	11.12	11.59	16.54	15.13	17. 9	*S*	13.18
2	5.27	12. 6	10.56	11.10	11.40	15.46	22.41	*S*	10.49	33.25	16. 2	13.44
3	7.24	5.53	9. 8	16.53	*S*	14.14	13.51	10.53	14.39	16. 9	10.41	6.50
4	*S*	7.33	13. 0	15.13	33.47	11.54	12. 3	13.14	29.24	*S*	10.32	8.17
5	7.59	6. 2	8.12	*S*	16.20	9.44	*S*	12. 7	28.36	9.42	8.52	5.39
6	5. 2	8.45	7.32	26.43	9.10	12.29	17.44	19.49	*S*	14.26	6.27	*S*
7	6. 4	9. 5	7.43	12. 5	17.44	*S*	22.16	39. 5	8.52	28.30	20.11	4.13
8	8.48	*S*	*S*	16.39	16.44	11.58	12. 2	10.21	25.26	41.46	*S*	8.15
9	6.22	10.27	7.33	12.15	30. 7	13.35	12. 1	*S*	12.11	13.23	7.26	17.52
10	5.20	7.31	9.53	Good Friday	*S*	14.16	13.46	18.14	16.41	17.56	9. 1	21. 8
11	*S*	7. 4	9. 9	16.26	36.10	13.12	27.59	14.11	56.52	*S*	13.30	8. 3
12	10.11	11.41	11.11	*S*	27.47	14. 3	*S*	14.59	15.14	13. 5	6. 6	9.12
13	9.35	6. 5	19.48	18.27	15.43	20.27	14.22	9.49	*S*	7.44	9.45	*S*
14	10.28	11.51	21.44	19.11	10.46	*S*	12.11	14.40	15.58	11.49	11.11	5. 2
15	5.21	*S*	*S*	24.46	11.44	13.18	9.28	15.58	13.42	6.35	*S*	5.31
16	8.30	19.44	23.47	26.34	10.18	9.48	13.56	*S*	11. 2	9. 9	6.50	6.10
17	11.17	17.11	25.43	16.12	*S*	12.36	7.39	9.58	14.22	9.26	15.34	5.15
18	*S*	11.59	20.50	13.14	11.41	10. 9	11.31	12.50	12.20	*S*	7.10	7.27
19	7.43	5.25	29.24	*S*	12.48	10. 6	*S*	9.55	11.36	19.53	6.48	4.19
20	6. 7	7.21	21.26	16.42	10.29	13. 5	9.47	13.17	*S*	26.54	17. 2	*S*
21	6.17	10.19	14.24	12. 8	16.33	*S*	7.23	14.13	29.53	18.10	13.40	5. 9
22	8.59	*S*	*S*	11.13	20. 9	14.44	8.51	16.52	62.29	30.34	*S*	8.29
23	6.16	3.29	11.28	14.31	15.43	11.17	12.46	*S*	14. 8	10. 8	3.55	27.19
24	19.43	5.48	16.24	13.54	*S*	11.27	14.27	22.39	19.38	14. 7	4.10	17.25
25	*S*	12.14	25.15	13.29	10.18	13. 0	14.27	20.49	13.13	*S*	4.56	Christ. Day
26	6.27	16.44	18.48	*S*	15.15	15.28	*S*	19.21	10.44	10.32	31.34	7.23
27	9.20	12.58	10.54	13.32	13.11	11.53	14. 5	24.28	*S*	9. 4	21.22	*S*
28	12. 4	9.21	13.30	9.55	13. 3	*S*	11.56	26.27	11.33	8.54	20.43	11.49
29	15.52		*S*	11.12	14. 0	13. 6	19.20	22.53	13.51	9.27	*S*	8.12
30	9.23		18. 1	10.56	18.38	17. 0	16.36	*S*	9.24	11.18	6.51	5.17
31	7. 4		16. 9		*S*		13. 1	11.20		9.46		5.31

The letter *S* denotes that the day was Sunday.

From this table we learn that

On 6 days out of 311 the daily arc described by the magnet was less than 5′
238 ,, ,, greater than 5′ and less than 17′
45 ,, ,, 17′ ,, 26′
22 ,, ,, 26′ ,, 65′

In January, the greatest and least daily ranges of the declination magnet took place on the 24th and 6th days respectively.

February	,,	16th and 23rd ,,
March	,,	19th and 6th ,,
April	,,	6th and 28th ,,
May	,,	11th and 6th ,,
June	,,	13th and 5th ,,
July	,,	11th and 21st ,,
August	,,	7th and 13th ,,
September	,,	22nd and 7th ,,
October	,,	8th and 15th ,,
November	,,	26th and 23rd ,,
December	,,	23rd and 7th ,,

If the numbers in March between the 9th and 25th days be omitted, the greatest daily range will be on the 26th day.

TABLE IV.—Diurnal Range of the Declination Magnet in each Month.

1846, Month.	Mean of all the Daily Ranges in each Month.	1846, Month.	Mean of all the Daily Ranges in each Month.
	′ ″		′ ″
January	8. 9	July	14. 0
February	10. 19	August	16. 44
March	15. 27	September	19. 9
April	15. 49	October	15. 53
May	16. 31	November	11. 37
June	9. 13	December	9. 50

The diurnal range of the magnet was smallest in January and largest in September.

By taking the means of the above numbers in two groups, those between April and September for one, and those in the remaining months for the other, we find that

	′ ″
The diurnal range in Summer was	15. 14
The diurnal range in Winter was	11. 53
The diurnal range for the Year was	13. 34

If the numbers in March between the 9th and the 25th days be not used, the diurnal range of the declination magnet in that month will be 12′. 10″, the diurnal range for winter will be 11′. 20″, and that for the year will be 13′. 17″.

TABLE V.—Mean Westerly Declination of the Magnet at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″
14	22. 49. 36	22. 48. 52	22. 47. 37	22. 49. 25	22. 46. 57	22. 49. 7	22. 47. 5	22. 47. 22	22. 47. 1	22. 45. 19	22. 46. 42	22. 46. 19
16	50. 8	48. 44	47. 16	49. 24	46. 25	49. 11	47. 1	48. 38	46. 1	45. 15	46. 41	47. 14
18	49. 45	48. 40	46. 47	49. 15	45. 10	47. 57	45. 39	46. 51	46. 6	46. 24	47. 14	47. 15
20	50. 33	49. 51	46. 54	48. 21	43. 40	46. 58	44. 47	46. 23	46. 37	47. 12	47. 14	47. 35
22	51. 24	51. 22	47. 28	49. 42	46. 47	49. 53	47. 7	47. 53	50. 27	47. 39	46. 48	47. 59
0	53. 47	53. 50	53. 55	54. 41	53. 56	56. 33	53. 53	54. 59	55. 45	52. 44	51. 13	50. 41
2	54. 50	54. 43	57. 36	60. 36	57. 45	58. 34	56. 29	57. 21	56. 5	54. 35	51. 57	51. 30
4	52. 52	52. 17	54. 0	57. 20	55. 32	57. 1	54. 32	53. 33	52. 4	51. 37	49. 52	49. 56
6	50. 59	50. 15	49. 57	53. 51	52. 21	53. 59	51. 34	49. 43	48. 55	47. 25	48. 22	47. 47
8	49. 53	49. 14	47. 34	50. 10	49. 22	51. 42	49. 19	47. 42	44. 28	45. 40	46. 27	46. 56
10	48. 27	47. 59	46. 56	50. 10	48. 21	50. 20	48. 6	47. 15	46. 9	45. 47	44. 22	45. 34
12	49. 4	47. 37	46. 8	49. 22	48. 4	50. 19	47. 16	46. 56	47. 19	45. 29	44. 47	45. 27

From the numbers in this table we learn that the westerly declination was, without exception, greater at 2^h than at any other hour. The time when the declination was least is different in the different months. In the months of May and July the magnet has passed uninterruptedly from one extreme position to the other. In all the remaining months, except November, there have been two extreme West positions and two extreme East positions; and in the months of November a triple maximum and a triple minimum took place.

If the numbers in March between the 9th and the 25th days be not used, the mean westerly declination of the magnet at every even hour in March will be as follows:—

		h	° ′ ″
At	14	the westerly declination	22. 51. 10
	16	,,	50. 32
	18	,,	49. 53
	20	,,	49. 14
	22	,,	49. 48
	0	,,	56. 38
	2	,,	60. 6
	4	,,	54. 55
	6	,,	51. 54
	8	,,	51. 1
	10	,,	49. 51
	12	,,	50. 5

The time of maximum declination will be at 2^h, and there will be two extreme West and two extreme East positions.

The next table is formed by taking the means of the numbers in Table V., corresponding to the same hour for each month; January, February, March, October, November, and December, being grouped together for Winter, and the remaining months, from April to September, for Summer.

TABLE VI.—Mean Westerly Declination at every Even Hour of Göttingen Mean Solar Time, in the Summer, in the Winter, and for the Year.

1846, Hour, Göttingen Mean Time.	Mean Westerly Declination.		
	Summer.	Winter.	The Year.
h	° ′ ″	° ′ ″	° ′ ″
14	22. 47. 50	22. 47. 24	22. 47. 37
16	22. 47. 47	22. 47. 33	22. 47. 40
18	22. 46. 50	22. 47. 43	22. 47. 16
20	22. 46. 8	22. 48. 13	22. 47. 10
22	22. 48. 38	22. 48. 47	22. 48. 43
0	22. 54. 58	22. 52. 42	22. 53. 50
2	22. 57. 48	22. 54. 12	22. 56. 0
4	22. 55. 0	22. 51. 46	22. 53. 23
6	22. 51. 44	22. 49. 8	22. 50. 26
8	22. 48. 47	22. 47. 37	22. 48. 12
10	22. 48. 24	22. 46. 31	22. 47. 28
12	22. 48. 13	22. 46. 25	22. 47. 19

The greatest western declination occurred, both in the summer and in the winter, at 2^h; the least occurred in the summer at 20^h, and in the winter at 12^h. In both periods there was one maximum and one minimum only.

The last column shews the mean for the year, and it exhibits a double maximum and minimum, viz:—

	h
The maximum at	2
A minimum at	12
A maximum at	16
The minimum at	20

The mean westerly declination for summer was 22°. 50′. 11″, and for winter it was 22°. 49′. 0″. In the year 1845 it was 22°. 58′. 16″ for summer, and for winter 22°. 55′. 11″; so that the western declination in the summer half-year of 1846 was smaller by 8′. 5″, and in the winter half-year it was smaller by 6′. 11″, than it was in the corresponding periods of the year 1845. Comparing the results of 1846 with those of 1845, hour by hour, the greatest difference occurred in summer at 8^h, being 9′. 26″, and the least difference at 22^h, being 7′. 25″; in winter the greatest difference occurred at 16^h, being 6′. 33″, and the least difference at 4^h, being 5′. 40″. The results in 1846 are in all cases smaller than those of previous years.

In 1846, the mean for the whole year was 22°. 49′. 35″; in 1845 it was 22°. 56′. 43″; therefore, the mean western declination for 1846 was smaller than that for 1845 by 7′. 8″.

Comparing the numbers in the last column with the westerly declination for the year, or 22°. 49′. 35″, the following results are obtained:—

	h			′ ″
The mean position at	14	is more easterly than	the mean position for the year by	1. 58
,,	16	,,	,,	1. 55
,,	18	,,	,,	2. 19
,,	20	,,	,,	2. 25
,,	22	,,	,,	0. 52
The mean position at	0	is more westerly than	the mean position of the year by	4. 15
,,	2	,,	,,	6. 25
,,	4	,,	,,	3. 48
,,	6	,,	,,	0. 51
The mean position at	8	is more easterly than	the mean position of the year by	1. 23
,,	10	,,	,,	2. 7
,,	12	,,	,,	2. 16

If the numbers in March between the 9th and the 25th days be omitted, the mean West declination, for the winter and for the year, will be as follows:—

1846, Hour, Göttingen Mean Time.	Mean Westerly Declination.	
	Winter.	The Year.
h	° ′ ″	° ′ ″
14	22.48. 0	22.47.55
16	22.48. 6	22.47.57
18	22.48.14	22.47.32
20	22.48.36	22.47.22
22	22.49.10	22.48.54
0	22.53. 9	22.54. 4
2	22.54.37	22.56.13
4	22.51.55	22.53.28
6	22.49.28	22.50.36
8	22.48.12	22.48.30
10	22.47. 0	22.47.42
12	22.47. 2	22.47.38

The maximum West declination for Winter will be at 2^h.
The minimum West declination for Winter will be at 10^h.
The mean westerly declination for Winter will be 22°. 49′. 27″.
The mean westerly declination for the Year will be 22°. 49′. 49″.

Comparing the numbers in the last column of the preceding table with the westerly declination for the year, or 22°. 49′. 49″, the following results are obtained :—

	h		′ ″
The mean position at	14	is more easterly than the mean for the year by	1.54
,,	16	,, ,,	1.52
,,	18	,, ,,	2.17
,,	20	,, ,,	2.27
,,	22	,, ,,	0.55
The mean position at	0	is more westerly than the mean for the year by	4.15
,,	2	,, ,,	6.24
,,	4	,, ,,	3.39
,,	6	,, ,,	0.47
The mean position at	8	is more easterly than the mean for the year by	1.19
,,	10	,, ,,	2. 7
,,	12	,, ,,	2.11

TABLE VII.—Excess of the Mean Westerly Declination in every Month, at each Even Hour of Göttingen Mean Solar Time (as deduced from the Monthly Means of the Observations at each Hour), above the Mean Westerly Declination for the Month (as found from the Mean of all the Two-hourly Observations for that Month).

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
14	— 1.20	— 1.25	— 1.44	— 2.26	—2.35	—2.41	—2.19	—2.11	— 1.54	— 2.36	— 0.56	— 1.32
16	— 0.48	— 1.33	— 2. 5	— 2.27	—3. 7	—2.37	—2.23	—0.55	— 2.54	— 2.40	— 0.57	— 0.37
18	— 1.11	— 1.37	— 2.34	— 2.36	—4.22	—3.51	—3.45	—2.42	— 2.49	— 1.31	— 0.24	— 0.36
20	— 0.23	— 0.26	— 2.27	— 3.30	—5.52	—4.50	—4.37	—3.10	— 2.18	— 0.43	— 0.24	— 0.16
22	+ 0.28	+ 1. 5	— 1.53	— 2. 9	—2.45	—1.55	—2.17	—1.40	+ 1.32	— 0.16	— 0.50	+ 0. 8
0	+ 2.51	+ 3.33	+ 4.34	+ 2.50	+4.24	+4.45	+4.29	+5.26	+ 6.50	+ 4.49	+ 3.35	+ 2.50
2	+ 3.54	+ 4.26	+ 8.15	+ 8.45	+8.13	+6.46	+7. 5	+7.48	+ 7.10	+ 6.40	+ 4.19	+ 3.39
4	+ 1.56	+ 2. 0	+ 4.39	+ 5.29	+6. 0	+5.13	+5. 8	+4. 0	+ 3. 9	+ 3.42	+ 2.14	+ 2. 5
6	+ 0. 3	— 0. 2	+ 0.36	+ 2. 0	+2.49	+2.11	+2.10	+0.10	0. 0	— 0.30	+ 0.44	— 0. 4
8	— 1. 3	— 1. 3	— 1.47	— 1.41	—0.10	—0. 6	—0. 5	—1.51	— 4.27	— 2.15	— 1.11	— 0.55
10	— 2.29	— 2.18	— 2.25	— 1.41	—1.11	—1.28	—1.18	—2.18	— 2.46	— 2. 8	— 3.16	— 2.17
12	— 1.52	— 2.40	— 3.13	— 2.29	—1.28	—1.29	—2. 8	—2.37	— 1.36	— 2.26	— 2.51	— 2.24

This table shews that the magnet has been twice every day in its mean position for the month; in the months of February, October, and December before 6^h; in September at 6^h; and in the remaining months before 8^h; and again in January, February, September, and December before 22^h; and in the remaining eight months before 0^h. This table also shews that the marked end of the magnet was from 4^h to 8^h longer to the East of the meridian than it was to the West.

By taking the means of the numbers in the preceding table (attention being paid to the signs), which correspond to the same hour, it will be found that they are identical with the numbers following Table VI.

If the numbers in March between the 9th and 25th days be omitted, the excess of the West declination for March at every even hour, above the mean westerly declination for that month, as found from the mean of all the Two-hourly Observations, will be

h	′ ″	h	′ ″
at 14.....	— 0.56	at 2.....	+ 8. 0
16.....	— 1.34	4.....	+ 1.49
18.....	— 2.13	6.....	— 0.12
20.....	— 2.52	8.....	— 1.15
22.....	— 2.18	10.....	— 2.15
0.....	+ 4.32	12.....	— 2. 1

TABLE VIII.—Mean Westerly Declination, deduced from all the Observations taken at $1^h.50^m$, $2^h.0^m$, and $2^h.10^m$ in each Month.

1846, Month.	$1^h.50^m$.	$2^h.0^m$.	$2^h.10^m$.
	° ′ ″	° ′ ″	° ′ ″
January.....	22.54.50	22.54.50	22.54.42
February.....	22.54.53	22.54.43	22.54.29
March.....	22.57.27	22.57.36	22.57.32
April.....	23. 0.33	23. 0.36	23. 0.31
May.....	22.57.38	22.57.45	22.57.45
June.....	22.58.40	22.58.34	22.58.33
July.....	22.56.37	22.56.29	22.56.21
August.....	22.57.36	22.57.21	22.57. 8
September.....	22.56.24	22.56. 5	22.56.14
October.....	22.54.49	22.54.35	22.54.27
November.....	22.52.12	22.51.57	22.51.31
December.....	22.51.31	22.51.30	22.51.19

	h m	° ′ ″
The mean of all for the year	at 1.50	is 22.56. 6
,, ,,	at 2. 0	is 22.56. 0
,, ,,	at 2.10	is 22.55.53

If the numbers between the 9th and the 25th days in March be omitted, the mean westerly declination deduced from all the remaining numbers in that month will be

h m	° ′ ″
at 1.50.....	22.59.54
at 2. 0.....	23. 0. 6
at 2.10.....	22.59.49

and the mean of all for the year

at 1.50.....	22.56.18
at 2. 0.....	22.56.13
at 2.10.....	22.56. 1

TABLE IX.—Mean Reading of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, as deduced from the 12 Observations taken on every Civil Day (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	0·039372	*S*	*S*	0·034661	0·025504	0·021348	0·020586	0·020406	0·021626	0·021848	*S*	0·021705
2	0·038531	0·038326	0·036959	0·034343	0·025613	0·020658	0·020378	*S*	0·021737	0·020930	0·022652	0·021335
3	0·038062	0·038067	0·036765	0·034436	*S*	0·020095	0·020184	0·020949	0·021795	0·021784	0·022994	0·021759
4	*S*	0·038554	0·036821	0·033701	0·024431	0·020332	0·019812	0·020812	0·021054	*S*	0·023677	0·021725
5	0·038478	0·038224	0·037458	*S*	0·023975	0·020100	*S*	0·021343	0·020506	0·021525	0·023550	0·022246
6	0·039386	0·038139	0·037609	0·032949	0·024165	0·020684	0·019409	0·022201	*S*	0·021599	0·023507	*S*
7	0·038762	0·037459	0·037343	0·031294	0·024461	*S*	0·019945	0·021055	0·020510	0·021177	0·022744	0·022734
8	0·038100	*S*	*S*	0·030925	0·024541	0·020189	0·020133	0·021259	0·020654	0·019769	*S*	0·022577
9	0·038370	0·037664	0·036911	0·030179	0·024141	0·019965	0·020501	*S*	0·020506	0·021009	0·022661	0·022302
10	0·038437	0·036923	0·037020	Good Friday	*S*	0·019652	0·020549	0·020659	0·020866	0. 020615	0·023521	0·021747
11	*S*	0·037240	0·036047	0·028594	0·024336	0·020050	0·020029	0·021280	0·020782	*S*	0·023286	0·021420
12	0·038074	0·037885	0·035509	*S*	0·022743	0·020205	*S*	0·021442	0·020814	0·021596	0·023266	0·021523
13	0·038256	0·037655	0·034720	0·028085	0·022787	0·021174	0·019932	0·020734	*S*	0·022071	0·023320	*S*
14	0·038389	0·038062	0·034019	0·027831	0·023305	*S*	0·019587	0·021434	0·021082	0·022027	0·023084	0·021806
15	0·039137	*S*	*S*	0·027886	0·022536	0·020426	0·019572	0·020909	0·020529	0·022431	*S*	0·021837
16	0·039317	0·037971	0·035202	0·027044	0·022514	0·019946	0·019880	*S*	0·021048	0·022003	0·023008	0·022015
17	0·038829	0·037906	0·034102	0·026852	*S*	0·020521	0·020069	0·021062	0·021226	0·022563	0·021609	0·022652
18	*S*	0·037273	0·033348	0·027391	0·023655	0·020511	0·020481	0·021445	0·021158	*S*	0·020743	0·023111
19	0·039696	0·037717	0·032587	*S*	0·023193	0·021253	*S*	0·021325	0·021298	0·023727	0·021392	0·023601
20	0·039330	0·038011	0·032381	0·026844	0·023127	0·020609	0·020211	0·021356	*S*	0·023495	0·021977	*S*
21	0·039009	0·037823	0·032555	0·027313	0·022999	*S*	0·020551	0·021427	0·021400	0·023557	0·021844	0·024632
22	0·038930	*S*	*S*	0·027614	0·022831	0·020920	0·020849	0·021888	0·019027	0·022659	*S*	0·024253
23	0·038895	0·038980	0·033362	0·027155	0·023488	0·021210	0·020322	*S*	0·020426	0·022414	0·022562	0·024207
24	0·037900	0·038700	0·032626	0·027424	*S*	0·020297	0·020670	0·021635	0·021043	0·022645	0·022927	0·023254
25	*S*	0·037818	0·034492	0·026909	0·023092	0·020147	0·020506	0·021266	0·021173	*S*	0·023176	Christ. Day
26	0·039242	0·036889	0·035928	*S*	0·023200	0·020085	*S*	0·021348	0·021387	0·022667	0·022322	0·023078
27	0·038899	0·037276	0·035294	0·026433	0·022885	0·020728	0·020204	0·021238	*S*	0·022572	0·021556	*S*
28	0·038353	0·037346	0·034745	0·026202	0·022562	*S*	0·020542	0·021327	0·021462	0·023064	0·021856	0·024674
29	0·038626		*S*	0·025896	0·022177	0·020393	0·020456	0·021255	0·021723	0·022945	*S*	0·026490
30	0·038604		0·034936	0·025477	0·022483	0·020417	0·020364	*S*	0·022041	0·022854	0·221865	
31	0·038456		0·034808		*S*		0·020654	0·021161		0·023268		

The letter *S* denotes that the day was Sunday.

From March 9 to March 25, both days inclusive, workmen were engaged with a number of iron tools boring the ground for the reception of the Ground Thermometers, at the distance of about 44 feet from the Horizontal Force Magnet. It is believed that the iron at this distance had no injurious effect on the observations made with this magnet.

It is necessary to decrease all these numbers by 0·022831 (see the Introduction), to make them comparable with those of the five preceding years. As the numbers after the end of May would generally be rendered negative by this subtraction, the whole of the numbers have been increased by 0·1 previously to the application of the above number. In this way the next table is formed, the numbers in which, as compared with those of the preceding five years are too large by 0·1.

TABLE X.—Mean Reading of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force, and reduced to the Zero of the five preceding years, increased by 0·1 by applying the Constant Numbers at the foot of Table IX. to all the Numbers in that Table.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·116541	*S*	*S*	0·111830	0·102673	0·098517	0·097755	0·097575	0·098795	0·099017	*S*	0·098874
2	0·115700	0·115495	0·114128	0·111512	0·102782	0·097827	0·097547	*S*	0·098906	0·098099	0·099821	0·098504
3	0·115231	0·115236	0·113934	0·111605	*S*	0·097264	0·097353	0·098118	0·098964	0·098953	0·100163	0·098928
4	*S*	0·115723	0·113990	0·110870	0·101600	0·097501	0·096981	0·097981	0·098223	*S*	0·100846	0·098894
5	0·115647	0·115393	0·114627	*S*	0·101144	0·097269	*S*	0·098512	0·097675	0·098694	0·100719	0·099415
6	0·116555	0·115308	0·114778	0·110118	0·101334	0·097853	0·096578	0·099370	*S*	0·098768	0·100676	*S*
7	0·115931	0·114628	0·114512	0·108463	0·101630	*S*	0·097114	0·098224	0·097679	0·098346	0·099913	0·099903
8	0·115269	*S*	*S*	0·108094	0·101710	0·097358	0·097302	0·098428	0·097823	0·096938	*S*	0·099746

TABLE X.—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d 9	0·115539	0·114833	0·114080	0·107348	0·101310	0·097134	0·097670	*S*	0·097675	0·098178	0·099830	0·099471
10	0·115606	0·114092	0·114189	Good Friday	*S*	0·096821	0·097718	0·097828	0·098035	0·097784	0·100690	0·098916
11	*S*	0·114409	0·113216	0·105763	0·101505	0·097219	0·097198	0·098449	0·097951	*S*	0·100455	0·098589
12	0·115243	0·115054	0·112678	*S*	0·099912	0·097374	*S*	0·098611	0·097983	0·098765	0·100435	0·098692
13	0·115425	0·114824	0·111889	0·105254	0·099956	0·098343	0·097101	0·097903	*S*	0·099240	0·100489	*S*
14	0·115558	0·115231	0·111188	0·105000	0·100474	*S*	0·096756	0·098603	0·098251	0·099196	0·100253	0·098975
15	0·116306	*S*	*S*	0·105055	0·099705	0·097595	0·096741	0·098078	0·097698	0·099600	*S*	0·099006
16	0·116486	0·115140	0·112371	0·104213	0·099683	0·097115	0·097049	*S*	0·098217	0·099172	0·100177	0·099184
17	0·115998	0·115075	0·111271	0·104021	*S*	0·097690	0·097238	0·098231	0·098395	0·099732	0·098778	0·099821
18	*S*	0·114442	0·110517	0·104560	0·100824	0·097680	0·097650	0·098614	0·098327	*S*	0·097912	0·100280
19	0·116865	0·114886	0·109756	*S*	0·100362	0·098422	*S*	0·098494	0·098467	0·100896	0·098561	0·100770
20	0·116499	0·115180	0·109550	0·104013	0·100296	0·097778	0·097380	0·098525	*S*	0·100664	0·099146	*S*
21	0·116178	0·114992	0·109724	0·104482	0·100168	*S*	0·097720	0·098596	0·098569	0·100726	0·099013	0·101801
22	0·116099	*S*	*S*	0·104783	0·100000	0·098089	0·098018	0·099057	0·096196	0·099828	*S*	0·101422
23	0·116064	0·116149	0·110531	0·104324	0·100657	0·098379	0·097491	*S*	0·097595	0·099583	0·099731	0·101376
24	0·115069	0·115869	0·109795	0·104593	*S*	0·097466	0·097839	0·098804	0·098212	0·099814	0·100096	0·100423
25	*S*	0·114987	0·111661	0·104078	0·100261	0·097316	0·097675	0·098435	0·098342	*S*	0·100345	Christ. Day
26	0·116411	0·114058	0·113097	*S*	0·100369	0·097254	*S*	0·098517	0·098556	0·099836	0·099491	0·100247
27	0·116058	0·114445	0·112463	0·103602	0·100054	0·097897	0·097373	0·098407	*S*	0·099741	0·098725	*S*
28	0·115522	0·114515	0·111914	0·103371	0·099731	*S*	0·097711	0·098496	0·098631	0·100233	0·099025	0·101843
29	0·115795		*S*	0·103065	0·099346	0·097562	0·097625	0·098424	0·098892	0·100114	*S*	0·103659
30	0·115773		0·112105	0·102646	0·099652	0·097586	0·097533	*S*	0·099210	0·100023	0·099034	
31	0·115625		0·111977		*S*		0·097823	0·098330		0·100437		

The letter *S* denotes that the day was Sunday.

There is one instance in this table in which the difference between the numbers on two consecutive days is greater than 0·002, viz., between September 21 and 22; there are four instances in which the difference exceeds 0·0015 aud is less than 0·002, viz., between March 24 and 25; April 6 and 7; May 11 and 12; and December 28 and 29. There are seven cases in which the difference exceeds 0·001 and is less than 0·0015, viz., between March 16 and 17, 25 and 26; August 6 and 7; September 22 and 23; October 7 and 8, 8 and 9; and November 16 and 17. There are eight cases in which the difference exceeds 0·0009 and is less than 0·001; nine cases of difference between 0·0008 and 0·0009. There are forty-six cases in which the difference exceeds 0·0005 and is less than 0·0008; and all the other differences are less than 0·0005.

In January the greatest mean reading took place on the	19th day,	and the least on the	24th day;	the difference between these numbers is	0·001796
February	,,	23rd	,,	16th	,,	0·002091
March	,,	6th	,,	20th	,,	0·005228
April	,,	1st	,,	30th	,,	0·009184
May	,,	2nd	,,	29th	,,	0·003436
June	,,	1st	,,	10th	,,	0·001696
July	,,	22nd	,,	6th	,,	0·001440
August	,,	6th	,,	1st	,,	0·001795
September	,,	30th	,,	22nd	,,	0·003014
October	,,	19th	,,	8th	,,	0·003958
November	,,	4th	,,	18th	,,	0·002934
December	,,	29th	,,	2nd	,,	0·005155

These numbers shew that the mean position of the magnet was subject to less variation in the month of July and to greater in the month of April than in any other month. The mean of the monthly ranges (thus estimated from the mean of all the observations on each day) was 0·003477. The mean yearly range (similarly estimated) was 0·020669, being the difference between the mean daily reading on January 19, when the marked end of the magnet was most drawn towards the North, and the mean daily reading on September 22, when the marked end was most drawn towards the South.

In January the extreme readings for single observations were	0·040883	and	0·036218,	and they took place at	d h m s 19. 1.50. 0	and	d h m s 12. 2. 0. 0	respectively.
February	,,	0·040971	,,	0·034784	,,	17. 9. 2.45	,,	25.13.23.19	,,
March	,,	0·040280	,,	0·029959	,,	17. 9.34.13	,,	18.22.15. 0	,,
April	,,	0·035875	,,	0·022864	,,	6. 4. 0. 0	,,	30. 0. 0. 0	,,

						d	h	m	s	d	h	m	s	
In May the extreme readings for single observations were		0·030269	and	0·019156,	and they took place at	12.	7.	16.	0	and 12.	0.	0.	0	respectively.
						12.	7.	18.	0					
June	,,	0·023998	,,	0·016205	,,	15.	6.	0.	0	,, 16.	0.	0.	0	,,
July	,,	0·024325	,,	0·014271	,,	11.	2.	26.	31	,, 6.	0.	1.	29	,,
August	,,	0·026728	,,	0·016146	,,	29.	10.	6.	0	,, 6.	23.	37.	0	,,
September	,,	0·026148	,,	0·012675	,,	10.	12.	14.	0	,, 21.	23.	34.	0	,,
						10.	12.	16.	0					
October	,,	0·026403	,,	0·014236	,,	22.	9.	25.	0	,, 8.	1.	12.	0	,,
November	,,	0·026971	,,	0·016384	,,	9.	18.	28.	0	,, 17.	8.	42.	0	,,
						9.	18.	36.	0					
December	,,	0·029177	,,	0·019760	,,	29.	8.	0.	0	,, 2.	0.	0.	0	,,

From these numbers it appears that the marked end of the magnet was most drawn towards the South in September, at $21^d.\ 23^h.\ 34^m$, its reduced reading being 0·012675; and that it was most drawn towards the North in February, at $17^d.\ 9^h.\ 2^m.\ 45^s$, its reduced reading being 0·040971; the difference between these numbers is 0·028296, and it represents the extreme yearly range of the Horizontal Force Magnet from the observations in the year 1846. This number is unusually large.

The range of the readings of the magnet from the above numbers was, in the month of

January	0·004665
February	0·006187
March	0·010321
April	0·013011
May	0·011113
June	0·007793
July	0·010054
August	0·010582
September	0·013473
October	0·012167
November	0·010587
December	0·009417

The monthly ranges in April, September, and October are large. The mean of the extreme ranges in each month, thus estimated, is 0·000948.

TABLE XI.—Mean Reading of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force in each Month, corrected for Temperature, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean for each Month, Corrected.	1846, Month.	Mean for each Month, Corrected.
January	0·115888	July	0·097405
February	0·114998	August	0·098408
March	0·112305	September	0·098203
April	0·106106	October	0·099347
May	0·100659	November	0·099773
June	0·097627	December	0·099947

The mean of all the monthly results is 0·103389, which, being decreased by 0·1 to make it comparable with similar results of preceding years, is 0·003389 for the year 1846; that for 1845, was 0·014081; for 1844, was 0·013975; for 1843, was 0·014778; for 1842, was 0·015535; and for 1841, was 0·032932; so that

The apparent decrease of force from	1841	to 1842	was 0·017397
,,	1842	,, 1843	,, 0·000757
,,	1843	,, 1844	,, 0·000803
The apparent increase of force from	1844	,, 1845	,, 0·000106
The apparent decrease of force from	1845	,, 1846	,, 0·010692

The means for the months in the year 1846 were all smaller than the means for the corresponding months in the year 1845.

TABLE XII.—Daily Range of the Horizontal Force Magnet on every Day of the Year (except Sundays, Good Friday, and Christmas Day), as deduced from all the Observations taken on that Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·001669	*S*	*S*	0·003126	0·003477	0·003105	0·004429	0·005150	0·002910	0·004020	*S*	0·001499
2	0·001598	0·001540	0·001479	0·003424	0·003314	0·005093	0·004460	*S*	0·002833	0·001990	0·003473	0·003361
3	0·001726	0·001700	0·002076	0·002412	*S*	0·004353	0·004611	0·004393	0·003138	0·003574	0·003139	0·001654
4	*S*	0·001178	0·002902	0·002792	0·007424	0·003376	0·003896	0·003798	0·007031	*S*	0·002451	0·002207
5	0·002088	0·001318	0·001557	*S*	0·002835	0·001659	*S*	0·003942	0·009428	0·001687	0·001975	0·001594
6	0·001906	0·001798	0·001522	0·007425	0·003813	0·004467	0·007499	0·002981	*S*	0·001720	0·001585	*S*
7	0·002479	0·001045	0·001278	0·002687	0·003062	*S*	0·003805	0·010381	0·003160	0·008072	0·004395	0·003089
8	0·001213	*S*	*S*	0·002979	0·002732	0·002698	0·004953	0·006767	0·005518	0·011172	*S*	0·001446
9	0·001251	0·001957	0·001808	0·002716	0·003416	0·004654	0·004785	*S*	0·004408	0·004862	0·002502	0·002530
10	0·001680	0·003054	0·000862	Good Friday	*S*	0·004904	0·004280	0·004934	0·004427	0·005262	0·005792	0·002204
11	*S*	0·001626	0·002219	0·003771	0·003884	0·003975	0·009076	0·004832	0·009513	*S*	0·001918	0·001770
12	0·003110	0·002517	0·001926	*S*	0·001113	0·004945	*S*	0·004709	0·006662	0·004472	0·002342	0·002306
13	0·002205	0·001201	0·002989	0·005093	0·006709	0·003518	0·004935	0·005602	*S*	0·002016	0·001615	*S*
14	0·002418	0·003073	0·004282	0·003354	0·005610	*S*	0·005202	0·004015	0·003685	0·002469	0·001540	0·001566
15	0·001184	*S*	*S*	0·004930	0·004810	0·006537	0·003526	0·005917	0·005677	0·002467	*S*	0·002359
16	0·001661	0·004281	0·002638	0·007558	0·004103	0·006048	0·004591	*S*	0·002862	0·002672	0·001713	0·001537
17	0·002851	0·004436	0·008279	0·005126	*S*	0·004260	0·004086	0·004269	0·003579	0·002886	0·006570	0·002263
18	*S*	0·002250	0·004891	0·003241	0·004161	0·003509	0·004742	0·002677	0·001619	*S*	0·002420	0·001735
19	0·003065	0·002121	0·004453	*S*	0·004308	0·003239	*S*	0·004344	0·002257	0·001973	0·002308	0·001395
20	0·002369	0·001967	0·003229	0·003054	0·005244	0·002046	0·004543	0·002925	*S*	0·004702	0·002537	*S*
21	0·001502	0·001653	0·001578	0·002542	0·004447	*S*	0·003625	0·003777	0·005631	0·004038	0·002691	0·002026
22	0·002393	*S*	*S*	0·004095	0·005183	0·004895	0·004860	0·004805	0·013352	0·006861	*S*	0·002103
23	0·002061	0·001231	0·002246	0·004374	0·005858	0·003804	0·004877	*S*	0·005192	0·003721	0·001644	0·007621
24	0·003609	0·001119	0·003172	0·004135	*S*	0·005008	0·005457	0·004057	0·004676	0·004026	0·001659	0·005754
25	*S*	0·004498	0·003196	0·004487	0·004034	0·005775	0·004417	0·004954	0·003957	*S*	0·001640	Christ. Day.
26	0·000929	0·003330	0·004114	*S*	0·002456	0·003857	*S*	0·005714	0·004768	0·001702	0·007420	0·002475
27	0·001233	0·001760	0·002864	0·004214	0·003301	0·004529	0·004350	0·005124	*S*	0·002366	0·007725	*S*
28	0·002069	0·001864	0·003192	0·003881	0·002005	*S*	0·003710	0·005642	0·002554	0·002694	0·005886	0·002329
29	0·001996		*S*	0·002961	0·003929	0·004640	0·003754	0·009880	0·002407	0·002450	*S*	0·004983
30	0·001685		0·003097	0·003567	0·006470	0·004426	0·004323	*S*	0·001809	0·002890	0·001421	
31	0·002478		0·003863		*S*		0·005065	0·003072		0·002402		

The letter *S* denotes that the day was Sunday.

In January, the greatest and least daily ranges of the horizontal force magnet took place on the 24th and 26th days respectively.

February	,,	,,	,,	25th and 7th	,,
March	,,	,,	,,	17th and 10th	,,
April	,,	,,	,,	16th and 3rd	,,
May	,,	,,	,,	12th and 28th	,,
June	,,	,,	,,	15th and 5th	,,
July	,,	,,	,,	11th and 15th	,,
August	,,	,,	,,	7th and 18th	,,
September	,,	,,	,,	22nd and 18th	,,
October	,,	,,	,,	8th and 5th	,,
November	,,	,,	,,	27th and 30th	,,
December	,,	,,	,,	23rd and 19th	,,

The greatest daily range during the year took place on September 22; and those on May 12, August 7, and October 8 were large. The least daily range took place on March 10.

TABLE XIII.—Diurnal Ranges of the Horizontal Force Magnet in each Month, expressed in parts of the whole Horizontal Force, corrected for Temperature.

1846, Month.	Mean of all the Daily Ranges in each Month.	1846, Month.	Mean of all the Daily Ranges in each Month.	1846, Month.	Mean of all the Daily Ranges in each Month.
January	0·002016	May	0·004527	September	0·004733
February	0·002188	June	0·004205	October	0·003673
March	0·002540	July	0·004735	November	0·003134
April	0·003918	August	0·004949	December	0·002576

The diurnal range of the Horizontal Force Magnet was largest in August and smallest in January.

By taking the means of the above numbers in two groups, those between April and September for the Summer group, and those of the remaining months for the Winter group, we find that

The diurnal range in Summer was 0·004511
" Winter was 0·002688
" for the Year was 0·003600

TABLE XIV.—Mean Reading of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at those Hours in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·038528	0·037669	0·035149	0·029286	0·023737	0·020603	0·020366	0·021813	0·021354	0·022400	0·022725	0·022519
16	0·038608	0·037693	0·034944	0·029153	0·023407	0·020584	0·020124	0·021398	0·021486	0·022568	0·022676	0·022587
18	0·038970	0·037912	0·035095	0·029379	0·023222	0·020071	0·019985	0·021038	0·021230	0·022533	0·023206	0·022839
20	0·039040	0·037848	0·035072	0·029037	0·022427	0·018948	0·018894	0·020216	0·020448	0·022097	0·022859	0·022902
22	0·038538	0·037439	0·034222	0·027391	0·021612	0·018394	0·018063	0·018742	0·018968	0·020834	0·021824	0·022398
0	0·038341	0·037379	0·034088	0·027069	0·021883	0·019350	0·018685	0·019542	0·019552	0·020987	0·021754	0·022001
2	0·038866	0·037946	0·035116	0·028314	0·023402	0·020714	0·019997	0·021090	0·021077	0·021815	0·022275	0·022617
4	0·038741	0·038037	0·035654	0·029467	0·024521	0·021349	0·021459	0·021912	0·021754	0·022383	0·022602	0·023082
6	0·038920	0·038211	0·035587	0·029875	0·025082	0·021837	0·021797	0·022665	0·022065	0·022516	0·023059	0. 023230
8	0·038877	0·038200	0·035556	0·029577	0·024889	0·021718	0·021642	0·022412	0·021512	0·022564	0·022701	0·023176
10	0·038698	0·037987	0·035683	0·029480	0·023992	0·021014	0·021037	0·022164	0·021413	0·022652	0·022947	0·023054
12	0·038509	0·037631	0·035471	0·029220	0·023708	0·020916	0·020785	0·021872	0·021545	0·022790	0·022619	0·022825

The numbers in this table require to be decreased by 0·022831 to make them comparable with those of the five preceding years; but for the reason assigned in the remarks following Table IX. they have first been increased by 0·1 previously to the application of the above number; the numbers, therefore, in the following table are all too large by 0·1.

TABLE XV.—Mean Reading of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at those Hours in each Month, and made comparable with the numbers of preceding years increased by 0·1, by applying the Constant Numbers mentioned at the foot of Table XIV.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·115697	0·114838	0·112318	0·106455	0·100906	0·097772	0·097535	0·098982	0·098523	0·099569	0·099894	0·099688
16	0·115777	0·114862	0·112113	0·106322	0·100576	0·097753	0·097293	0·098567	0·098655	0·099737	0·099845	0·099756
18	0·116139	0·115081	0·112264	0·106548	0·100391	0·097240	0·097154	0·098207	0·098399	0·099702	0·100375	0·100008
20	0·116209	0·115017	0·112241	0·106206	0·099596	0·096117	0·096063	0·097385	0·097617	0·099266	0·100028	0·100071
22	0·115707	0·114608	0·111391	0·104560	0·098780	0·095563	0·095232	0·095911	0·096137	0·098003	0·098993	0·099567
0	0·115510	0·114548	0·111257	0·104238	0·099052	0·096519	0·095854	0·096711	0·096721	0·098156	0·098923	0·099170
2	0·116035	0·115115	0·112285	0·105483	0·100571	0·097883	0·097166	0·098259	0·098246	0·098984	0·099444	0·099786
4	0·115910	0·115206	0·112823	0·106636	0·101690	0·008518	0·098628	0·099081	0·098923	0·099552	0·099771	0·100251
6	0·116089	0·115380	0·112756	0·107044	0·102251	0·099006	0·098966	0·099834	0·099234	0·099685	0·100228	0·100399
8	0·116046	0·115369	0·112725	0·106746	0·102058	0·098887	0·098811	0·099581	0·098681	0·099733	0·099870	0·100345
10	0·115867	0·115156	0·112852	0·106649	0·101161	0·098183	0·098206	0·099333	0·098582	0·099821	0·100116	0·100223
12	0·115678	0·114800	0·112640	0·106389	0·100877	0·098085	0·097954	0·099041	0·098714	0·099959	0·099788	0·099994

In December, on the 28th day, an observation of this magnet was omitted at 0^h, and in consequence the mean for this month, as deduced from the numbers in this table, is 0·000009 less than that deduced from the daily means in Table XI.

An extreme position appears from this table to have taken place at 0^h in the first four months, and in the last two months; and at 22^h in the other months of the year. Another extreme position appears to have taken place during the evening hours.

The diurnal movement has consisted of four maxima and four minima in November; of a triple maximum and minimum in January, March, April, and September; of a double maximum and minimum in February, May, October, and December; and of a single maximum and minimum in June, July, and August.

The next table is formed by taking the mean of the numbers in the preceding table, corresponding to the same hours for each month; those from April to September, inclusive, being grouped together for summer, and those for the other six months for winter.

TABLE XVI.—Mean Reading of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, at every Even Hour of Göttingen Mean Time, for the Summer and Winter periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Mean Reading of the Horizontal Force Magnet.		
	Summer.	Winter.	The Year.
h			
14	0·099984	0·107001	0·103493
16	0·099861	0·107015	0·103438
18	0·099657	0·107262	0·103459
20	0·098831	0·107139	0·102985
22	0·097697	0·106378	0·102038
0	0·098183	0·106261	0·102222
2	0·099601	0·106942	0·103272
4	0·100579	0·107252	0·103916
6	0·101056	0·107423	0·104239
8	0·100794	0·107348	0·104071
10	0·100352	0·107339	0·103846
12	0·100177	0·107143	0·103660

The maximum force is indicated at 6^h, both in the summer and in the winter. The minimum force is indicated at 22^h in the summer, and at 0^h in the winter. In summer there was but one maximum and one minimum; in winter there was a double maximum and minimum: the times were,

In Summer.	In Winter.
The maximum at 6^h	The maximum at 6^h
The minimum at 22	A minimum at 14
	A maximum at 18
	The minimum at 0

The last column shews the mean at each hour for the year, and it indicates a double maximum and minimum: the times are,

The maximum for the Year at 6^h
A minimum at 16
A maximum at 18
The minimum at 22

The amount of the diurnal change in Summer was 0·003359
,, in Winter was 0·001162

So that the change in winter was about one-third of that in summer.

The mean for the Summer period was 0·099731
The mean for the Winter period was 0·107044
And the mean for the Year was 0·103388

As these numbers are too large by 0·1 as compared with those of previous years, we find, by the application of this number, the following values:—

The mean for the Summer period was − 0·000269
The mean for the Winter period was + 0·007044
And the mean for the Year was + 0·003388

In the year 1841 the mean for the summer period was 0·032047, and in 1842 it was 0·013436; so that the force in the summer half-year of 1842 was apparently less than in the corresponding period of 1841 by 0·018611, and it was less in the same period of 1843 than in that of 1842 by 0·000009; the mean force in the corresponding period of 1844 was greater than in that of 1843 by 0·000289; in 1845 it was less than in 1844 by 0·000411; and it was less in 1846 than in 1845 by 0·013574. In the year 1841 the mean of the winter period was 0·033817, and in 1842 it was 0·017635; so that the force in the winter half-year of 1842 was less than in the winter half-year of 1841 by 0·016182; in the winter half-year of 1843 it was less than in the winter half-year of 1842 by 0·001506; in 1844 it was less than in the corresponding period of 1843 by 0·001894; in 1845 it was less than in 1844 by 0·000623; and it was less in 1846 than in 1845 by 0·007814. In 1841 the mean for the whole year was 0·032932; in 1842 it was 0·015535; in 1843 it was 0·014778; in 1844 it was 0·013975; in 1845 it was 0·014082; and in 1846 it was 0·003388; so that the decrease from 1841 to 1842 was 0·017377; from 1842 to 1843 it was 0·000757; from 1843 to 1844 it was 0·000803; from 1844 to 1845 there was an increase of 0·000107; and from 1845 to 1846 there was a decrease of 0·0010694. These deductions, however, rest upon an assumed permanency of the instrumental adjustments, and on the constancy of the magnetism of the magnet, for which it will be very difficult to answer.

Comparing the results at each hour for the same periods of different years, we find that for the summer of 1842 the result at each hour was

less than the result at the corresponding hour in 1841, the greatest difference being at 16^h, when it amounts to 0·018940, and the least at 12^h, when it amounts to 0·018532. In the summer of 1843 the results at 16^h, 18^h, 0^h, 2^h, and 4^h were larger than those at the corresponding hours in 1842, the greatest increase being 0·000282 at 2^h: at the other hours the results of 1843 were smaller than those of 1842, the greatest decrease being 0·000292 at 12^h. In the summer of 1844 the result at each hour was greater than the result of the corresponding hour in 1843, the greatest difference being at 8^h, which amounted to 0·000533, and the least at 20^h, which amounted to 0·000022. In the summer of 1845 the result at each hour was less than the result at the corresponding hour of 1844, the greatest differences being at 6^h and 8^h, and amounting, at both those times, to 0·000491, and the least at 4^h, and amounting to 0·000163. In the summer of 1846 the result at each hour was less than the result at the corresponding hour in 1845, the greatest difference amounting to 0·014146 at 6^h, and the least difference amounting to 0·013476 at 8^h.

In the winter of 1842 the result at every hour was less than the result at the same hour of 1841, the greatest difference being 0·016606 at 18^h, and the least difference being 0·015872 at 6^h. In the winter of 1843 the result was at every hour less than the result of 1842 at the same hour; the greatest and least differences being 0·001783 and 0·001221 at 20^h and at 2^h respectively. In the winter of 1844 the result was at every hour less than the results for 1843 at the same hour, the greatest and least differences being 0·002123 and 0·001587 at 14^h and at 6^h respectively. In the winter of 1845 the result was at every hour greater than the result for 1844 at the same hour, but less than the result for 1843 at the same hour; this was the first instance of the results for winter being larger than those for the same period of preceding years; the greatest difference was 0·000872 at 20^h, and the least difference was 0·000310 at 8^h. In the winter of 1846 the result at every hour was less than the result at the same hour in 1845, the greatest difference being at 2^h, which amounts to 0·008107, and the least difference being at 14^h, which amounts to 0·007620.

Comparing the results for the whole year in the same way, it will be found that in the years 1842, 1843, 1844, and 1846, every result was less than the result at the same hour in the preceding year. The greatest decrease from 1841 to 1842 was 0·017754 at 18^h; from 1842 to 1843 was 0·000996 at 20^h; from 1843 to 1844 was 0·001017 at 20^h: and from 1845 to 1846 was 0·010921 at 2^h. The least decrease from 1841 to 1842 was 0·017130 at 2^h; from 1842 to 1843 was 0·000469, also at 2^h; from 1843 to 1844 was 0·000558 at 8^h; and from 1845 to 1846 was 0·010455 at 6^h. In 1845 the results at 6^h and 8^h were smaller than those of the corresponding hours in 1844 by 0·000056 and 0·000091 respectively; at the other hours the results of 1845 were larger than those at 1844, the greatest increase being 0·000215 at 18^h. The results for the year 1845, therefore, differ from those of every other year.

Comparing the numbers in the last column with the mean for the year, or 0·103388, the following results are obtained, exhibiting the differences between the mean position for the year, and the mean position for the year at that hour; and thus it appears that the mean position of the marked end of the magnet

At 14^h was	0·000105	parts of the whole horizontal force	more North than the mean position for the year.
16 was	0·000050	,,	North ,,
18 was	0·000071	,,	North ,,
20 was	0·000403	,,	South ,,
22 was	0·001350	,,	South ,,
0 was	0·001166	,,	South ,,
2 was	0·000116	,,	South ,,
4 was	0·000528	,,	North ,,
6 was	0·000851	,,	North ,,
8 was	0·000683	,,	North ,,
10 was	0·000458	,,	North ,,
12 was	0·000272	,,	North ,,

TABLE XVII.—Excess of the Mean Reading of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force, corrected for Temperature, in every Month, at each Even Hour of Göttingen Mean Solar Time (deduced from all the Observations made throughout each Month at the same Hour), above the Monthly Mean deduced from the Mean of all the Observations made at all the Even Hours throughout the Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	−0·000191	−0·000160	+0·000013	+0·000349	+0·000247	+0·000145	+0·000130	+0·000574	+0·000320	+0·000222	+0·000121	−0·000259
16	−0·000111	−0·000136	−0·000192	+0·000216	−0·000083	+0·000126	−0·000112	+0·000159	+0·000452	+0·000390	+0·000072	−0·000191
18	+0·000251	+0·000830	−0·000041	+0·000442	−0·000268	−0·000387	−0·000251	−0·000201	+0·000196	+0·000355	+0·000602	+0·000061
20	+0·000321	+0·000019	−0·000064	+0·000100	−0·001063	−0·001510	−0·001342	−0·001023	−0·000586	−0·000081	+0·000255	+0·000124
22	−0·000101	−0·000390	−0·000914	−0·001546	−0·001879	−0·002064	−0·002173	−0·002497	−0·002066	−0·001344	−0·000780	−0·000380
0	−0·000378	−0·000450	−0·001048	−0·001868	−0·001607	−0·001108	−0·001551	−0·001697	−0·001482	−0·001191	−0·000850	−0·000777
2	+0·000147	+0·000117	−0·000020	−0·000623	−0·000088	+0·000256	−0·000239	−0·000149	+0·000043	−0·000363	−0·000329	−0·000161
4	+0·000022	+0·000208	+0·000518	+0·000530	+0·001031	+0·000891	+0·001223	+0·000673	+0·000720	+0·000205	−0·000002	+0·000304
6	+0·000201	+0·000382	+0·000451	+0·000938	+0·001592	+0·001379	+0·001561	+0·001426	+0·001031	+0·000338	+0·000455	+0·000452
8	+0·000158	+0·000371	+0·000420	+0·000640	+0·001399	+0·001260	+0·001406	+0·001173	+0·000478	+0·000386	+0·000097	+0·000398
10	−0·000021	+0·000158	+0·000547	+0·000543	+0·000502	+0·000556	+0·000801	+0·000925	+0·000379	+0·000474	+0·000343	+0·000276
12	−0·000210	−0·000198	+0·000335	+0·000283	+0·000218	+0·000458	+0·000549	+0·000633	+0·000511	+0·000612	+0·000015	+0·000047

The numbers at 20^h and 22^h deserve the same particular attention as in all the preceding years. At 20^h the horizontal force has very nearly its mean value, but the diminution of force between 20^h and 22^h is very considerable.

By taking the mean of all the numbers at the same hour, without regard to sign, the following results are obtained, exhibiting the average departure from the mean of the month at each hour, the months from April to September being taken for summer, and the remaining months for winter.

At ^{h}14	the mean departure from the mean for the month was,	in summer	0·000294,	in winter	0·000161
16	,,	,,	0·000191	,,	0·000182
18	,,	,,	0·000291	,,	0·000232
20	,,	,,	0·000937	,,	0·000144
22	,,	,,	0·002038	,,	0·000735
0	,,	,,	0·001552	,,	0·000782
2	,,	,,	0·000233	,,	0·000190
4	,,	,,	0·000845	,,	0·000210
6	,,	,,	0·001321	,,	0·000380
8	,,	,,	0·001059	,,	0·000305
10	,,	,,	0·000618	,,	0·000303
12	,,	,,	0·000442	,,	0·000236

TABLE XVIII.—Mean Reading of the Horizontal Force Magnet, corrected for Temperature, and expressed in parts of the whole Horizontal Force, as deduced from all the Triple Observations taken near 2^h Göttingen Mean Time on every Day in each Month.

1846, Month.	Mean Reading at		
	$1^h.52^m.30^s.$	$2^h.2^m.30^s.$	$2^h.12^m.30^s.$
January	0·038840	0·038866	0·038963
February	0·037949	0·037946	0·037985
March	0·035028	0·035116	0·035131
April	0·028236	0·028314	0·028330
May	0·023306	0·023402	0·023446
June.....	0·020643	0·020714	0·020791
July	0·020094	0·019997	0·020163
August.....	0·021070	0·021090	0·021185
September	0·021033	0·021077	0·021318
October	0·021734	0·021815	0·021866
November	0·022223	0·022275	0·022272
December.....	0·022596	0·022617	0·022576

The mean of all the observations in 1846	taken at	^{h}1. ^{m}52. ^{s}30	is	0·026063
,,	,,	2. 2. 30	is	0·026102
,,	,,	2. 12. 30	is	0·026169

These numbers require diminishing by 0·022831 to render them comparable with those deduced from other years.

Throughout the whole of this discussion for the Horizontal Force Magnet, with the exception of the above table, the even hour of Göttingen mean time has been used; the true time of observation is in every case $2^m.\ 30^s$ after the hour.

TABLE XIX.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, as deduced from the 12 Observations taken on every Civil Day of the Year 1846 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	0·033279	*S*	*S*	0·033654	0·033368	0·033675	0·032586	0·032766	0·031515	0·030547	*S*	0·027097
2	0·032982	0·033292	0·033456	0·033713	0·033458	0·033239	0·032886	*S*	0·031809	0·030473	0·029368	0·026990
3	0·032854	0·033236	0·033693	0·033401	*S*	0·033716	0·033081	0·032338	0·031745	0·030163	0·029718	0·027107
4	*S*	0·033450	0·033642	0·033318	0·033630	0·033700	0·033547	0·032213	0·031566	*S*	0·029704	0·026741
5	0·032989	0·033424	0·033446	*S*	0·033649	0·033767	*S*	0·032286	0·032197	0·030450	0·029686	0·026848
6	0·033411	0·033199	0·033440	0·033516	0·033415	0·034023	0·032474	0·032543	*S*	0·030411	0·029106	*S*
7	0·033708	0·033317	0·033535	0·033398	0·033568	*S*	0·032332	0·032324	0·032058	0·030252	0·029061	0·026354
8	0·033648	*S*	*S*	0·033599	0·033552	0·033781	0·032368	0·032270	0·032194	0·030373	*S*	0·026570
9	0·033520	0·032912	0·033408	0·033246	0·033921	0·033447	0·032522	*S*	0·032018	0·030331	0·028953	0·026765
10	0·033189	0·032905	0·033430	Good Friday	*S*	0·033322	0·032531	0·032076	0·032002	0·030701	0·029223	0·026900
11	*S*	0·032766	0·033474	0·033036	0·033414	0·033536	0·032487	0·032146	0·032053	*S*	0·029113	0·026036
12	0·033089	0·032892	0·033129	*S*	0·033234	0·033654	*S*	0·032103	0·031810	0·029955	0·029050	0·025837
13	0·033476	0·033079	0·033324	0·033552	0·033442	0·033694	0·033188	0·031874	*S*	0·030100	0·029019	*S*
14	0·033300	0·032925	0·033482	0·033580	0·033412	*S*	0·033127	0·031782	0·031438	0·029790	0·029027	0·025332
15	0·033526	*S*	*S*	0·033509	0·033161	0·033749	0·032995	0·032190	0·031406	0·029892	*S*	0·025494
16	0·033585	0·033199	0·033260	0·033676	0·033314	0·033630	0·032647	*S*	0·031508	0·030186	0·028888	0·025514
17	0·033561	0·033357	0·032994	0·033372	*S*	0·033702	0·032610	0·031779	0·031647	0·030200	0·029529	0·026019
18	*S*	0·033213	0·032798	0·033258	0·032817	0·033613	0·032457	0·031873	0·031206	*S*	0·029510	0·025713
19	0·033545	0·033307	0·033247	*S*	0·033236	0·033437	*S*	0·031742	0·031208	0·030006	0·029343	0·026304
20	0·033562	0·033207	0·032972	0·033185	0·033355	0·033687	0·032557	0·031719	*S*	0·029907	0·029287	*S*
21	0·033619	0·033564	0·033031	0·033284	0·033420	*S*	0·032447	0·031770	0·031295	0·029938	0·029097	0·026665
22	0·033870	*S*	*S*	0·033401	0·033538	0·033401	0·032872	0·031773	0·031547	0·029864	*S*	0·026246
23	0·033557	0·033605	0·033119	0·033413	0·033431	0·032696	0·032947	*S*	0·031598	0·029567	0·028640	0·026363
24	0·033637	0·033469	0·033044	0·033314	*S*	0·032611	0·032472	0·031736	0·031560	0·029696	0·029336	0·026508
25	*S*	0·033445	0·033363	0·033378	0·033529	0·033067	0·032334	0·031568	0·031295	*S*	0·029314	Christ. Day
26	0·033543	0·033539	0·033502	*S*	0·033386	0·032422	*S*	0·031605	0·031052	0·029307	0·029124	0·025846
27	0·033588	0·033534	0·033579	0·032829	0·033324	0·032711	0·032457	0·031840	*S*	0·029306	0·028681	*S*
28	0·033570	0·033938	0·033392	0·033435	0·033405	*S*	0·032710	0·032062	0·030975	0·029380	0·028861	0·025872
29	0·033372		*S*	0·033282	0·033393	0·032935	0·033010	0·031864	0·031102	0·029370	*S*	0·025987
30	0·033417		0·033388	0·033315	0·033518	0·032537	0·033069	*S*	0·031114	0·029713	0·027774	0·025760
31	0·033695		0·033438		*S*		0·032820	0·031816		0·029311		0·025352

The letter *S* denotes that the day was Sunday.

Between March 9 and March 25, both days inclusive, workmen were engaged with a number of iron tools boring the ground for the reception of the Ground Thermometers, at the distance of about forty-one feet from the Vertical Force Magnet. It is believed that the iron had no injurious effect upon the observations made with this magnet.

The numbers between January 1 and September 30 require the additive correction 0·001160 to make them comparable with the series beginning 1845, January 1, as exhibited in Table XIX., page 14, of the volume for 1845. The numbers between October 1 and October 31 require to be increased by 0·000663 to reduce them to the series January 1 and September 30, or require to be increased by 0·001823 to make them comparable with the series beginning 1845, January 1. The numbers in the month of November require to be increased by 0·000218 to reduce them to the series in October, or require to be increased by 0·002041 to make them comparable with the series beginning 1845, January 1. The numbers in the month of December require to be increased by 0·001127 to reduce them to the series in November, or to be increased by 0·003168 to make them comparable with the series beginning 1845, January 1. (See the Introduction.) By the application of these numbers the following table is formed, the numbers of which are comparable with those of the series beginning 1845, January 1.

TABLE XX.—Table formed from the preceding (Table XIX) by applying the Corrections mentioned at the foot of the latter to reduce the Series of Numbers to the same Zero as that commencing 1845, January 1.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	0·034439	*S*	*S*	0·034814	0·034528	0·034835	0·033746	0·033926	0·032675	0·032370	*S*	0·030265
2	0·034142	0·034452	0·034616	0·034873	0·034618	0·034399	0·034046	*S*	0·032969	0·032296	0·031409	0·030158
3	0·034014	0·034396	0·034853	0·034561	*S*	0·034876	0·034241	0·033498	0·032905	0·031986	0·031759	0·030275
4	*S*	0·034610	0·034802	0·034478	0·034790	0·034860	0·034707	0·033373	0·032726	*S*	0·031745	0·029909
5	0·034149	0·034584	0·034606	*S*	0·034809	0·034927	*S*	0·033446	0·033357	0·032273	0·031727	0·030016

TABLE XX.—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
6	0·034571	0·034359	0·034600	0·034676	0·034575	0·035183	0·033634	0·033703	*S*	0·032234	0·031147	*S*
7	0·034868	0·034477	0·034695	0·034558	0·034728	*S*	0·033492	0·033484	0·033218	0·032075	0·031102	0·029522
8	0·034808	*S*	*S*	0·034759	0·034712	0·034941	0·033528	0·033430	0·033354	0·032196	*S*	0·029738
9	0·034680	0·034072	0·034568	0·034406	0·035081	0·034607	0·033682	*S*	0·033178	0·032154	0·030994	0·029933
10	0·034349	0·034065	0·034590	Good Friday	*S*	0·034482	0·033691	0·033236	0·033162	0·032524	0·031264	0·030068
11	*S*	0·033926	0·034634	0·034196	0·034574	0·034696	0·033647	0·033306	0·033213	*S*	0·031154	0·029204
12	0·034249	0·034052	0·034289	*S*	0·034394	0·034814	*S*	0·033263	0·032970	0·031778	0·031091	0·029005
13	0·034636	0·034239	0·034484	0·034712	0·034602	0·034854	0·034348	0·033034	*S*	0·031923	0·031060	*S*
14	0·034460	0·034085	0·034642	0·034740	0·034572	*S*	0·034287	0·032942	0·032598	0·031613	0·031068	0·028500
15	0·034686	*S*	*S*	0·034669	0·034321	0·034909	0·034155	0·033350	0·032566	0·031715	*S*	0·028662
16	0·034745	0·034359	0·034420	0·034836	0·034474	0·034790	0·033807	*S*	0·032668	0·032009	0·030929	0·028682
17	0·034721	0·034517	0·034154	0·034532	*S*	0·034862	0·033770	0·032939	0·032807	0·032023	0·031570	0·029187
18	*S*	0·034373	0·033958	0·034418	0·033977	0·034773	0·033617	0·033033	0·032366	*S*	0·031551	0·028881
19	0·034705	0·034467	0·034407	*S*	0·034396	0·034597	*S*	0·032902	0·032368	0·031829	0·031384	0·029472
20	0·034722	0·034367	0·034132	0·034345	0·034515	0·034847	0·033717	0·032879	*S*	0·031730	0·031328	*S*
21	0·034779	0·034724	0·034191	0·034444	0·034580	*S*	0·033607	0·032930	0·032455	0·031761	0·031138	0·029833
22	0·035030	*S*	*S*	0·034561	0·034698	0·034561	0·034032	0·032933	0·032707	0·031687	*S*	0·029414
23	0·034717	0·034765	0·034279	0·034573	0·034591	0·033856	0·034107	*S*	0·032758	0·031390	0·030681	0·029531
24	0·034797	0·034629	0·034204	0·034474	*S*	0·033771	0·033632	0·032896	0·032720	0·031519	0·031377	0·029676
25	*S*	0·034605	0·034523	0·034538	0·034689	0·034227	0·033494	0·032728	0·032455	*S*	0·031355	Christ. Day
26	0·034703	0·034699	0·034662	*S*	0·034546	0·033582	*S*	0·032765	0·032212	0·031130	0·031165	0·029014
27	0·034748	0·034694	0·034739	0·033989	0·034486	0·033871	0·033617	0·033000	*S*	0·031129	0·030722	*S*
28	0·034730	0·035098	0·034552	0·034595	0·034565	*S*	0·033870	0·033222	0·032135	0·031203	0·030902	0·029040
29	0·034532		*S*	0·034442	0·034553	0·034095	0·034170	0·033024	0·032262	0·031193	*S*	0·029155
30	0·034577		0·034548	0·034475	0·034678	0·033697	0·034229	*S*	0·032274	0·031536	0·029815	0·028928
31	0·034855		0·034598		*S*		0·033980	0·032976		0·031134		0·028520

The letter *S* denotes that the day was Sunday.

There are two instances in this table in which the difference between the numbers on two consecutive days amounts to more than 0·0007 and less than 0·0009, viz., between June 22 and 23, and December 10 and 11. There are six cases in which the difference exceeds 0·0006 and is less than 0·0007, viz., between April 27 and 28; June 25 and 26; September 4 and 5; November 16 and 17, and 23 and 24. There are three cases in which the difference exceeds 0·0005 and is less than 0·0006, viz., between November 5 and 6; December 16 and 17, and 18 and 19. There are eighteen cases in which the difference exceeds 0·0004 and is less than 0·0005. There are twenty-one cases of the difference exceeding 0·0003 and less than 0·0004; all the other differences are less than 0·0003.

In January the greatest mean reading took place on the	22nd	day, and the least on the	3rd	day; the difference between these numbers is		0·001016
February	,,	28th	,,	11th	,,	0·001172
March	,,	3rd	,,	18th	,,	0·000895
April	,,	2nd	,,	27th	,,	0·000884
May	,,	9th	,,	18th	,,	0·001104
June	,,	6th	,,	26th	,,	0·001601
July	,,	4th	,,	7th	,,	0·001215
August	,,	1st	,,	25th	,,	0·001198
September	,,	5th	,,	28th	,,	0·001222
October	,,	10th	,,	27th	,,	0·001395
November	,,	3rd	,,	30th	,,	0·001944
December	,,	3rd	,,	14th	,,	0·001775

These numbers shew that the mean position of the magnet was subject to less variation in the months of March and April, and to greater in the months of November and December than in any other month. The mean of the monthly ranges (thus estimated from the mean of all the observations on each day) was 0·001285. The mean yearly range (similarly estimated) was 0·006683, being the difference between the mean daily reading on June 6, on which day the marked end of the magnet was most drawn downwards, and the mean daily reading on December 14, when it was the least drawn downwards during the year.

					d h m s		d h m s
In January the extreme readings for single observations were	0·034297	and	0·032297,	and they took place at	14. 6. 0. 0	and	4.16. 0. 0
February	0·034686	„	0·032039	„	28. 4.50. 0	„	8.16. 0. 0
March	0·034861	„	0·031630	„	14. 6. 0. 0	„	16.12.45.15
April	0·035083	„	0·031904	„	16. 6. 0. 0	„	26.18. 0. 0
May	0·035366	„	0·031992	„	12. 6.13. 0	„	12.12.14 .0
June	0·035236	„	0·031528	„	15. 6. 0. 0	„	25.18. 0. 0
July	0·035687	„	0·031350	„	4. 8. 0. 0	„	24.16. 0. 0
August	0·034289	„	0·030260	„	1. 4. 0. 0	„	28.16. 0. 0
September	0·035096	„	0·028635	„	22. 2.53. 0	„	3.20. 0. 0
October	0·031971	„	0·027846	„	8. 6. 0. 0	„	7.18. 7. 0
November	0·032994	„	0·027065	„	17. 8. 0. 0	„	29.14. 0. 0
December	0·027506	„	0·024883	„	4. 8. 0. 0	„	13.22. 0. 0

The numbers in October, November, and December require to be increased by 0·000663, 0·000881, and 0·002008 respectively, to reduce them to the series January to September: thus increased, the numbers in October become 0·032634 and 0·028509; those in November become 0·033875 and 0·027946; and those in December become 0·029514 and 0·026891.

From these numbers it appears that the marked end of the magnet was most drawn downwards in July, at $4^d.\ 8^h$, its reduced reading being 0·035687; and that it was the least drawn downwards in December, at $13^d.\ 12^h$, its reduced reading being 0·026891; the difference between these numbers is 0·008796, and it represents the extreme yearly range of the Vertical Force Magnet from the observations in the year 1846.

The range of the magnet in January	was.....	0·002000
February	„	0·002647
March	„	0·003231
April	„	0·003179
May	„	0·003374
June	„	0·003708
July	„	0·004337
August	„	0·004029
September	„	0·006461
October	„	0·004125
November	„	0·005929
December	„	0·002623

The ranges for January, February, and December were small, and those for September and November were large. The mean of the extreme ranges in each month, estimated as above, was 0·003804 for the year 1846.

TABLE XXI.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, and expressed in parts of the whole Vertical Force, deduced from the Mean of all the Two-hourly Observations in each Month, and reduced to the Zero of 1845, January 1.

1846, Month.	Mean for each Month.	1846, Month.	Mean for each Month.
January	0·034608	July	0·033883
February	0·034442	August.....	0·033162
March	0·034490	September.....	0·032734
April	0·034547	October	0·031793
May.....	0·034579	November	0·031177
June.....	0·034535	December.....	0·029407

The mean of all the monthly values is 0·033280; that for the year 1845 was 0·0040885; the apparent decrease of force, from the year 1845 to the year 1846, is therefore 0·007605.

TABLE XXII.—Daily Range of the Vertical Force Magnet on every Day of the Year (except Sundays, Good Friday, and Christmas Day), as deduced from all the Observations taken on that Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	0·000631	*S*	*S*	0·001430	0·001078	0·001992	0·001541	0·002435	0·000865	0·001967	*S*	0·000289
2	0·000956	0·001094	0·001468	0·001499	0·001124	0·002875	0·002074	*S*	0·001746	0·001275	0·001643	0·000776
3	0·000687	0·001090	0·000726	0·001191	*S*	0·002547	0·001708	0·001797	0·001811	0·001813	0·001297	0·000684
4	*S*	0·000535	0·000545	0·000682	0·001980	0·002387	0·004303	0·001280	0·002656	*S*	0·001042	0·001470
5	0·001189	0·001135	0·000664	*S*	0·001950	0·001800	*S*	0·001116	0·003945	0·001048	0·000861	0·000815
6	0·000999	0·001132	0·000654	0·002308	0·001641	0·002352	0·001324	0·002233	*S*	0·001242	0·000683	*S*
7	0·000741	0·000871	0·001247	0·001666	0·001876	*S*	0·001531	0·003655	0·001741	0·001941	0·000638	0·000936
8	0·000870	*S*	*S*	0·001293	0·001698	0·001026	0·001271	0·002219	0·002587	0·004125	*S*	0·000785
9	0·000574	0·001740	0·001319	0·001325	0·001933	0·002661	0·001202	*S*	0·001744	0·001915	0·000582	0·000550
10	0·000713	0·000915	0·001185	Good Friday	*S*	0·001635	0·001079	0·001982	0·001515	0·002612	0·000916	0·000658
11	*S*	0·001119	0·001293	0·001657	0·001627	0·001670	0·002408	0·001695	0·003236	*S*	0·000818	0·000613
12	0·001085	0·000814	0·000845	*S*	0·003225	0·001894	*S*	0·001944	0·002545	0·001355	0·000486	0·001209
13	0·000932	0·000444	0·002276	0·001923	0·002492	0·001899	0·002972	0·001821	*S*	0·000723	0·000485	*S*
14	0·001757	0·000873	0·002104	0·001354	0·001893	*S*	0·001761	0·002629	0·001882	0·001026	0·000632	0·001005
15	0·000901	*S*	*S*	0·000942	0·001928	0·002978	0·002227	0·003047	0·001425	0·000633	*S*	0·000610
16	0·000754	0·001221	0·001661	0·002448	0·001377	0·002237	0·000788	*S*	0·001533	0·001287	0·000884	0·000840
17	0·000763	0·000541	0·002233	0·002325	*S*	0·002160	0·001525	0·001996	0·001767	0·001003	0·004381	0·000990
18	*S*	0·000921	0·001633	0·000762	0·001488	0·002299	0·001613	0·001435	0·000991	*S*	0·000853	0·000662
19	0·001165	0·000352	0·001752	*S*	0·001456	0·002678	*S*	0·001394	0·001903	0·001581	0·001044	0·000811
20	0·000465	0·000461	0·001538	0·001545	0·001463	0·001742	0·001546	0·000920	*S*	0·001561	0·000829	*S*
21	0·000951	0·001328	0·000969	0·001369	0·001649	*S*	0·001633	0·000874	0·001689	0·001227	0·000587	0·000781
22	0·000532	*S*	*S*	0·001854	0·001978	0·002403	0·001665	0·001211	0·006461	0·001911	*S*	0·000742
23	0·000958	0·000791	0·001889	0·001108	0·001548	0·000458	0·002060	*S*	0·003101	0·001277	0·001407	0·001305
24	0·001075	0·001108	0·001943	0·001364	*S*	0·001234	0·000579	0·001321	0·001293	0·001567	0·000729	0·001316
25	*S*	0·000862	0·000957	0·001749	0·001104	0·001614	0·001895	0·001755	0·000974	*S*	0·000729	Christ. Day.
26	0·000856	0·001213	0·001307	*S*	0·000839	0·001634	*S*	0·001187	0·001226	0·001084	0·002953	0·001713
27	0·000780	0·001055	0·001584	0·001962	0·001814	0·001256	0·001802	0·001845	*S*	0·000673	0·001105	*S*
28	0·001148	0·001252	0·001120	0·001418	0·001149	*S*	0·002167	0·001859	0·000989	0·000391	0·000979	0·001719
29	0·001322		*S*	0·001985	0·001153	0·001844	0·002571	0·002744	0·001405	0·000709	*S*	0·000583
30	0·000772		0·001614	0·001030	0·002573	0·001688	0·002423	*S*	0·001275	0·000984	0·001506	0·000593
31	0·000602		0·001788		*S*		0·002465	0·001736		0·000521		0·000783

The letter *S* denotes that the day was Sunday.

In January, the greatest and least daily ranges of the vertical force magnet took place on the 14th and 20th days respectively.

February	,,	,,	,,	9th and 19th	,,
March	,,	,,	,,	13th and 4th	,,
April	,,	,,	,,	16th and 4th	,,
May	,,	,,	,,	12th and 26th	,,
June	,,	,,	,,	15th and 23rd	,,
July	,,	,,	,,	4th and 24th	,,
August	,,	,,	,,	7th and 21st	,,
September	,,	,,	,,	22nd and 1st	,,
October	,,	,,	,,	8th and 28th	,,
November	,,	,,	,,	17th and 13th	,,
December	,,	,,	,,	28th and 1st	,,

The greatest daily range in the year took place on September 22, and the least on December 1.

TABLE XXIII.—Diurnal Range of the Vertical Force Magnet in each Month, expressed in parts of the whole Vertical Force.

1846, Month.	Mean of all the Daily Ranges in each Month.	1846, Month.	Mean of all the Daily Ranges in each Month.	1846, Month.	Mean of all the Daily Ranges in each Month.
January	0·000895	May	0·001694	September	0·002012
February	0·000953	June	0·001960	October	0·001387
March	0·001397	July	0·001857	November	0·001123
April	0·001528	August	0·001851	December	0·000894

The diurnal range of the magnet appears to be smallest in January, February, and December, and largest in September.

By taking the means of the above numbers in two groups, those between April and September for summer, and those in the remaining months for the winter, we find that

The diurnal range in Summer was 0·001817 of the whole vertical force.
„ in Winter 0·001108 „
„ for the Year 0·001132 „

TABLE XXIV.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·033344	0·033074	0·033084	0·033050	0·033032	0·032875	0·032259	0·031689	0·031239	0·029615	0·028920	0·026140
16	0·033297	0·033036	0·033018	0·032869	0·032837	0·032667	0·032115	0·031389	0·031107	0·029539	0·028915	0·026053
18	0·033218	0·032980	0·032919	0·032812	0·032818	0·032524	0·032025	0·031458	0·031037	0·029509	0·028930	0·026068
20	0·033173	0·032984	0·032912	0·032921	0·032862	0·032566	0·032125	0·031548	0·031038	0·029636	0·028980	0·026056
22	0·033222	0·033092	0·032918	0·033071	0·032974	0·033007	0·032277	0·031494	0·030956	0·029725	0·028844	0·026115
0	0·033398	0·033210	0·033119	0·033309	0·033247	0·033362	0·032533	0·031705	0·031266	0·029849	0·028907	0·026127
2	0·033683	0·033469	0·033586	0·033626	0·033681	0·033935	0·032968	0·032241	0·032022	0·030292	0·029221	0·026322
4	0·033775	0·033705	0·033898	0·034020	0·034108	0·034192	0·033471	0·032737	0·032457	0·030664	0·029484	0·026442
6	0·033730	0·033632	0·033977	0·034133	0·034283	0·034298	0·033743	0·032919	0·032492	0·030562	0·029454	0·026439
8	0·033574	0·033506	0·033718	0·033882	0·034152	0·034159	0·033490	0·032729	0·032169	0·030360	0·029555	0·026434
10	0·033513	0·033419	0·033504	0·033590	0·033708	0·033651	0·033067	0·032291	0·031766	0·030037	0·029322	0·026382
12	0·033447	0·033278	0·033309	0·033356	0·033325	0·033265	0·032610	0·031826	0·031334	0·029851	0·029105	0·026293

The numbers in this table, from January to September, both inclusive, require to be increased by 0·001160; those in October require to be increased by 0·001823; those in November by 0·002041; and those in December by 0·003168, to reduce them to the same zero as the series beginning 1845, January 1. (See page 105, note to Table XIX.) By application of these numbers the following table is formed:—

TABLE XXV.—Table formed from the preceding (Table XXIV.), by applying the Corrections mentioned at the foot of the latter.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·034504	0·034234	0·034244	0·034210	0·034192	0·034035	0·033419	0·032849	0·032399	0·031438	0·030961	0·029308
16	0·034457	0·034196	0·034178	0·034029	0·033997	0·033827	0·033275	0·032549	0·032267	0·031362	0·030956	0·029221
18	0·034378	0·034140	0·034079	0·033972	0 033978	0·033684	0·033185	0·032618	0·032197	0·031332	0·030971	0·029236
20	0·034333	0·034144	0·034072	0·034081	0·034022	0·033726	0·033285	0·032708	0·032198	0·031459	0·031021	0·029224
22	0·034382	0·034252	0·034078	0·034231	0·034134	0·034167	0·033437	0·032654	0·032116	0·031548	0·030885	0·029283
0	0·034558	0·034370	0·034279	0·034469	0·034407	0·034522	0·033693	0·032865	0·032426	0·031672	0·030948	0·029295
2	0·034843	0·034629	0·034746	0·034786	0·034841	0·035095	0·034128	0·033401	0·033182	0·032115	0·031262	0·029490
4	0·034935	0·034865	0·035058	0·035180	0·035268	0·035352	0·034631	0·033897	0·033617	0·032487	0·031525	0·029610
6	0·034890	0·034792	0·035137	0·035293	0·035443	0·035458	0·034903	0·034079	0·033652	0·032385	0·031495	0·029607
8	0·034734	0·034666	0·034878	0·035042	0·035312	0·035319	0·034650	0·033889	0·033329	0·032183	0·031596	0·029602
10	0·034673	0·034579	0·034664	0·034750	0·034868	0·034811	0·034227	0·033451	0·032926	0·031860	0·031363	0·029550
12	0·034607	0·034438	0·034469	0·034516	0·034485	0·034425	0·033770	0·032986	0·032494	0·031674	0·031146	0·029461

From the numbers in this table it appears that the diurnal movement has consisted of a single maximum and a single minimum in the months from January to July, both inclusive, and in October; of a double maximum in all the remaining months excepting November, in which month a triple maximum and minimum has taken place.

The next table is formed by taking the means of the numbers in Table XXV., corresponding to the same hours for the several months; those from April to September are grouped together for summer, and those for the other six months for winter.

TABLE XXVI.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, and expressed in parts of the whole Vertical Force, at every Even Hour of Göttingen Mean Time, for the Summer and Winter periods, and for the Year.

Hour of Observation.	Mean Position of the Magnet for		
	Summer.	Winter.	The Year.
h			
14	0·033517	0·032448	0·032983
16	0·033324	0·032395	0·032860
18	0·033272	0·032356	0·032814
20	0·033337	0·032376	0·032857
22	0·033457	0·032405	0·032931
0	0·033730	0·032520	0·033125
2	0·034239	0·032848	0·033544
4	0·034658	0·033080	0·033869
6	0·034805	0·033051	0·033928
8	0·034590	0·032943	0·033767
10	0·034172	0·032782	0·033477
12	0·033779	0·032632	0·033206

The minimum force is indicated at 18^h both in the summer and in the winter periods. The maximum force is indicated at 6^h in summer and at 4^h in winter. The last column shews the mean at each hour for the year, and it indicates a single maximum and minimum only, occurring at the same times as those in the summer period. In the summer and in the winter period a single maximum and minimum is indicated.

The amount of the daily changes in Summer was 0·001533
,, Winter 0·000724

The change in the winter period is less than one half of that in the summer period.

The mean reading for the vertical force for the Summer period was 0·033907
,, Winter period 0·032653
And the mean for the Year 0·033280

Comparing the numbers in the last column of the above table with the mean for the year, or 0·033280, the following results are obtained, exhibiting the difference between the mean position for the year at every observation-hour, and that for the year from all the observations; and thus it appears that the mean position of the marked end of the magnet—

h
At 14 was 0·000297 parts of the whole vertical force *less* drawn downwards than the mean position for the year.
16 0·000420 ,, ,, ,, ,,
18 0·000466 ,, ,, ,, ,,
20 0·000423 ,, ,, ,, ,,
22 0·000349 ,, ,, ,, ,,
0 0·000155 ,, ,, ,, ,,
2 was 0·000264 parts of the whole vertical force *more* drawn downwards than the mean position for the year.
4 0·000589 ,, ,, ,, ,,
6 0·000648 ,, ,, ,, ,,
8 0·000487 ,, ,, ,, ,,
10 0·000197 ,, ,, ,, ,,
12 was 0·000074 parts of the whole vertical force *less* drawn downwards than the mean position for the year.

TABLE XXVII.—Excess of the Mean Reading of the Vertical Force Magnet, corrected for Temperature, and expressed in parts of the whole Vertical Force, in every Month, at each Even Hour of Göttingen Mean Solar Time, deduced from all the Observations made in each Month at the same Hour, above the Monthly Mean deduced from the Mean of all the Observations made at all Hours throughout the Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	−0·000104	−0·000208	−0·000246	−0·000337	−0·000387	−0·000500	−0·000464	−0·000313	−0·000335	−0·000355	−0·000216	−0·000099
16	−0·000151	−0·000246	−0·000312	−0·000518	−0·000582	−0·000708	−0·000608	−0·000613	−0·000467	−0·000431	−0·000221	−0·000186
18	−0·000230	−0·000302	−0·000411	−0·000575	−0·000601	−0·000851	−0·000698	−0·000544	−0·000537	−0·000461	−0·000206	−0·000171
20	−0·000275	−0·000298	−0·000418	−0·000466	−0·000557	−0·000809	−0·000598	−0·000454	−0·000536	−0·000334	−0·000156	−0·000183
22	−0·000226	−0·000190	−0·000412	−0·000316	−0·000445	−0·000368	−0·000446	−0·000508	−0·000618	−0·000245	−0·000292	−0·000124
0	−0·000050	−0·000072	−0·000211	−0·000078	−0·000172	−0·000013	−0·000190	−0·000297	−0·000308	−0·000121	−0·000229	−0·000112
2	+0·000235	+0·000187	+0·000256	+0·000239	+0·000262	+0·000560	+0·000245	+0·000239	+0·000448	+0·000322	+0·000085	+0·000083
4	+0·000327	+0·000423	+0·000568	+0·000633	+0·000689	+0·000817	+0·000748	+0·000735	+0·000883	+0·000694	+0 000348	+0·000203
6	+0·000282	+0·000350	+0·000647	+0·000746	+0·000864	+0·000923	+0·001020	+0·000917	+0·000918	+0·000592	+0·000318	+0·000200
8	+0·000126	+0·000224	+0·000388	+0·000495	+0·000733	+0·000784	+0·000767	+0·000727	+0·000595	+0·000390	+0·000419	+0·000195
10	+0·000065	+0·000137	+0·000174	+0·000203	+0·000289	+0·000276	+0·000344	+0·000289	+0·000192	+0·000067	+0·000186	+0·000143
12	−0·000001	−0·000004	−0·000021	−0·000031	−0·000094	−0·000110	−0·000113	−0·000176	−0·000240	−0·000119	−0·000031	+0·000054

This table exhibits the following particulars:—The sign of the numbers in every month at 0^h is negative, while the sign at 2^h is positive. The sign of the numbers in every month at 10^h is positive, and it is negative at 12^h in every month except December, and in this month the number is small. Thus it appears, that between 0^h and 2^h, and again between 10^h and 12^h, the magnet has been in its mean position.

In December there are six negative and six positive signs, shewing that in this month the marked end of the magnet was as long above as it was below its mean position; in all the other months there are seven negative and five positive signs, and therefore the marked end of the magnet in those months was longer above its mean position than it was below it. The turning points in this table are strongly marked, and agree in this respect with the results derived from the observations of previous years.

By taking the means of all the numbers at the same hour, without regard to sign, the following results are obtained, exhibiting the average departure from the mean for the month at each hour, the months from April to September being taken for summer, and the remaining months for winter.

At	h 14	the mean departure from the mean of the month was, in summer		0·000389,	and in winter	0·000205
	16	,,	,,	0·000583	,,	0·000258
	18	,,	,,	0·000634	,,	0·000297
	20	,,	,,	0·000570	,,	0·000277
	22	,,	,,	0·000450	,,	0·000248
	0	,,	,,	0·000176	,,	0·000133
	2	,,	,,	0·000332	,,	0·000195
	4	,,	,,	0·000751	,,	0·000427
	6	,,	,,	0·000898	,,	0·000398
	8	,,	,,	0·000684	,,	0·000290
	10	,,	,,	0·000266	,,	0·000129
	12	,,	,,	0·000127	,,	0·000038

The simple arithmetical mean of these numbers at each hour, for summer and for winter, should be identical with those following Table XXVI., in all cases in which no change of sign occurred at that hour, and should differ from them at those hours at which a change of sign has occurred. By referring to Table XXVII. it will be seen that there is only one instance of a change of sign, viz., at 12^h in December, so that the mean of the above numbers should be identical with those before referred to in every month at all hours, except at 12^h; the following are their means:—

At	h 14	the mean departure from the mean for the year was	0·000297
	16	,,	,,	0·000421
	18	,,	,,	0·000466
	20	,,	,,	0·000424
	22	,,	,,	0·000349
	0	,,	,,	0·000155
	2	,,	,,	0·000264
	4	,,	,,	0·000589
	6	,,	,,	0·000648
	8	,,	,,	0·000487
	10	,,	,,	0·000198
	12	,,	,,	0·000083

These numbers are identical with those following Table XXVI. in all cases except at 12^h, as has been stated above.

TABLE XXVIII.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, and expressed in parts of the whole Vertical Force, as deduced from all the Triple Observations taken near 2^h, Göttingen Mean Solar Time, on every Day in each Month.

Month.	Mean Reading at			Month.	Mean Reading at		
	$1^h.47^m.30^s$.	$1^h.57^m.30^s$.	$2^h.7^m.30^s$.		$1^h.47^m.30^s$.	$1^h.57^m.30^s$.	$2^h.7^m.30^s$.
January	0·033662	0·033683	0·033675	July	0·032989	0·032968	0·032958
February ...	0·033488	0·033469	0·033462	August.....	0·032242	0·032241	0·032252
March	0·033607	0·033586	0·033577	September ..	0·032033	0·032022	0·032018
April	0·033630	0·033626	0·033612	October	0·030293	0·030292	0·030284
May	0·033678	0·033681	0·033683	November ..	0·029221	0·029221	0·029216
June.....	0·033969	0·033935	0·033925	December...	0·026308	0·026322	0·026315

The numbers in this table have been deduced from the observations as taken. To render them comparable with the preceding numbers in this section, they require to be increased by the same numbers as those mentioned in the note to Table XIX.

The mean of all the readings taken at $1^h.47^m.30^s$ is 0·032093
,, 1.52.30 is 0·032087
,, 1.57.30 is 0·032081

and these results will be rendered comparable with preceding results by increasing them by 0·001456

Throughout the whole of this discussion for the vertical force magnet, with the exception of the above table, the even hour of Göttingen mean time has been used; the true time of observation is in every case $2^m.30^s$ before the hour.

Abstract of the Observations of the Magnetic Dip.

The results of all the observations made at 21^h and 3^h in every month have been collected, and their means taken; and thus the following table is formed :—

TABLE XXIX.—Mean Monthly Magnetic Dip.

1846, Month.	Mean Monthly Dip at 21^h.		Mean Monthly Dip at 3^h.	
	By Needle, Marked A 1.	Number of Observations.	By Needle, Marked A 1.	Number of Observations.
	° ′		° ′	
January	68.57·8	4	68.58·5	4
February	68.56·5	4	68.54·3	5
March	68.58·0	5	68.56·0	2
April	68.56·8	4	68.56·0	4
May	68.57·8	5	68.58·0	4
June.....	68.57·5	4	68.58·3	3
July	69. 2·3	4	68.58·5	4
August	68.59·8	5	69. 0·0	3
September	68.59·8	4	68.57·3	3
October	68.58·3	4	69. 0·7	3
November	69. 0·3	4	68.58·0	3
December	....	...	68.57·0	3

By dividing the above numbers into quarterly periods, the next table is formed.

TABLE XXX.—Mean Quarterly Magnetic Dip.

1846, Months forming the Quarterly Period.	Mean Quarterly Dip at 21h.		Mean Quarterly Dip at 3h.	
	By Needle, Marked A 1.	Number of Observations.	By Needle, Marked A 1.	Number of Observations.
	° ′		° ′	
January, February, March ...	68. 57·5	13	68. 56·1	11
April, May, June.....	68. 57·4	13	68. 57·4	11
July, August, September.....	69. 0·6	13	68. 58·6	10
October, November, December.	68. 59·3	8	68. 58·6	9

No observations of the Magnetic Dip were made in the meridian at 21h during the month of December, therefore the mean for the last period is only that for October and November.

The Mean Magnetic Dip for the year 1846, at 21h, was 68° 58′·6
" " 3h, " 68. 57·6

The Mean Magnetic Dip at 21h, for the year 1844, was 69°. 0′·4; and the mean for the year 1845 was 68°. 56′·8.

The Mean Magnetic Dip at 3h, for the year 1844, was 69°. 0′·2; and for the year 1845 it was 68°. 58′·1.

Therefore the Mean Magnetic Dip at 21h had decreased between the years 1844 and 1845 by 3′·6, and between the years 1845 and 1846 it had increased by 1′·8.

The Mean Magnetic Dip at 3h had decreased between the years 1844 and 1845 by 2′·1, and between the years 1845 and 1846 it had decreased by 0′·5.

Abstract of the Observations of Deflexion.

TABLE XXXI.—Values of Absolute Measure of Horizontal Force from Observations of Deflexion of a Magnet.

Year, Month, and Day,	Apparent Value of a.	Apparent Value of b.	Mean Value of b.	Apparent Value of a'.	Apparent Value of b'.	Adopted Value of a, assuming the Mean Value of b as applicable to all.	Log. $\frac{1}{2}a = \log. \frac{m}{X}$.	Adopted Time of Vibration of Deflecting Magnet.	Log. $m X$.	Value of X.	Value of m.
1845.											
Sep. 11	+0·2432	+0·0030		+0·1247	+0·0030	+0·2454	9·08888	4·727	0·23936	3·7604	0·4615
22	+0·2387	+0·0004		+0·1174	+0·0068	+0·2387	9·07682	4·819	0·22262	3·7403	0·4464
Oct. 13	+0·2320	+0·0010		+0·1163	+0·0047	+0·2326	9·06554	4·882	0·21134	3·7403	0·4350
Nov. 3	+0·2327	0·0000		+0·1159	+0·0057	+0·2323	9·06498	4·872	0·21312	3·7503	0·4356
Dec. 2	+0·2292	+0·0016		+0·1151	+0·0055	+0·2303	9·06126	4·778	0·23104	3·8449	0·4427
1846.											
Feb. 4	+0·2171	+0·0055	+0·0004	+0·1122	+0·0046	+0·2215	9·04434	4·953	0·19880	3·7777	0·4184
March 17	+0·2257	−0·0042		+0·1062	+0·0103	+0·2217	9·04466	5·008	0·18922	3·7349	0·4139
April 21	+0·2243	−0·0021		+0·1106	+0·0065	+0·2221	9·04556	4·970	0·19582	3·7595	0·4175
May 13	+0·2229	−0·0013		+0·1068	+0·0132	+0·2214	9·04411	4·990	0·19234	3·7508	0·4152
Oct. 30	+0·2195	−0·0017		+0·1073	+0·0077	+0·2177	9·03687	5·026	0·18610	3·7551	0·4088
Nov. 26	+0·2152	+0·0030		+0·1091	+0·0059	+0·2174	9·03623	5·023	0·18662	3·7601	0·4087
Dec. 9	+0·2205	−0·0004		+0·1093	+0·0066	+0·2198	9·04104	5·021	0·18696	3·7408	0·4112

TABLE XXXII.—Values of Absolute Measure of Horizontal Force, from Observations of Vibration of the Deflecting Magnet.

Month and Day, 1846.	Adopted Time of Vibration.	Log. mX.	Value of m interpolated from the Deflexion Observations.	Inferred Value of X.
	•			
May 25	4·999	0·19074	0·4147	3·7412
June 1	5·030	0·18540	0·4145	3·6973
8	5·046	0·18264	0·4141	3·6773
8	5·033	0·18488	0·4141	3·6963
15	4·987	0·19286	0·4139	3·7667
22	5·022	0·18678	0·4137	3·7161
July 7	5·012	0·18852	0·4131	3·7365
15	5·023	0·18662	0·4128	3·7229
31	5·021	0·18696	0·4122	3·7312
August 10	5·038	0·18410	0·4118	3·7103
25	5·020	0·18714	0·4113	3·7409
September 2	5·034	0·18472	0·4109	3·7238
4	5·038	0·18402	0·4109	3·7178
8	5·033	0·18488	0·4107	3·7270
10	5·032	0·18506	0·4106	3·7294
11	5·037	0·18420	0·4106	3·7220
October 3	5·041	0·18260	0·4098	3·7156
November 5	5·030	0·18540	0·4088	3·7488
6	5·035	0·18454	0·4088	3·7414
11	5·023	0·18662	0·4090	3·7575
19	5·000	0·19060	0·4091	3·7911
19	5·005	0·18974	0·4091	3·7836
December 3	4·997	0·19112	0·4100	3·7874
4	4·998	0·19094	0·4102	3·7839
11	5·011	0·18870	0·4112	3·7554

ROYAL OBSERVATORY, GREENWICH.

ABSTRACTS

OF THE

RESULTS

OF THE

METEOROLOGICAL OBSERVATIONS.

1846.

TABLE I.—Mean Height of the Barometer as deduced from the Twelve Observations taken on every Civil Day of the Year 1846 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	29·687	*S*	*S*	29·425	30·175	30·055	29·886	29·616	30·113	29·794	*S*	29·699
2	30·158	29·663	29·830	29·139	30·067	30·087	29·900	*S*	30·162	29·642	29·853	29·317
3	30·308	29·730	29·730	29·239	*S*	30·086	30·024	29·735	30·141	29·573	29·923	29·494
4	*S*	29·871	29·345	29·296	29·696	30·047	29·981	29·811	30·089	*S*	29·992	29·718
5	30·021	29·715	29·436	*S*	29·521	30·009	*S*	29·763	29·991	29·281	30·053	29·822
6	29·966	29·839	29·542	28·924	29·411	29·942	29·432	29·717	*S*	29·328	30·052	*S*
7	30·134	29·753	29·633	28·971	29·566	*S*	29·631	29·606	29·764	29·322	30·138	29·844
8	30·405	*S*	*S*	29·142	29·743	29·721	29·691	29·604	29·807	29·396	*S*	30·090
9	30·511	30·029	30·068	29·564	29·814	29·679	29·537	*S*	29·923	29·490	30·351	30·025
10	30·356	30·223	30·260	Good Friday	*S*	29·823	29·695	29·893	30·159	29·463	30·310	29·691
11	*S*	30·029	30·354	29·364	29·959	30·031	29·980	29·934	30·245	*S*	30·175	29·511
12	29·900	30·039	30·483	*S*	29·825	30·070	*S*	29·919	30·268	29·354	30·233	29·543
13	29·520	30·021	30·319	29·503	29·616	30·004	29·870	29·654	*S*	29·678	30·227	*S*
14	29·375	30·043	30·008	29·549	29·781	*S*	29·604	29·775	30·133	29·199	30·150	29·456
15	29·654	*S*	*S*	29·542	29·787	30·060	29·769	29·616	30·114	28·891	*S*	29·381
16	29·715	30·093	29·359	29·850	29·447	30·173	29·544	*S*	30·067	29·093	30·011	29·581
17	29·589	30·013	29·282	29·814	*S*	30·165	29·308	29·696	29·879	29·225	29·797	29·568
18	*S*	29·890	29·409	29·815	28·973	30·062	29·274	29·455	29·764	*S*	29·707	30·005
19	29·071	29·917	29·449	*S*	29·376	29·962	*S*	29·514	29·601	29·615	29·690	29·763
20	29·243	29·992	29·496	29·973	29·381	29·993	29·787	29·661	*S*	29·450	29·341	*S*
21	29·211	30·010	29·404	29·909	29·643	*S*	29·772	29·679	29·454	29·002	29·490	29·050
22	29·009	*S*	*S*	29·761	30·011	29·746	29·771	29·890	29·517	29·058	*S*	28·932
23	29·093	29·700	29·117	29·681	30·090	29·482	29·740	*S*	29·314	29·573	29·656	28·719
24	29·344	29·471	29·221	29·667	*S*	29·335	29·699	30·040	29·339	29·435	29·521	29·134
25	*S*	29·488	29·257	29·761	30·043	29·412	29·859	30·090	29·630	*S*	29·391	Christ. Day.
26	29·065	29·657	29·425	*S*	29·998	29·551	*S*	29·992	29·618	29·910	29·139	30·134
27	29·383	29·539	29·646	29·771	29·959	29·556	30·052	29·855	*S*	30·140	29·200	*S*
28	29·376	29·649	29·446	29·804	30·062	*S*	30·054	29·819	29·430	30·060	29·333	30·383
29	29·411		*S*	30·086	30·187	29·678	29·926	29·830	29·328	29·948	*S*	30·386
30	29·788		29·938	30·170	30·131	29·790	29·843	*S*	29·564	30·015	29·781	30·477
31	29·808		29·570		*S*		29·801	30·042		30·006		30·414

The letter *S* denotes that the day was Sunday.

It appears that there were thirty-four instances deduced from observations on 311 days, taken in groups of six and six days together (excepting in four instances, in three of which the group included four days, and in the remaining one only three days), in which the mean height of the barometer between two consecutive days varied a quarter of an inch; of these nine took place between May and September, both months inclusive, and the remaining twenty-five in the other months of the year, excepting February, during which the largest difference between two consecutive days, namely, between the 23rd and 24th, was $0^{in}\cdot229$.

In the winter half year there were—

4	instances in which the difference between the mean heights on two consecutive days exceeded	in. 0·25,	and was less than	in. 0·30
11	,,	,,	0·30	,,	0·40
5	,,	,,	0·40	,,	0·50
1	,,	,,	0·50		

In the summer half-year there were—

8	instances in which the difference between the mean heights on two consecutive days exceeded	in. 0·25,	and was less than	in. 0·30
3	,,	,,	0·30	,,	0·40
2	,,	,,	0·40		

It appears from these numbers that the differences between the heights of the barometer on two consecutive days are much larger in the winter than in the summer.

The times at which the greatest differences between the mean heights of the barometer on two consecutive days took place in each month, with the amounts of the differences (estimated positive when the mean height was greater on the second day) are as follows:—

In January,	between the	1st and	2nd, the difference amounting to	+	in. 0·471
February	,,	23rd and	24th	,,	− 0·229
March	,,	3rd and	4th	,,	− 0·385
April	,,	8th and	9th	,,	+ 0·422

In May,	between the	18th and 19th,	the difference amounting to	+	0·403
June	,,	22nd and 23rd	,,	−	0·264
July	,,	10th and 11th	,,	+	0·285
August	,,	12th and 13th	,,	−	0·265
September	,,	24th and 25th	,,	+	0·291
October	,,	22nd and 23rd	,,	+	0·515
November	,,	19th and 20th	,,	−	0·349
December	,,	17th and 18th	,,	+	0·437

The mean daily readings of the barometer were the highest and lowest in each month as follows:—

In January the highest was	in. 30·511	on the	9th day,	and the lowest was	in. 29·009	on the	22nd day.
February	,, 30·223	,,	10th	,,	29·471	,,	24th
March	,, 30·483	,,	12th	,,	29·117	,,	23rd
April	,, 30·170	,,	30th	,,	28·924	,,	6th
May	,, 30·187	,,	29th	,,	28·973	,,	18th
June	,, 30·173	,,	16th	,,	29·335	,,	24th
July	,, 30·054	,,	28th	,,	29·274	,,	18th
August	,, 30·090	,,	25th	,,	29·455	,,	18th
September	,, 30·268	,,	12th	,,	29·314	,,	23rd
October	,, 30·140	,,	27th	,,	28·891	,,	15th
November	,, 30·351	,,	9th	,,	29·139	,,	26th
December	,, 30·477	,,	30th	,,	28·719	,,	23rd

The highest daily mean was in January, and the lowest was in December; and the difference between them is 1in.792, being the range of the mean daily heights for the year.

The ranges of the mean daily heights in each month were,

	in.		in.
In January	1·502	In July	0·780
February	0·752	August	0·635
March	1·366	September	0·954
April	1·246	October	1·249
May	1·214	November	1·212
June	0·838	December	1·758

The highest and lowest readings of the barometer in the simple two-hourly observations in each month were as follows:—

In January the highest reading was	in. 30·543	at	d h 8. 22,	and the lowest was	in. 28·805	at	d h 19. 12
February	,, 30·257	at	10. 0, 2h, & 6h	,,	29·317	at	24. 14
March	,, 30·530	at	11. 22	,,	29·052	at	22. 16
April	,, 30·207	at	30. 0	,,	28·839	at	6. 6
May	,, 30·207	at	28. 22	,,	28·878	at	18. 6
June	,, 30·203	at	16. 12	,,	29·232	at	24. 6
July	,, 30·095	at	27. 20	,,	29·182	at	18. 2
August	,, 30·109	at	24. 12	,,	29·383	at	18. 16
September	,, 30·289	at	11. 22 & 12d. 10h	,,	29·168	at	23. 16
October	,, 30·167	at	26. 22	,,	28·826	at	14. 18
November	,, 30·379	at	9. 12	,,	29·087	at	25. 20
December	,, 30·498	at	29. 22 & 30d. 0h	,,	28·536	at	22. 20

The ranges of the simple barometer-readings in each month were as follows:—

	in.		in.
In January	1·738	In July	0·913
February	0·940	August	0·726
March	1·478	September	1·121
April	1·368	October	1·341
May	1·329	November	1·292
June	0·971	December	1·962

In every month there have been readings of the barometer above 30 inches.

		in.
In January and in March	there were readings greater than	30·5
December	,,	30·4
November	,,	30·3
February, April, May, June, and September	,,	30·2
August and October	,,	30·1
July	,,	30·0

The lowest reading in the year took place in December, at 22^{d}. 20^{h}, in the two-hourly observations, being 28^{in}·536; the highest reading in the year occurred on January 8^{d}, at 22^{h}, in the two-hourly observations, being 30^{in}·543; and the range for the year was 2^{in}·007.

TABLE II.—Mean Height of the Barometer in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Height of the Barometer.	1846, Month.	Mean Height of the Barometer.
	in.		in.
January	29·671	July	29·757
February	29·849	August	29·777
March	29·655	September	29·824
April	29·589	October	29·516
May	29·779	November	29·821
June	29·866	December	29·697

The mean of all the monthly results is 29^{in}·733.

TABLE III.—Daily Range of the Barometer, as deduced from all the Observations taken on every Civil Day of the Year 1846 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·627	*S*	*S*	0·180	0·056	0·048	0·042	0·175	0·096	0·081	*S*	0·364
2	0·389	0·428	0·076	0·337	0·104	0·040	0·159	*S*	0·046	0·269	0·048	0·178
3	0·213	0·231	0·341	0·228	*S*	0·052	0·063	0·131	0·070	0·232	0·123	0·317
4	*S*	0·281	0·198	0·415	0·237	0·039	0·158	0·042	0·076	*S*	0·067	0·141
5	0·110	0·191	0·126	*S*	0·166	0·051	*S*	0·092	0·142	0·112	0·043	0·258
6	0·102	0·181	0·204	0·171	0·082	0·086	0·273	0·070	*S*	0·257	0·043	*S*
7	0·356	0·165	0·095	0·154	0·162	*S*	0·329	0·120	0·075	0·188	0·134	0·307
8	0·220	*S*	*S*	0·279	0·196	0·080	0·138	0·098	0·143	0·313	*S*	0·098
9	0·073	0·162	0·296	0·324	0·137	0·083	0·100	*S*	0·169	0·211	0·070	0·100
10	0·159	0·109	0·086	Good Friday	*S*	0·168	0·355	0·036	0·181	0·372	0·152	0·453
11	*S*	0·251	0·209	0 359	0·097	0·159	0·103	0·068	0·037	*S*	0·052	0·071
12	0·415	0·104	0·088	*S*	0·227	0·071	*S*	0·069	0·039	0·131	0·059	0·151
13	0·273	0·050	0·186	0·294	0·102	0·083	0·193	0·353	*S*	0·301	0·050	*S*
14	0·125	0·112	0·330	0·219	0·238	*S*	0·138	0·118	0·053	0·830	0·077	0·205
15	0·300	*S*	*S*	0·249	0·182	0·165	0·082	0·163	0·060	0·177	*S*	0·182
16	0·159	0·042	0·530	0·212	0·475	0·065	0·407	*S*	0·091	0·145	0·125	0·178
17	0·076	0·187	0·196	0·160	*S*	0·080	0·125	0·154	0·207	0·324	0·145	0·322
18	*S*	0·044	0·081	0·139	0·225	0·105	0·194	0·132	0·040	*S*	0·096	0·253
19	0·609	0·089	0·056	*S*	0·361	0·094	*S*	0·267	0·263	0·165	0·116	0·173
20	0·598	0·046	0·169	0·054	0·112	0·131	0·203	0·154	*S*	0·079	0·441	*S*

TABLE III.—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
21	0·440	0·035	0·469	0·118	0·393	*S*	0·157	0·293	0·131	0·579	0·167	0·555
22	0·201	*S*	*S*	0·097	0·226	0·398	0·121	0·101	0·097	0·447	*S*	0·207
23	0·096	0·180	0·172	0·079	0·055	0·087	0·117	*S*	0·200	0·395	0·138	0·425
24	0·483	0·265	0·040	0·160	*S*	0·261	0·094	0·117	0·352	0·248	0·146	0·341
25	*S*	0·378	0·062	0·115	0·117	0·247	0·162	0·033	0·178	*S*	0·467	Christ. Day.
26	0·141	0·152	0·309	*S*	0·062	0·089	*S*	0·136	0·121	0·284	0·081	0·267
27	0·369	0·055	0·079	0·086	0·115	0·182	0·036	0·100	*S*	0·086	0·093	*S*
28	0·246	0·321	0·225	0·178	0·196	*S*	0·090	0·042	0·159	0·156	0·203	0·077
29	0·365		*S*	0·217	0·038	0·096	0·118	0·105	0·091	0·055	*S*	0·116
30	0·165		0·212	0·088	0·140	0·148	0·038	*S*	0·340	0·067	0·169	0·055
31	0·201		0·249		*S*		0·125	0·053		0·058		0·134

The letter *S* denotes that the day was Sunday.

From this table we collect the following particulars:—

On 99 days out of 311, the daily range of the readings of the barometer was less	than	in. 0·1			in.	
111	,,	,,	greater than	0·1	and less than	0·2
51	,,	,,	,,	0·2	,,	0·3
30	,,	,,	,,	0·3	,,	0·4
13	,,	,,	,,	0·4	,,	0·5
4	,,	,,	,,	0·5	,,	0·6
2	,,	,,	,,	0·6	,,	0·7
1	,,	,,	,,	0·8	,,	0·9

TABLE IV.—Diurnal Range of the Barometer in each Month, in Quarterly Periods, and for the Year.

1846, Month.	Diurnal Range.	Diurnal Range in Spring.	Summer.	Autumn.	Winter.	Year.
	in.	in.	in.	in.	in.	in.
December	0·228					
January	0·278				0·225	
February	0·169					
March	0·196					
April	0·196	0·188				
May	0·173					
June	0·120					0·179
July	0·153		0·132			
August	0·124					
September	0·133					
October	0·243			0·169		
November	0·132					

TABLE V.—Mean Height of the Barometer, at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
14	29·637	29·845	29·677	29·587	29·775	29·867	29·764	29·786	29·822	29·509	29·831	29·701
16	29·649	29·830	29·656	29·585	29·775	29·860	29·756	29·776	29·816	29·498	29·824	29·694
18	29·668	29·819	29·652	29·588	29·783	29·866	29·759	29·773	29·816	29·498	29·820	29·685
20	29·656	29·826	29·658	29·598	29·795	29·875	29·765	29·784	29·829	29·512	29·826	29·688
22	29·668	29·847	29·666	29·602	29·798	29·877	29·765	29·788	29·838	29·519	29·836	29·701
0	29·675	29·861	29·668	29·599	29·791	29·874	29·764	29·781	29·834	29·518	29·832	29·696
2	29·666	29·854	29·654	29·591	29·782	29·862	29·754	29·773	29·823	29·509	29·814	29·682
4	29·672	29·847	29·639	29·567	29·766	29·852	29·748	29·762	29·811	29·511	29·805	29·685
6	29·682	29·855	29·640	29·562	29·762	29·847	29·738	29·762	29·809	29·521	29·808	29·699
8	29·693	29·866	29·648	29·577	29·768	29·862	29·744	29·772	29·823	29·532	29·815	29·711
10	29·694	29·869	29·651	29·599	29·779	29·873	29·760	29·786	29·832	29·537	29·819	29·715
12	29·696	29·867	29·650	29·610	29·778	29·877	29·761	29·782	29·830	29·531	29·816	29·712

From this table it appears that the daily motion of the mercurial column of the barometer has consisted of a triple maximum and a triple minimum in four months, viz., in January, March, August, and November; and of a double maximum and minimum in the eight remaining months. The hour of the first maximum in January, February, and March, was 0^h, and it was 22^h in the remaining nine months, the reading in July at 20^h being the same as that at 22^h. The hour of the first minimum was 2^h in January, October, and December; 4^h in February, March, and November; 4^h and 6^h in August; and 6^h in the remaining months. The interval of time between the first maximum and the first minimum was 2^h, 4^h, or 6^h in the winter months, and from 6^h to 10^h in the summer months; the maximum and the minimum in the latter period occurring earlier and later respectively than in the former period.

The means of the numbers in the preceding table are taken for March, April, and May, and called Spring.
,, June, July, and August, ,, Summer.
,, September, October, and November ,, Autumn.
,, December, January, and February ,, Winter.

and thus the following table is formed:—

TABLE VI.—Mean Height of the Barometer at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

1846.	Mean Height of the Barometer.				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h	in.	in.	in.	in.	in.
14	29·680	29·806	29·721	29·728	29·733
16	29·672	29·797	29·713	29·724	29·727
18	29·674	29·799	29·711	29·724	29·727
20	29·684	29·808	29·722	29·723	29·734
22	29·689	29·810	29·731	29·739	29·742
0	29·686	29·806	29·728	29·744	29·741
2	29·676	29·796	29·715	29·734	29·730
4	29·657	29·787	29·709	29·735	29·722
6	29·655	29·782	29·713	29·745	29·724
8	29·664	29·793	29·723	29·757	29·735
10	29·676	29·806	29·729	29·759	29·743
12	29·679	29·807	29·726	29·758	29·743

From this table it appears that a double maximum and a double minimum have taken place in each period of the year.

		h	h	in.	
In Spring	the maxima	took place at 22	and 14;	the former being 0·009	higher than the latter.
,,	the minima	,, 16	and 6	,, 0·017	,,
In Summer	the maxima	,, 22	and 12	,, 0·003	,,
,,	the minima	,, 16	and 6	,, 0·015	,,

In Autumn	the	maxima	took place at	22^h	and	10^h;	the former being	0·002 in. higher than the latter.
,,	the	minima	,,	18	and	4	,,	0·002 ,,
In Winter	the	maxima	,,	0	and	10	,,	0·015 lower than the latter.
,,	the	minima	,,	20	and	2	,,	0·011 ,,

The whole diurnal range was different in the different quarters.

In Spring it was	0·034 in.
Summer ,,	0·028.
Autumn ,,	0·022.
Winter ,,	0·036.

The variation of the heights, from two hours to two hours, was different at the different periods of the year.

Between 14^h and 16^h a fall at all periods, of nearly the same amount in spring, summer, and autumn, and about one-half as large in winter.

16 and 18 a slight rise in spring and in summer; a slight fall in autumn; and stationary in winter.

18 and 20 a rise in spring, in summer, and in autumn; a very slight fall in winter.

20 and 22 a rise at all periods; small in summer, larger in spring, still larger in autumn, and the greatest in winter.

22 and 0 a moderate fall in spring, in summer, and in autumn; a rise in winter.

0 and 2 a fall at all periods; large in autumn, smaller and of equal amounts in the three remaining periods.

2 and 4 the fall continues in spring, summer, and autumn; being large in spring and autumn, and moderate in summer; in winter a very slight rise.

4 and 6 a slight fall in spring; a moderate fall in summer and autumn; a rise in winter.

6 and 8 a rise at all periods.

8 and 10 the rise continues, but is smaller in winter than in the other periods.

10 and 12 a small rise in spring; a moderate fall in autumn; and a nearly stationary height at the other periods.

12 and 14 nearly stationary in spring and in summer; a small fall in autumn, and a very large fall in winter, in fact the greatest change in the year.

The mean height of the barometer in	Spring	was	29·674 in.
,, ,,	Summer	was	29·800
,, ,,	Autumn	was	29·720
,, ,,	Winter	was	29·739
,, for the whole	Year	was	29·733

By taking the differences between the mean for the year and the numbers in the last column of Table VI., the following results are deduced:—

At 14^h	the mean height of the barometer was	the same as the mean for the year	
16	,,	lower than the mean for the year by	0·006 in.
18	,,	lower ,,	0·006
20	,,	higher ,,	0·001
22	,,	higher ,,	0·009
0	,,	higher ,,	0·008
2	,,	lower ,,	0·003
4	,,	lower ,,	0·011
6	,,	lower ,,	0·009
8	,,	higher ,,	0·001
10	,,	higher ,,	0·010
12	,,	higher ,,	0·010

An inspection of the above table will shew that at 20^h, at 2^h, and at 8^h the mean height of the barometer is very nearly the same as the mean height for the year, and that, consequently, observations made at those hours may, by trifling corrections, be reduced to the mean of the two-hourly observations throughout the year.

For each of these hours, combining the results indicated above with the similar results obtained in preceding years, beginning with 1841, we find that the most probable corrections to reduce observations made at either of these hours to the mean for the year, are as follows:—

If the observation be made at	20^h	the correction is	− 0·001 in.
,,	2	,,	+ 0·002
,,	8	,,	− 0·001

TABLE VII.—Excess of the Mean Height of the Barometer in every Month at each Even Hour of Göttingen Mean Time (as deduced from the Monthly Means of the Observations at each Hour), above the Mean Height for the Month (as found from the Mean of all the Two-hourly Observations for that Month).

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
14	−0·034	−0·004	+0·022	−0·002	−0·004	+0·001	+0·007	+0·009	−0·002	−0·007	+0·010	+0·004
16	−0·022	−0·019	+0·001	−0·004	−0·004	−0·006	−0·001	−0·001	−0·008	−0·018	+0·003	−0·003
18	−0·003	−0·030	−0·003	−0·001	+0·004	0·000	+0·002	−0·004	−0·008	−0·018	−0·001	−0·012
20	−0·015	−0·023	+0·003	+0·009	+0·016	+0·009	+0·008	+0·007	+0·005	−0·004	+0·005	−0·009
22	−0·003	−0·002	+0·011	+0·013	+0·019	+0·011	+0·008	+0·011	+0·014	+0·003	+0·015	+0·004
0	+0·004	+0·012	+0·013	+0·010	+0·012	+0·008	+0·007	+0·004	+0·010	+0·002	+0·011	−0·001
2	−0·005	+0·005	−0·001	+0·002	+0·003	−0·004	−0·003	−0·004	−0·001	−0·007	−0·007	−0·015
4	+0·001	−0·002	−0·016	−0·022	−0·013	−0·014	−0·009	−0·015	−0·013	−0·005	−0·016	−0·012
6	+0·011	+0·006	−0·015	−0·027	−0·017	−0·019	−0·019	−0·015	−0·015	+0·005	−0·013	+0·002
8	+0·022	+0·017	−0·007	−0·012	−0·011	−0·004	−0·013	−0·005	−0·001	+0·016	−0·006	+0·014
10	+0·023	+0·020	−0·004	+0·010	0·000	+0·007	+0·003	+0·009	+0·008	+0·021	−0·002	+0·018
12	+0·025	+0·018	−0·005	+0·021	−0·001	+0·011	+0·004	+0·005	+0·006	+0·015	−0·005	+0·015

The order of the signs in this table being different at different times of the year, indicates that the daily change of the pressure of the atmosphere is different at different times of the year.

On the Influence of the Moon on the Barometer.

The following tables have been arranged, by considering that observation of the Barometer which was made nearest to the time of the meridian passage of the Moon to correspond to 0^h of the Moon's hour-angle, and the five preceding and following observations to correspond to 2^h, 4^h, 6^h, 8^h, and 10^h of the Moon's East and West hour-angles respectively. The sixth observation following that of 0^h of hour-angle, is considered to correspond to 12^h of hour-angle, or to the time of the lower meridian passage of the Moon. The means of the numbers thus collected have been taken for every month, and are exhibited in the following table:—

TABLE VIII.—Monthly Means of the Corrected Barometer Readings, arranged by Hour-angles of the Moon.

Lunation.		Mean Monthly Corrected Barometer Readings at the Times of Observation.											
		5th	4th	3rd	2nd	1st	Nearest to the Passage of the Moon.	1st	2nd	3rd	4th	5th	Nearest to the lower Passage of the Moon.
Commencing.	Ending.	Before the nearest to the Passage of the Moon.						After the nearest to the Passage of the Moon.					
1845. d h	1846. d h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Dec. 27. 0	Jan. 24.22	29·724	29·739	29·739	29·737	29·743	29·742	29·729	29·726	29·720	29·719	29·725	29·726
1846.													
Jan. 26. 0	Feb. 22.22	29·810	29·809	29·812	29·807	29·817	29·806	29·814	29·817	29·816	29·817	29·827	29·829
Feb. 24. 0	Mar. 23.22	29·659	29·661	29·666	29·669	29·671	29·667	29·665	29·671	29·670	29·666	29·660	29·649
Mar. 25. 0	Apr. 22.22	29·513	29·508	29·504	29·497	29·492	29·488	29·495	29·499	29·502	29·510	29·515	29·537
Apr. 24. 0	May 21.22	29·714	29·717	29·715	29·715	29·719	29·717	29·726	29·727	29·733	29·728	29·731	29·732
May 23. 0	June 20.22	30·022	30·019	30·020	30·020	30·023	30·022	30·012	30·015	30·015	30·015	30·015	30·017
June 22. 0	July 19.22	29·658	29·671	29·667	29·664	29·656	29·653	29·655	29·653	29·648	29·655	29·657	29·655
July 21. 0	Aug. 18.22	29·763	29·759	29·760	29·757	29·763	29·767	29·763	29·760	29·761	29·762	29·761	29·765
Aug. 20. 0	Sep. 17.22	29·980	29·980	29·974	29·976	29·979	29·972	29·980	29·979	29·984	29·986	29·985	29·983
Sep. 19. 0	Oct. 16.22	29·432	29·435	29·436	29·424	29·422	29·423	29·409	29·413	29·415	29·417	29·419	29·416
Oct. 18. 0	Nov. 15.22	29·902	29·897	29·898	29·911	29·902	29·906	29·907	29·907	29·909	29·909	29·923	29·920
Nov. 17. 0	Dec. 15.22	29·597	29·590	29·584	29·579	29·578	29·580	29·590	29·588	29·588	29·587	29·585	29·590

By taking the mean of the numbers in each vertical column of this table the next table was formed.

TABLE IX.—Mean Height of the Barometer at every Two Hours of the Moon's Hour-Angle in the Year 1846.

Hour-Angle of the Moon.		Mean Height of the Barometer.	Mean of the Heights corresponding to the Hour-Angles	
			10h to 2h East.	8h West to 8h East.
			2h to 10h West.	4h East to 4h West.
	h	in.	in.	in.
East	12	29·7349		29·7329
	10	29·7312		
	8	29·7321		
	6	29·7313	29·7309	
	4	29·7297		
	2	29·7304		
	0	29·7286		29·7294
West	2	29·7288		
	4	29·7296		
	6	29·7301	29·7306	
	8	29·7309		
	10	29·7336		

The general fact of a daily lunar tide is here imperfectly indicated, the mean readings increasing from 0h to 12h, and diminishing from 8h East to the minimum at 0h. The result at 10h East seems to be discordant, as it is not intermediate to those at 12h and 8h East. The times of maxima and minima are not in accordance with those deduced from the observations of previous years.

The following table is based upon the mean daily results of Table I. The mean heights on all the days when the Moon's North declination was the greatest have been collected, and their means taken: then the mean heights on all the days next following them, and so on:

TABLE X.—Mean Daily Heights of the Barometer, arranged with reference to the Moon's Declination, 1846.

Days after the Moon's greatest North Declination.	Mean Height of the Barometer.	Number of Obs.	Days after the Moon was in the Equator, the Moon going South.	Mean Height of the Barometer.	Number of Obs.	Days after the Moon's greatest South Declination.	Mean Height of the Barometer.	Number of Obs.	Days after the Moon was in the Equator, the Moon going North.	Mean Height of the Barometer.	Number of Obs.
d	in.		d	in.		d	in.		d	in.	
0	29·8861	13	0	29·8196	12	0	29·6766	12	0	29·6768	12
1	29·8294	12	1	29·8841	10	1	29·7475	11	1	29·7384	11
2	29·7113	11	2	29·6819	9	2	29·6802	10	2	29·7495	11
3	29·8444	11	3	29·7003	12	3	29·6875	11	3	29·8033	11
4	29·8304	12	4	29·5572	11	4	29·6603	12	4	29·8511	13
5	29·6991	13	5	29·5883	12	5	29·4815	11	5	29·7935	12
6	29·7884	12	6	29·5842	9	6	(29·6178)	4	6	29·8619	8
7	29·7110	7									

The mean of the numbers in each column respectively gives the mean height of the barometer for the different groups as follows:

When the Moon's Declination was	North,	and the Moon was going	South,	in. 29·7984
,,	South	,,	South,	29·6879
,,	South	,,	North,	29·6556
,,	North	,,	North,	29·7821

Combining the mean height of the barometer when the Moon was in the equator, or at her extreme North and South declinations, with the mean height of the barometer on the three preceding and the three following days, we find that

The mean height of the barometer, when the Moon was	at or near her greatest North declination,	was	in. 29·8254
,, ,,	in or near the Equator, and moving Southward,	,,	29·7549
,, ,,	at or near her greatest South declination,	,,	29·6459
,, ,,	in or near the Equator, and moving Northward,	,,	29·6853

From these numbers it seems that the mean height of the barometer is increased by the Moon's position in North declination.

The following table is also based upon the mean daily results of Table I. The mean heights on all the days on which the Moon was in perigee have been collected, and their mean taken; then the mean heights on all the days next following them, and so on.

TABLE XI.—Mean Daily Heights of the Barometer, arranged with reference to the Moon's Parallax.

Days after Perigee.	Mean Height of the Barometer.	Number of Observations.	Days after Apogee.	Mean Height of the Barometer.	Number of Observations.
d	in.		d	in	
0	29·651	14	0	29·741	9
1	29·566	12	1	29·728	11
2	29·454	9	2	29·728	12
3	29·616	14	3	29·817	10
4	29·745	12	4	29·854	12
5	29·872	11	5	29·824	11
6	29·794	11	6	29·607	12
7	29·816	14	7	29·602	9
8	29·794	12	8	29·610	11
9	29·823	9	9	29·579	12
10	29·916	14	10	29·665	10
11	29·831	14	11	29·751	12
12	29·889	9	12	29·747	9
13	29·719	4	13	29·675	6
14	29·806	5	14	(29·814)	3
15	(29·899)	2	15	(29·591)	3

The variation of the distance of the Moon seems to have but little effect; the numbers vary from day to day without any order.

By taking the means of these numbers between the first and sixth days, both inclusive, and those between the eighth and thirteenth, both inclusive, both after perigee and apogee, we have the mean height of the barometer:

	in.
$3\frac{1}{2}$ days after the Moon was in Perigee	29·6745
$10\frac{1}{2}$ days after the Moon was in Perigee	29·8287
$3\frac{1}{2}$ days after the Moon was in Apogee	29·7597
$10\frac{1}{2}$ days after the Moon was in Apogee	29·6712

Combining the mean height of the barometer when the Moon was at or near her mean distance, and at her greatest and least mean distances, with the heights of the barometer on the three preceding and the three following days, we find that

			in.
The mean height of the barometer when the Moon was at or near Perigee			was 29·6371
,,	,,	at or near her mean distance and going from the Earth	29·8229
,,	,,	at or near Apogee	29·7790
,,	,,	at or near her mean distance and coming nearer to the Earth,	29·6773

These numbers seem to indicate, that when the Moon was at or near her mean distance, and going from the Earth, the mean height of the barometer was the greatest.

In deducing these results, the numbers in brackets have not been used, in consequence of the small number of observations on which they depend.

The following table is formed in the same manner as the last two:—

Table XII.—Mean Daily Heights of the Barometer, arranged with reference to the relative Positions of the Sun and Moon.

Days after New Moon.	Mean Height of the Barometer,	Number of Observations.	Days after the Moon enters First Quarter.	Mean Height of the Barometer.	Number of Observations.	Days after Full Moon.	Mean Height of the Barometer.	Number of Observations.	Days after the Moon enters Third Quarter.	Mean Height of the Barometer.	Number of Observations.
d	in.		d	in.		d	in.		d	in.	
0	29·671	11	0	29·688	10	0	29·798	11	0	29·722	12
1	29·574	11	1	29·715	12	1	29·712	10	1	29·683	10
2	29·541	9	2	29·757	10	2	29·710	10	2	29·679	11
3	29·660	11	3	29·793	13	3	29·794	12	3	29·581	9
4	29·706	10	4	29·864	10	4	29·747	9	4	29·681	11
5	29·734	9	5	29·863	10	5	29·767	10	5	29·581	9
6	29·668	11	6	29·929	12	6	29·899	9	6	29·616	9
7	29·915	5	7	(30·289)	2	7	(29·662)	3	7	29·669	6

The mean of the numbers in each column gives the mean height of the barometer,

	in.
When the Moon was between new and first quarter.....	29·6836
,, first quarter and full	29·8013
,, full and third quarter.....	29·7753
,, third quarter and new	29·6515

By taking the mean of the mean heights on the day of each change, and on the three days preceding and following,

	in.
The mean height of the barometer, at or near new Moon, was	29·6160
,, at or near first quarter, was	29·7529
,, at or near full Moon, was	29·8100
,, at or near third quarter, was	29·7254

It would seem, therefore, that the mean pressure of the atmosphere was greatest when the Moon was about 14 days old.

The numbers in brackets have not been used, in consequence of the small number of observations on which they depend.

Results of the Observations of the Thermometers.

TABLE XIII.—Mean Daily Temperature, as deduced from the Mean of the 12 Observations with the Dry Thermometer, taken on every Civil Day (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	41·6	*S*	*S*	50·0	51·8	61·6	61·3	71·2	59·4	54·2	*S*	28·9
2	35·3	41·8	49·8	50·9	56·7	62·2	66·1	*S*	61·9	57·8	50·3	33·0
3	35·9	46·7	50·5	46·3	*S*	64·4	66·5	64·1	59·9	55·1	53·6	33·3
4	*S*	43·4	49·4	45·4	55·4	64·9	70·6	63·9	59·7	*S*	53·0	32·6
5	32·5	42·0	45·6	*S*	55·4	66·2	*S*	66·3	65·3	58·6	53·3	34·3
6	41·4	41·6	44·7	44·7	54·1	68·5	59·5	71·8	*S*	56·3	42·5	*S*
7	45·8	46·4	45·5	42·8	53·7	*S*	59·2	68·2	64·9	55·8	41·7	38·0
8	45·8	*S*	*S*	45·3	55·0	66·7	59·6	64·5	64·1	53·6	*S*	39·1
9	41·8	32·9	40·8	45 3	57·4	64·0	62·1	*S*	63·7	56·1	41·7	40·8
10	37·4	31·1	42·9	Good Friday	*S*	62·9	60·3	62·6	64·0	58·1	42·7	39·0
11	*S*	34·8	43·7	49·5	53·3	67·5	59·0	63·1	65·2	*S*	44·2	28·6
12	33·7	36·4	44·1	*S*	53·4	69·9	*S*	62·5	65·2	50·7	45·0	30·0
13	40·0	41·1	44·5	52·5	53·0	67·4	68·7	60·2	*S*	48·5	45·2	*S*
14	41·8	41·1	49·3	50·7	51·2	*S*	69·4	59·3	61·3	48·0	45·7	24·5
15	45·1	*S*	*S*	50·0	49·4	69·4	64·4	62·9	61·4	49·9	*S*	24·2
16	44·4	43·6	47·1	51·9	50·4	69·4	63·1	*S*	63·7	53·0	40·8	29·8
17	44·9	43·4	39·4	49·8	*S*	68·2	62·3	61·0	63·3	52·7	46·8	32·1
18	*S*	42·8	36·1	47·2	50·9	68·8	61·2	60·6	57·4	*S*	50·0	27·5
19	48·0	42·5	33 8	*S*	53·2	70·2	*S*	60·2	54·6	53·7	50·9	41·1
20	44·7	43·5	34·7	43·4	52·7	71·2	62·6	59·5	*S*	50·7	50·5	*S*
21	48·8	48·6	37·9	42·3	53·8	*S*	62·8	62·0	58·4	50·0	48·0	45·8
22	51·4	*S*	*S*	45·0	56·8	72·8	64·2	61·3	60·9	46·6	*S*	35·4
23	47·9	51·8	43·7	45·6	57·7	61·0	65·3	*S*	60·9	45·4	47·3	36·3
24	47·1	53·4	42·8	47·2	*S*	56·6	60·7	62·2	59·2	48·2	53·9	33·1
25	*S*	50·6	42·3	49·5	60·1	57·9	60·2	58·8	57·9	*S*	51·4	Christ. Day.
26	48·0	50·1	43·3	*S*	57·1	57·9	*S*	60·8	57·8	44·0	45·7	31·0
27	47·2	52·1	43·3	41·5	56·5	61·0	65·5	65·7	*S*	41·2	39·2	*S*
28	46·8	52·4	41·7	46·4	55·5	*S*	69·9	65·4	53·0	39·4	37·0	29·5
29	47·1		*S*	45·0	56·5	64·5	69·4	62·6	51·0	45·7	*S*	33·1
30	46·8		42·5	49·0	59·9	61·2	73·6	*S*	49·7	47·9	29·9	28·5
31	50·2		45·8		*S*		74·2	63·6		41·2		25·2

The letter *S* denotes that the day was Sunday.

The numbers in the above table shew that from observations on 311 days (taken in general consecutively, six and six together, the excepted cases being marked in the table), there were 21 cases in which the differences in the mean temperature, between two consecutive days, exceed 5°; of these there were

		°		°
7 instances in which the difference exceeded	5	and was less than	6	
7	,,	6	,,	7
1	,,	7	,,	8
1	,,	8	,,	9
3	,,	10	,,	11
1	,,	11	,,	12
1	,,	13	,,	14

In addition to these a difference of 8°·4 took place between January 31 and February 2; a difference of 13°·5 between February 7 and 9; one of 8°·0 between April 25 and 27; one of 11°·1 between July 4 and 6; and one of 9°·7 between July 11 and 13, Sunday intervening in all cases. The number of cases of large differences during this year was unusually small.

The mean daily temperatures were the highest and lowest in each month, as follows:—

In January the highest was	51°·4	on the	22nd	day, and the lowest was	32°·5	on the	5th	day.
February	53·4	„	24th	„	31·1	„	10th	
March	50·5	„	3rd	„	33·8	„	19th	
April	52·5	„	13th	„	41·5	„	27th	
May	60·1	„	25th	„	49·4	„	15th	
June	72·8	„	22nd	„	56·6	„	24th	
July	74·2	„	31st	„	59·0	„	11th	
August	71·8	„	6th	„	58·8	„	25th	
September	65·3	„	5th	„	49·7	„	30th	
October	58·6	„	5th	„	39·4	„	28th	
November	53·9	„	24th	„	29·9	„	30th	
December	45·8	„	21st	„	24·2	„	15th	

The highest daily temperature in the year was 74°·2 on July 31, and the lowest was 24°·2 on December 15; the difference between these numbers is 50°·0, being the yearly range of the mean daily temperature.

The ranges of the mean daily temperature in each month were,

In January	18°·9	In July	15°·2
February	22·3	August	13·0
March	16·7	September	15·6
April	11·0	October	19·2
May	10·7	November	24·0
June	16·2	December	21·6

The highest and lowest readings of the thermometer in the simple two-hourly observations in each month were as follows:—

In January the highest reading was	54°·0	at	21d 14h,	and the lowest was	30°·1	at	2d 20h	
February	60·8	„	28. 1	„	26·7	„	10. 18	
March	56·3	„	31. 4	„	27·6	„	20. 18	
April	60·0	„	14. 2	„	33·3	„	20. 18	
May	72·2	„	30. 2	„	38·5	„	15. 16	
June	87·0	„	20. 2	„	48·7	„	1. 18	
July	87·8	„	31. 2	„	49·2	„	10. 16	
August	88·4	„	1. 0	„	48·0	„	13. 18	
September	78·1	„	5. 2	„	40·3	„	29. 18	
October	65·8	„	1. 2	„	37·2	„	27. 22	
November	61·0	„	4. 2	„	25·0	„	29. 20	
December	49·5	„	21. 2	„	19·8	„	13. 20	

The highest and lowest readings, shewn by the self-registering maximum and minimum thermometer in each month, were as follows:—

In January the highest reading was	55°·3	on the	26th	day, and the lowest was	29°·4	on the	5th	day.
February	62·3	„	28th	„	26·9	„	10th	
March	58·0	„	31st	„	26·5	„	20th	
April	63·0	„	12th	„	33·3	„	20th	
May	84·3	„	31st	„	38·3	„	15th	
June	91·1	„	20th	„	49·4	„	1st	
July	93·3	„	5th	„	49·1	„	25th	
August	92·0	„	1st	„	47·5	„	13th	
September	86·4	„	6th	„	39·2	„	29th	
October	67·7	„	4th	„	35·0	„	28th	
November	61·5	„	4th	„	23·4	„	29th	
December	49·9	„	21st	„	18·8	„	14th and 30th	

Table XIV.—Mean Heights of the Dry Thermometer in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Temperature.	1846, Month.	Mean Temperature.
	°		°
January	43·7	July	64·5
February	43·9	August	63·2
March	43·3	September	60·1
April	47·1	October	50·5
May	54·6	November	46·0
June	65·2	December	32·9

The mean of all the monthly results is 51°·3.

The following table is formed by taking the mean of all the maximum readings and the mean of all the minimum readings of the self-registering maximum and minimum thermometer for each month; and then considering the mean temperature for the month to be the mean of the resulting numbers.

Table XV.—Mean Temperature of each Month, deduced from the Maximum and Minimum Self-registering Thermometer.

1846, Month.	Mean of all the Maximum Readings in each Month.	Mean of all the Minimum Readings in each Month.	Mean Temperature deduced from Maximum and Minimum Thermometer.
	°	°	°
January	48·1	39·4	43·8
February	49·0	39·3	44·2
March	51·6	38·1	44·9
April	56·4	41·8	49·1
May	66·7	47·4	57·1
June	80·4	55·1	67·8
July	77·9	56·5	67·2
August	74·4	56·6	65·5
September	71·9	51·4	61·7
October	58·7	44·5	51·6
November	50·3	40·0	45·2
December	37·2	27·9	32·6

And the mean of all the monthly results is 52°·5.

TABLE XVI.—Table exhibiting the Daily Range of the Dry Thermometer on every Civil Day throughout the Year (Sundays, Good Friday, and Christmas Day excepted).

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	12·3	*S*	*S*	12·2	10·8	23·5	16·5	24·4	13·1	22·3	*S*	4·6
2	6·1	5·9	10·4	8·0	11·8	27·8	14·2	*S*	23·7	8·4	11·0	3·8
3	10·2	11·2	10·7	11·3	*S*	30·5	15·0	15·5	28·7	18·2	11·8	8·9
4	*S*	8·0	8·3	11·7	11·4	27·8	33·5	17·5	28·2	*S*	12·5	11·1
5	5·8	5·2	8·6	*S*	15·9	24·9	*S*	18·5	23·4	7·7	10·9	7·1
6	15·7	10·0	9·1	8·3	9·8	30·1	13·5	21·1	*S*	6·1	6·4	*S*
7	4·1	10·0	9·8	8·2	15·5	*S*	8·0	15·6	22·7	6·1	4·1	5·5
8	3·1	*S*	*S*	9·9	15·5	16·2	13·7	11·6	13·8	9·8	*S*	3·6
9	4·8	5·9	16·0	16·9	22·5	20·1	11·5	*S*	22·9	12·9	3·5	3·6
10	1·9	5·8	16·2	Good Friday	*S*	15·5	13·3	9·3	12·1	10·5	10·4	11·3
11	*S*	16·0	12·7	10·8	20·7	19·7	18·2	16·8	15·2	*S*	11·0	5·3
12	6·0	10·4	12·8	*S*	22·8	25·8	*S*	12·5	17·0	7·3	10·9	8·9
13	11·4	4·4	14·6	12·3	9·5	24·7	27·3	12·3	*S*	11·8	2·8	*S*
14	6·0	10·8	9·3	16·0	15·1	*S*	19·1	22·5	15·2	14·2	5·1	11·1
15	7·3	*S*	*S*	4·0	18·3	27·2	17·2	20·1	20·9	4·8	*S*	7·7
16	10·3	6·4	12·6	13·5	22·2	23·9	10·1	*S*	22·0	12·9	3·9	9·0
17	7·1	3·5	11·0	16·4	*S*	27·0	13·5	15·4	24·8	13·2	9·0	4·7
18	*S*	7·2	12·5	5·2	13·8	25·2	18·3	9·4	17·2	*S*	8·7	12·8
19	10·3	4·0	11·7	*S*	10·3	26·9	*S*	7·6	24·5	15·5	6·6	7·6
20	6·2	5·1	9·6	12·0	12·0	28·2	17·1	9·5	*S*	12·8	4·0	*S*
21	9·0	12·6	18·8	18·1	17·0	*S*	15·9	9·9	12·2	11·9	6·0	10·7
22	6·5	*S*	*S*	17·9	28·0	30·2	15·5	13·0	15·5	4·3	*S*	5·9
23	7·1	4·8	15·7	15·7	12·3	12·0	21·2	*S*	12·4	14·3	12·2	4·6
24	5·7	5·4	12·4	13·5	*S*	13·5	14·2	13·3	11·5	16·3	3·5	1·9
25	*S*	11·5	12·6	15·5	17·3	17·5	20·2	17·5	12·7	*S*	6·6	Christ. Day.
26	4·5	13·8	11·0	*S*	9·4	14·1	*S*	14·5	11·8	4·5	8·9	8·7
27	7·6	9·6	13·7	11·9	21·4	16·5	17·8	16·9	*S*	6·2	10·0	*S*
28	8·8	12·8	14·7	17·6	18·3	*S*	14·8	19·7	13·0	5·0	11·2	10·7
29	11·2		*S*	19·7	21·7	18·6	25·9	15·6	16·2	8·7	*S*	9·1
30	11·9		16·3	20·6	27·5	18·8	24·5	*S*	18·5	9·4	8·4	7·9
31	4·3		20·9		*S*		23·8	23·5		4·4		11·6

The letter *S* denotes that the day was Sunday.

From this table we find that the number of large ranges in this year is greater than the average.

The greatest and least daily ranges of the readings in each month, as deduced from the two-hourly observations, are as follows:

		°			°	
In January	the greatest was	15·7	on the	6th;	the least was 1·9	on the 10th
February	„	16·0	„ 11th	„	3·5	„ 17th
March	„	20·9	„ 31st	„	8·3	„ 4th
April	„	20·6	„ 30th	„	4·0	„ 15th
May	„	28·0	„ 22nd	„	9·4	„ 26th
June	„	30·5	„ 3rd	„	12·0	„ 23rd
July	„	33·5	„ 4th	„	8·0	„ 7th
August	„	24·4	„ 1st	„	7·6	„ 19th
September	„	28·7	„ 3rd	„	11·5	„ 24th
October	„	22·3	„ 1st	„	4·3	„ 22nd
November	„	12·5	„ 4th	„	2·8	„ 13th
December	„	12·8	„ 18th	„	1·9	„ 24th

TABLE XVII.—Diurnal Range of the Dry Thermometer in each Month, in Quarterly Periods, and for the Year.

1846, Month.	Diurnal Range.	Diurnal Range in Spring.	Summer.	Autumn.	Winter.	The Year.
	°	°	°	°	°	°
December.....	8·5					
January	7·6				8·1	
February	8·3					
March	12·7					
April	13·1	14·1				
May.....	16·6					
June.....	22·5					13·2
July	17·5		18·5			
August.....	15·5					
September.....	18·0					
October	10·4			12·1		
November	8·0					

TABLE XVIII.—Mean Temperature at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken with the Dry Thermometer at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	42·8	42·5	39·7	42·7	48·3	56·2	57·9	58·1	54·5	48·2	45·0	31·6
16	42·3	41·6	39·3	42·2	47·2	55·1	57·0	57·6	53·9	48·3	44·6	31·3
18	41·8	41·0	38·7	41·8	47·7	56·2	57·5	57·5	53·2	48·3	44·4	31·2
20	41·9	41·4	40·0	44·9	53·1	63·1	62·2	60·4	55·7	48·5	44·2	31·2
22	42·8	42·8	44·0	48·8	58·2	70·7	67·2	65·8	62·5	51·6	45·6	31·7
0	45·4	46·0	47·5	51·6	60·6	74·0	71·1	69·3	67·7	53·9	47·9	34·4
2	46·7	47·6	49·0	52·5	62·0	75·8	72·5	70·4	69·2	54·9	49·3	36·0
4	46·4	47·6	48·8	52·5	61·3	74·8	71·5	70·2	68·5	54·0	48·6	35·4
6	44·7	45·4	46·2	50·6	59·4	71·8	69·7	67·3	64·6	51·4	46·8	33·9
8	43·7	44·2	43·1	47·7	55·3	66·3	65·9	63·0	59·8	49·8	45·9	33·1
10	43·3	43·6	42·0	45·7	52·3	61·0	61·9	60·4	57·0	48·8	45·1	32·5
12	43·1	43·4	40·8	44·1	50·3	58·1	59·6	58·8	55·1	47·9	44·9	32·1

From this table it appears that the maximum temperature has happened in every month nearer to the observation at 2^h than to any other. In the months of February and April the values at 2^h and at 4^h are identical. The minimum temperature has happened at about that hour of observation which was the nearest to the time of sun rising, except in October, in which month it took place at 12^h. During the morning hours in October the temperature was nearly constant. In every month the temperature has passed uninterruptedly from one extreme to the other, except in November, in which month a slight deviation from this law took place at 14^h.

The greatest daily variation of the monthly mean temperature, as deduced from the two-hourly observations, was 20°·7 in June; and the least variations were 4°·9 and 4°·8, occurring in January and December respectively. There is a great difference between the extreme variations in the months of September and October; the former was 16°·0 and the latter was 7°·0.

In the following table Spring includes the months of March, April, and May.
" Summer " June, July, and August.
" Autumn " September, October, and November.
" Winter " January, February, and December.

TABLE XIX.—Mean Temperature at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

Hour of Observation.	Mean Temperature.				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h	°	°	°	°	°
14	43·6	57·4	49·2	39·0	47·3
16	42·9	56·6	48·9	38·4	46·7
18	42·7	57·1	48·6	38·0	46·6
20	46·0	61·9	49·5	38·2	48·9
22	50·3	67·9	53·2	39·1	52·6
0	53·2	71·5	56·5	41·9	55·8
2	54·5	72·9	57·8	43·4	57·2
4	54·2	72·2	57·0	43·1	56·6
6	52·1	69·6	54·3	41·3	54·3
8	48·7	65·1	51·8	41·3	51·5
10	46·7	61·1	50·3	39·8	49·5
12	45·1	58·8	49·3	39·5	48·2

From this table it appears that the maximum temperature has taken place at 2^h at all periods of the year, and that the minimum temperature has taken place at 18^h in all periods excepting summer, when it occurred at 16^h.

The difference between the maximum and minimum temperature in	Spring	was	11·8 °
,,	Summer	,,	16·3
,,	Autumn	,,	9·2
,,	Winter	,,	5·4
,,	for the Year	,,	10·6

The mean temperature for	Spring	was	48·3 °
,,	Summer	,,	64·3
,,	Autumn	,,	52·2
,,	Winter	,,	40·3
,,	the Year	,,	51·3

By taking the difference between the mean temperature for the year and the mean temperature at each hour for the year, as contained in the last column of the above table, the following results are deduced:—

The mean temperature at	h 14	was below the mean temperature of the year by	° 4·0
,,	16	,,	4·6
,,	18	,,	4·7
,,	20	,,	2·4
,,	22	was above the mean temperature of the year by	1·3
,,	0	,,	4·5
,,	2	,,	5·9
,,	4	,,	5·3
,,	6	,,	3·0
,,	8	,,	0·2
,,	10	was below the mean temperature of the year by	1·8
,,	12	,,	3·1

An inspection of the above table will shew that at 8^h the mean temperature is nearly the same as the mean temperature deduced from all the two-hourly observations throughout the year; and, combining the difference (0°·2 in excess) with the corresponding differences deduced from all the preceding years, beginning with the year 1841, we find that the correction required to reduce from this hour to the mean for the year, will be — 0°·2.

The mean of the observations at 16^h and 0^h, at 6^h and 12^h, and at 22^h and 10^h also agree closely with the mean for the year from all the two-hourly observations, and the corrections similarly deduced to reduce such pairs of observations to the mean for the year, are respectively + 0°·05, + 0°·05, and + 0°·25.

TABLE XX.—Excess of the Monthly Mean Temperature at each Even Hour above the Mean Temperature for the Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	−0·9	−1·4	−3·6	−4·4	−6·3	− 9·1	−6·6	−5·1	−5·6	−2·3	−1·0	−1·3
16	−1·4	−2·3	−4·0	−4·9	−7·4	−10·2	−7·5	−5·6	−6·2	−2·2	−1·4	−1·6
18	−1·9	−2·9	−4·6	−5·3	−6·9	− 9·1	−7·0	−5·7	−6·9	−2·2	−1·6	−1·7
20	−1·8	−2·5	−3·3	−2·2	−1·5	− 2·2	−2·3	−2·8	−4·4	−2·0	−1·8	−1·7
22	−0·9	−1·1	+0·7	+1·7	+3·6	+ 5·4	+2·7	+2·6	+2·4	+1·1	−0·4	−1·2
0	+1·7	+2·1	+4·2	+4·5	+6·0	+ 8·7	+6·6	+6·1	+7·6	+3·4	+1·9	+1·5
2	+3·0	+3·7	+5·7	+5·4	+7·4	+10·5	+8·0	+7·2	+9·1	+4·4	+3·3	+3·1
4	+2·7	+3·7	+5·5	+5·4	+6·7	+ 9·5	+7·0	+7·0	+8·4	+3·5	+2·6	+2·5
6	+1·0	+1·5	+2·9	+3·5	+4·8	+ 6·5	+5·2	+4·1	+4·5	+0·9	+0·8	+1·0
8	0·0	+0·3	−0·2	+0·6	+0·7	+ 1·0	+1·4	−0·2	−0·3	−0·7	−0·1	+0·2
10	−0·4	−0·3	−1·3	−1·4	−2·3	− 4·3	−2·6	−2·8	−3·1	−1·7	−0·9	−0·4
12	−0·6	−0·5	−2·5	−3·0	−4·3	− 7·2	−4·9	−4·4	−5·0	−2·6	−1·1	−0·8

Table XXI.—Abstract of the Results of the Observations of Radiation.

1846, Month.	Monthly Mean of the: Observations of Highest Reading of the Thermometer whose Bulb is in the full Rays of the Sun.	Monthly Mean of the: Observations of Lowest Reading of the Thermometer whose Bulb is in the Focus of a Metallic Reflector exposed to the Sky.	1846, Month.	Monthly Mean of the: Observations of Highest Reading of the Thermometer whose Bulb is in the full Rays of the Sun.	Monthly Mean of the: Observations of Lowest Reading of the Thermometer whose Bulb is in the Focus of a Metallic Reflector exposed to the Sky.
	°	°		°	°
January	50·7	35·5	July	97·4	51·8
February	55·7	35·3	August.....	93·3	51·1
March	63·6	35·1	September.....	90·3	44·7
April	71·6	37·3	October.....	66·2	39·7
May.....	87·1	42·7	November.....	....	35·4
June.....	103·1	48·8	December.....	49·9	22·3

During the month of November the maximum thermometer was out of order.

The mean of all the observations of the thermometer, whose bulb was in the full rays of the Sun, is 75°·4; and the mean of all the observations of the other thermometer is 40°·0. The mean for the same time of all the observations of the maximum temperature of the air is 60°·2; and that for the minimum temperature is 44°·8.

Results of the Observations of the Thermometers Sunk in the Ground.

TABLE XXII.—Mean Daily Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, from the Mean of the 12 Observations taken on every Civil Day, from April 16 to December 31 (except Sundays and Christmas Day), at every Even Hour of Göttingen Mean Time.

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
1	..	48·85	48·76	49·03	49·85	50·79	51·68	*S*	52·62
2	..	48·86	48·77	49·05	*S*	50·83	51·72	52·53	52·63
3	..	*S*	48·77	49·07	49·90	50·87	51·73	52·56	52·62
4	..	48·84	48·77	49·10	49·92	50·90	*S*	52·57	52·61
5	..	48·84	48·78	*S*	49·96	50·94	51·79	52·56	52·61
6	..	48·83	48·79	49·12	50·01	*S*	51·81	52·54	*S*
7	..	48·82	*S*	49·13	50·03	51·01	51·83	52·54	52·62
8	..	48·82	48·79	49·16	50·06	51·03	51·86	*S*	52·63
9	..	48 82	48·79	49·19	*S*	51·06	51·89	52·57	52·62
10	..	*S*	48·79	49·21	50·11	51·11	51·92	52·56	52·61

The letter *S* denotes that the day was Sunday.

TABLE XXII.—*continued.*

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
11	..	48·81	48·81	49·24	50·15	51·13	*S*	52·59	52·56
12	..	48·79	48·82	*S*	50·17	51·16	51·96	52·61	52·56
13	..	48·79	48·83	49·30	50·19	*S*	51·98	52·66	*S*
14	..	48·79	*S*	49·33	50·22	51·21	51·99	52·61	52·52
15	..	48·76	48·84	49·35	50·27	51·25	52·02	*S*	52·52
16	49·06	48·76	48·86	49·37	*S*	51·29	52·17	52·60	52·53
17	49·05	*S*	48·86	49·38	50·32	51·31	52·39	52·61	52·54
18	49·04	48·75	48·87	49·41	50·36	51·33	*S*	92·64	52·50
19	*S*	48·75	48·88	*S*	50·38	51·35	52·74	52·64	52·54
20	48·99	48·75	48·89	49·47	50·41	*S*	52·57	52·64	*S*
21	48·98	48·75	*S*	49·50	50·45	51·40	52·53	52·64	52·54
22	48·97	48·75	48·91	49·54	50·48	51·45	52·55	*S*	52·49
23	48·96	48·75	48·91	49·57	*S*	51·47	52·57	52·63	52·49
24	48·95	*S*	48·91	49·59	50·55	51·49	52·54	52·66	52·46
25	48·95	48·76	48·92	49·62	50·57	51·52	*S*	52·66	Christ. Day.
26	*S*	48·74	48·94	*S*	50·61	51·56	52·53	52·67	52·44
27	48·88	48·74	48·96	49·69	50·65	*S*	52·51	52·66	*S*
28	48·86	48·75	*S*	49·72	50·68	51·59	52·49	52·66	52·42
29	48·86	48·74	49·00	49·76	50·71	51·60	52·50	*S*	52·40
30	48·86	48·76	49·01	49·80	*S*	51·63	52·50	52·63	52·32
31		*S*		49·83	50·69		52·48		52·35

The letter *S* denotes that the day was Sunday.

The diurnal range of the readings in each month was,

In April	0°·03	In July	0°·05	In October	0°·06
May	0·03	August	0·07	November	0·06
June	0·04	September	0·07	December	0·03

TABLE XXIII.—Mean Monthly Reading of the Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Monthly Reading.	1846, Month.	Mean Monthly Reading.	1846. Month.	Mean Monthly Reading.
April	48°·95	July	49°·39	October	52°·19
May	48·78	August	50·30	November	52·60
June	48·86	September	51·24	December	52·53

The mean for the above period is 50° ·54.

TABLE XXIV.—Mean Reading, at every Even Hour of Göttingen Mean Time, of the Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°
14	48·95	48·78	48·84	49·37	50·27	51·21	52·18	52·59	52·53
16	48·95	48·78	48·84	49·36	50·27	51·21	52·17	52·59	52·53
18	48·94	48·78	48·84	49·37	50·28	51·21	52·18	52·59	52·53
20	48·95	48·78	48·84	49·37	50·28	51·22	52·18	52·59	52·53
22	48·95	48·78	48·86	49·38	50·29	51·23	52·19	52·61	52·53
0	48·96	48·79	48·86	49·40	50·31	51·25	52·20	52·62	52·53
2	48·96	48·79	48·87	49·41	50·32	51·26	52·21	52·63	52·53
4	48·96	48·80	48·87	49·41	50·32	51·27	52·22	52·62	52·54
6	48·96	48·79	48·87	49·41	50·32	51·27	52·21	52·61	52·53
8	48·95	48·79	48·86	49·40	50·31	51·26	52·21	52·61	52·53
10	48·95	48·78	48·86	49·40	50·31	51·25	52·20	52·61	52·53
12	48·94	48·78	48·85	49·39	50·30	51·25	52·20	52·60	52·52

TABLE XXV.—Mean Daily Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, from the mean of the 12 Observations taken on every Civil Day, from April 16 to December 31 (except Sundays and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
1	..	47·40	49·07	52·40	54·75	56·21	56·86	*S*	53·53
2	..	47·43	49·15	52·56	*S*	56·24	56·87	55·73	53·49
3	..	*S*	49·22	52·67	54·81	56·26	56·85	55·69	53·41
4	..	47·48	49·28	52·79	54·87	56·28	*S*	55·60	53·37
5	..	47·53	49·37	*S*	54·94	56·35	56·87	55·51	53·29
6	..	47·54	49·45	52·93	55·03	*S*	56·83	55·37	*S*
7	..	47·56	*S*	53·01	55·08	56·40	56·83	55·30	53·19
8	..	47·59	49·60	53·10	55·12	56·40	56·83	*S*	53·10
9	..	47·63	49·69	53·19	*S*	56·42	56·81	55·15	53·01
10	..	*S*	49·79	53·27	55·22	56·46	56·85	55·07	52·90
11	..	47·71	49·91	53·35	55·31	56·48	*S*	55·01	52·73
12	..	47·76	50·03	*S*	55·37	56·52	56·70	54·95	52·66
13	..	47·82	50·15	53·55	55·41	*S*	56·67	54·89	*S*
14	..	47·87	*S*	53·63	55·47	56·55	56·64	54·82	52·44
15	..	47·92	50·38	53·69	55·55	56·57	56·60	*S*	52·32
16	47·04	47·98	50·51	53·71	*S*	56·62	56·71	54·66	52·22
17	47·05	*S*	50·64	53·78	55·66	56·65	56·80	54·61	52·14
18	47·08	48·11	50·76	53·84	55·72	56·66	*S*	54·58	52·01
19	*S*	48·19	50·89	*S*	55·77	56·65	56·75	54·49	51·98
20	47·08	48·24	51·02	53·99	55·79	*S*	56·62	54·43	*S*
21	47·11	48·34	*S*	54·04	55·88	56·73	56·56	54·34	51·86
22	47·14	48·41	51·28	54·13	55·92	56·78	56·47	*S*	51·58
23	47·16	48·48	51·35	54·19	*S*	56·77	56·43	54·18	51·47
24	47·19	*S*	51·47	54·23	56·00	56·80	56·35	54·17	51·31
25	47·23	48·65	51·60	54·28	56·02	56·80	*S*	54·08	Christ. Day.
26	*S*	48·68	51·72	*S*	56·07	56·84	56·19	53·94	51·04
27	47·24	48·72	51·88	54·44	56·13	*S*	56·10	53·81	*S*
28	47·28	48·72	*S*	54·52	56·15	56·82	56·04	53·75	50·81
29	47·31	48·87	52·18	54·59	56·17	56·81	55·98	*S*	50·71
30	47·36	48·95	52·28	54·66	*S*	56·82	55·93	53·58	50·61
31		*S*		54·72	56·20		55·83		50·49

The letter *S* denotes that the day was Sunday.

The diurnal range of the readings in each month was,

In April	0°·07	In July	0°·17	In October	0°·12
May	0·10	August	0·15	November	0·09
June	0·18	September	0·15	December	0·12

TABLE XXVI.—Mean Monthly Reading of the Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Reading.	1846, Month.	Mean Reading.
	°		°
April	47·17	September	56·57
May	48·06	October	56·55
June	50·49	November	54·71
July	53·68	December	52·21
August	55·55		

The mean for the above period is 52°·78.

TABLE XXVII.—Mean Reading at every Even Hour of Göttingen Mean Time of the Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°
14	47·15	48·02	50·38	53·59	55·49	56·52	56·54	54·73	52·24
16	47·14	48·02	50·39	53·58	55·48	56·51	56·53	54·72	52·24
18	47·15	48·03	50·41	53·60	55·50	56·51	56·53	54·72	52·23
20	47·16	48·04	50·45	53·64	55·52	56·54	56·55	54·71	52·22
22	47·17	48·06	50·49	53·68	55·55	56·57	56·56	54·72	52·23
0	47·19	48·08	50·52	53·71	55·59	56·61	56·58	54·72	52·23
2	47·19	48·09	50·54	53·73	55·60	56·64	56·60	54·73	52·24
4	47·20	48·10	50·55	53·74	55·62	56·64	56 59	54·72	52·22
6	47·20	48·10	50·55	53·74	55·61	56·62	56·57	54·70	52·20
8	47·19	48·09	50·54	53·72	55·59	56·59	56·55	54·68	52·18
10	47·18	48·08	50·52	53·70	55·56	56·57	56·54	54·67	52·18
12	47·17	48·07	50·50	53·69	55·55	56·55	56·51	54·66	52·15

TABLE XXVIII.—Mean Daily Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, from the mean of the 12 Observations taken on every Civil Day, from April 16 to ecember 31 (except Sundays and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
1	..	47·80	52·18	58·23	58·38	59·20	59·02	*S*	51·16
2	..	47·86	52·41	58·26	*S*	59·23	59·02	54·19	50·96
3	..	*S*	52·66	58·21	58·38	59·25	58·85	54·10	50·64
4	..	48·02	52·95	58·22	58·43	59·25	*S*	53·99	50·36
5	..	48·18	53·24	*S*	58·36	59·29	58·88	53·87	50·08
6	..	48·36	53·59	58·21	58·32	*S*	58·84	53·74	*S*
7	..	48·59	*S*	58·18	58·32	59·21	58·77	53·70	49·52
8	..	48·84	54·20	58·18	58·35	59·21	58·75	*S*	49·26
9	..	49·06	54·48	58·18	*S*	59·25	58·75	53·60	49·04
10	..	*S*	54·79	58·15	58·99	59·24	58·66	53·49	48·82
11	..	49·44	55·12	58·12	59·34	59·23	*S*	53·41	48·62
12	..	49·63	55·38	*S*	59·34	59·34	58·18	53·29	48·48
13	..	49·83	55·59	58·23	59·26	*S*	57·74	53·16	*S*
14	..	49·99	*S*	58·27	59·29	59·27	57·58	52·97	48·19
15	..	50·14	56·07	58·26	59·28	59·30	57·46	*S*	47·99
16	46·85	50·27	56·30	58·26	*S*	59·33	57·16	52·68	47·78
17	46·99	*S*	56·56	58·27	59·25	59·29	56·71	52·55	47·59
18	47·09	50·48	56·85	58·26	59·29	59·25	*S*	52·48	47·34
19	*S*	50·60	57·14	*S*	59·22	59·23	56·02	52·31	47·18
20	47·37	50·65	57·45	58·32	59·21	*S*	56·08	52·22	*S*
21	47·46	50·71	*S*	58·22	59·21	59·26	56·05	52·13	46·70
22	47·53	50·78	58·11	58·21	59·21	59·25	55·79	*S*	46·46
23	47·56	50·84	58·11	58·29	*S*	59·23	55·67	51·99	46·39
24	47·58	*S*	58·13	58·30	59·25	59·24	55·60	52·02	46·25
25	47·60	51·05	58·20	58·28	59·20	59·20	*S*	51·85	Christ. Day.
26	*S*	51·16	58·24	*S*	59·22	59·20	55·23	51·63	46·07
27	47·67	51·31	58·26	58·33	59·28	*S*	55·09	51·52	*S*
28	47·76	51·49	*S*	58·35	59·17	59·20	54·93	51·51	45·83
29	47·76	51·65	58·30	58·25	59·14	59·07	54·78	*S*	45·69
30	47·78	51·85	58·20	58·37	*S*	59·06	54·64	51·30	45·54
31		*S*		58·40	59·15		54·44		45·39

The letter *S* denotes that the day was Sunday.

The diurnal range of the readings in each month was,

In April	0°·13	In July	0°·20	In October	0°·18
May	0·19	August	0·19	November	0·12
June	0·36	September	0·20	December	0·17

TABLE XXIX.—Monthly Mean Reading of the Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Reading.	1846, Month.	Mean Reading.
April	47°·46	September	59°·23
May	49·94	October	56·99
June	55·87	November	52·79
July	58·25	December	47·97
August	58·99		

The mean for the above period is 54°·17.

TABLE XXX.—Mean Reading at every Even Hour of Göttingen Mean Time, of the Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°
14	47·40	49·83	55·67	58·19	58·92	59·16	57·02	52·83	48·05
16	47·41	49·85	55·68	58·18	58·89	59·16	57·00	52·81	48·03
18	47·41	49·86	55·72	58·20	58·93	59·15	56·99	52·80	48·02
20	47·43	49·90	55·79	58·24	58·95	59·19	57·01	52·80	48·00
22	47·46	49·98	55·87	58·26	59·02	59·25	57·00	52·79	48·01
0	47·47	49·97	55·93	58·29	59·05	59·30	57·02	52·80	47·99
2	47·49	50·00	55·99	58·32	59·07	59·31	57·03	52·81	47·98
4	47·50	50·01	56·00	58·30	59·08	59·33	57·01	52·80	47·96
6	47·50	50·02	55·99	58·30	59·06	59·30	57·98	52·78	47·94
8	47·49	50·00	55·96	58·27	59·03	59·25	57·95	52·76	47·93
10	47·49	49·98	55·91	58·23	58·99	59·21	56·93	52·75	47·90
12	47·48	49·97	55·89	58·21	58·96	59·18	56·91	52·73	47·88

TABLE XXXI.—Mean Daily Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, from the Mean of the Twelve Observations taken on every Civil Day, from April 16 to December 31 (except Sundays and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
1	..	47·72	56·08	62·41	64·83	62·84	58·95	*S*	46·80
2	..	48·07	56·79	62·37	*S*	62·80	58·64	51·36	46·02
3	..	*S*	57·49	62·41	65·10	62·71	58·58	51·46	45·45
4	..	49·48	58·12	62·75	65·02	62·69	*S*	51·63	45·07
5	..	50·28	58·73	*S*	64·91	62·77	58·41	51·84	44·61
6	..	50·81	59·37	63·53	64·97	*S*	58·31	52·01	*S*
7	..	51·15	*S*	63·39	64·96	63·26	58·24	51·94	43·93
8	..	51·36	60·41	62·96	65·05	63·41	58·06	*S*	43·89
9	..	51·59	60·79	62·58	*S*	63·48	57·77	51·33	43·83
10	..	*S*	60·91	62·32	64·88	63·51	57·50	51·01	44·01
11	..	52·19	60·99	62·13	64·68	63·55	*S*	50·62	44·03
12	..	52·35	61·12	*S*	64·47	63·64	57·24	50·33	43·69
13	..	52·52	61·49	62·08	64·25	*S*	56·95	50·06	*S*
14	..	52·63	*S*	62·59	63·87	63·56	56·53	49·87	42·69
15	..	52·55	62·47	63·20	63·43	63·46	55·97	*S*	42·27
16	47·64	52·52	62·91	63·48	*S*	63·33	55·21	49·67	41·85
17	47·96	*S*	63·42	63·53	63·16	63·16	54·81	49·47	41·47
18	48·23	52·52	63·85	63·33	63·01	63·00	*S*	49·41	41·11
19	*S*	52·29	64·26	*S*	62·85	62·78	54·45	49·52	40·90
20	48·06	52·21	64·67	62·86	62·60	*S*	54·37	49·76	*S*

The letter *S* denotes that the day was Sunday.

TABLE XXXIII.—*continued.*

Days of the Month, 1846.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°
21	47·79	52·27	*S*	62·78	62·44	62·00	54·36	49·85	41·26
22	47·51	52·39	65·21	62·81	62·55	61·82	53·93	*S*	41·82
23	47·36	52·78	65·18	62·93	*S*	61·68	53·52	49·48	41·96
24	47·32	*S*	64·99	63·11	62·27	61·63	53·11	49·27	41·73
25	47·51	53·70	64·21	63·21	62·23	61·40	*S*	49·45	Christ. Day.
26	*S*	54·04	63·40	*S*	62·21	61·18	52·58	49·71	41·24
27	47·82	54·31	62·93	62·72	62·26	*S*	52·37	49·60	*S*
28	47·50	54·46	*S*	62·88	62·45	60·51	52·04	49·16	40·56
29	47·41	54·70	62·42	63·23	62·75	60·08	51·72	*S*	40·26
30	47·53	55·06	62·40	63·74	*S*	59·46	51·56	47·70	40·05
31		*S*		64·35	62·92		51·58		39·84

The letter *S* denotes that the day was Sunday.

The diurnal range of the readings in each month was,

In April	0°·26	In July	0°·45	In October	0°·29
May	0·38	August	0·34	November	0·26
June	0·65	September	0·38	December	0·34

TABLE XXXII.—Mean Reading of the Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Reading.	1846, Month.	Mean Reading.
	°		°
April	47·66	September	62·45
May	52·15	October	55·44
June	61·72	November	50·22
July	62·95	December	42·71
August	63·61		

The mean for the above period is 55°·44.

TABLE XXXIII.—Mean Reading at every Even Hour of Göttingen Mean Time of the Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Gottingen Mean Time.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°
14	47·60	51·95	61·45	62·77	63·54	62·39	55·52	50·25	42·81
16	47·61	51·97	61·46	62·76	63·52	62·36	55·49	50·24	42·78
18	47·61	52·00	61·49	62·79	63·53	62·35	55·47	50·23	42·76
20	47·64	52·07	61·58	62·86	63·57	62·38	55·47	50·23	42·75
22	47·69	52·15	61·76	62·97	63·64	62·46	55·47	50·24	42·74
0	47·73	52·22	61·86	63·05	63·70	62·55	55·49	50·25	42·74
2	47·72	52·27	61·93	63·11	63·74	62·61	55·49	50·26	42·73
4	47·73	52·29	61·93	63·12	63·74	62·60	55·46	50·25	42·71
6	47·72	52·28	61·90	63·09	63·70	62·55	55·41	50·21	42·66
8	47·68	52·25	61·81	63·03	63·64	62·46	55·36	50·18	42·63
10	47·64	52·21	61·74	62·96	63·55	62·38	55·32	50·16	42·61
12	47·61	52·17	61·68	62·91	63·49	62·31	55·28	50·14	42·58

TABLE XXXIV.—Mean Daily Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the box which covers the tops of the deep-sunk Thermometers, from the mean of the 12 Observations taken on every Civil Day, from June 20 to December 31 (except Sundays and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°
1	..	60·84	71·20	62·77	55·59	*S*	35·36
2	..	64·49	*S*	63·68	58·36	49·96	36·58
3	..	65·68	66·42	62·56	57·56	53·05	37·25
4	..	67·24	65·48	62·73	*S*	52·97	35·44
5	..	*S*	66·69	66·04	58·13	53·55	36·73
6	..	61·70	70·43	*S*	57·30	48·03	*S*
7	..	60·88	69·16	65·88	55·87	46·05	39·53
8	..	60·10	66·68	65·28	55·04	*S*	40·71
9	..	62·92	*S*	64·80	55·67	45·30	41·95
10	..	62·43	64·97	65·68	57·78	45·17	41·89
11	..	59·72	65·28	65·78	*S*	46·02	34·52
12	..	*S*	64·80	65·96	52·86	45·98	33·46
13	..	67·61	62·87	*S*	52·29	46·96	*S*
14	..	69·00	61·42	63·98	50·31	47·18	31·53
15	..	66·42	64·01	63·48	51·01	*S*	30·73
16	..	64·05	*S*	63·85	53·41	44·77	32·88
17	..	62·71	63·23	64·62	54·19	46·93	34·57
18	..	63·29	62·71	62·15	*S*	49·82	32·31
19	..	*S*	61·82	58·69	54·07	50·72	39·54
20	72·12	62·82	61·01	*S*	52·62	50·81	*S*
21	*S*	63·73	62·56	60·36	51·28	48·86	45·27
22	72·43	65·21	63·23	62·17	48·69	*S*	39·22
23	65·01	66·40	*S*	61·88	48·56	46·53	39·05
24	60·08	63·88	63·13	61·38	49·25	52·58	36·33
25	60·10	61·22	61·57	60·63	*S*	51·58	Christ. Day.
26	59·66	*S*	62·66	59·62	47·55	48·50	33·96
27	61·82	64·96	65·28	*S*	45·38	43·40	*S*
28	*S*	68·51	66·40	56·68	44·68	42·52	32·90
29	64·25	69·69	64·75	55·48	47·31	*S*	36·02
30	62·21	72·33	*S*	52·89	49·12	35·69	33·49
31		72·93	64·15		46·24		30·82

The letter *S* denotes that the day was Sunday.

The diurnal range of the readings in each month was,

	°		°		°
In June	9·3	In September	8·4	In November	4·0
July	9·9	October	4·8	December	3·9
August	7·6				

TABLE XXXV.—Mean Monthly Reading of the Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Monthly Reading.	1846, Month.	Mean Monthly Reading.
	°		°
June.....	64·2	October.....	52·2
July.....	64·8	November.....	47·7
August.....	64·7	December.....	36·2
September.....	62·2		

The mean reading for the above period is 56°·0.

TABLE XXXVI.—Mean Reading at every Even Hour of Göttingen Mean Time of the Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, deduced from all the Observations taken at that Time in each Month.

1846, Hour, Göttingen Mean Time.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°
14	62·19	61·87	63·00	60·48	51·56	47·27	35·88
16	60·97	60·84	62·06	59·68	50·96	47·20	35·69
18	60·40	60·53	61·71	58·87	50·87	46·82	35·40
20	61·34	61·69	61·86	58·82	51·04	46·84	35·48
22	63·31	63·59	63·27	60·28	51·59	46·84	35·33
0	65·86	65·71	65·24	62·72	52·68	47·55	36·12
2	67·06	67·84	66·98	64·75	53·72	48·64	36·95
4	68·64	69·46	68·17	66·18	54·25	49·08	37·67
6	67·82	69·29	68·19	66·23	53·79	48·82	37·27
8	66·39	67·74	66·94	64·52	52·89	48·20	36·66
10	64·14	65·51	65·18	62·93	51·99	47·87	36·34
12	62·10	64·01	63·65	61·28	51·40	47·47	35·98

TABLE XXXVII. — Mean Daily Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with the scales of the other Thermometers, on every Civil Day, from June 18 to December 31 (except Sundays and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1846.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°
1	..	60·98	70·86	60·98	54·53	*S*	30·35
2	..	65·86	*S*	63·66	58·99	50·12	33·40
3	..	67·64	66·16	62·16	56·48	54·23	33·94
4	..	70·88	65·48	61·98	*S*	53·03	32·23
5	..	*S*	67·38	67·20	58·57	53·16	34·54
6	..	59·57	73·27	*S*	56·42	44·09	*S*
7	..	60·31	69·12	66·21	55·20	42·90	38·14
8	..	60·08	65·84	65·44	53·90	*S*	39·33
9	..	63·08	*S*	64·60	55·71	42·09	41·07
10	..	62·29	64·11	65·90	58·11	43·21	40·66
11	..	59·48	64·33	66·53	*S*	44·94	28·91
12	..	*S*	64·30	65·88	50·90	44·63	31·75
13	..	69·48	61·13	*S*	49·40	45·64	*S*
14	..	70·62	60·71	63·38	48·57	46·38	25·67
15	..	65·80	64·11	62·34	50·22	*S*	24·78
16	..	63·33	*S*	64·00	53·44	42·23	29·97
17	..	61·93	62·82	64·21	53·98	46·91	32·54
18	71·15	61·59	60·93	59·79	*S*	50·40	27·94
19	72·49	*S*	60·83	56·36	53·55	51·22	41·17
20	73·51	63·23	59·98	*S*	51·11	50·46	*S*
21	*S*	64·09	62·98	59·08	50·05	48·07	45·88
22	75·84	65·68	63·10	62·01	46·47	*S*	36·66
23	61·48	66·93	*S*	61·24	45·94	47·22	36·56
24	57·07	61·87	62·88	59·76	48·73	53·83	33·38
25	57·65	61·22	60·24	58·73	*S*	51·43	Christ. Day.
26	58·22	*S*	62·34	57·83	44·88	46·36	30·82
27	61·80	65·68	66·58	*S*	42·18	39·85	*S*
28	*S*	71·02	66·58	53·61	40·95	38·21	30·04
29	64·28	73·15	64·48	51·67	46·10	*S*	34·33
30	61·62	74·79	*S*	50·62	48·43	31·07	29·17
31		75·19	64·18		42·74		26·06

The letter *S* denotes that the day was Sunday.

TABLE XXXVIII.—Mean Monthly Reading of the Thermometer whose bulb is placed on a level with the scales of the other Thermometers, from the Mean of all the Two-hourly Observations.

1846, Month.	Mean Monthly Reading.	1846, Month.	Mean Monthly Reading.
	°		°
July	65·40	October	50·95
August.....	64·41	November	46·47
September	61·35	December.....	33·43

TABLE XXXIX.—Mean Reading at every Even Hour of Göttingen Mean Time of the Thermometer whose bulb is placed on a level with the scales of the other Thermometers, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°
14	59·24	59·71	60·51	56·74	49·01	45·30	32·18
16	58·03	58·70	59·67	55·65	48·54	45·08	31·75
18	58·15	58·48	58·85	54·85	48·71	44·91	31·87
20	61·16	60·99	60·17	55·67	48·79	44·68	31·81
22	66·07	65·68	64·20	60·47	50·77	45·66	31·90
0	70·01	69·44	67·82	65·65	53·25	47·26	34·04
2	73·10	72·43	69·99	69·05	54·71	49·42	36·10
4	73·85	72·99	71·25	70·00	54·51	49·42	36·31
6	71·63	71·51	69·83	67·56	52·89	47·76	35·03
8	66·73	68·01	66·00	63·20	51·06	46·58	33·77
10	62·11	64·75	63·35	59·80	50·05	46·00	33·52
12	60·04	62·08	61·30	57·59	49·09	45·53	32·92

Abstract of the Results of the Observations of Thermometers placed 2 feet below the surface of the Water of the Thames.

TABLE XL.—Mean Monthly Reading of the Thermometers immersed in the Thames.

1846, Month.	Monthly Mean of the Maximum Thermometer.	Monthly Mean of the Minimum Thermometer.	1846, Month.	Monthly Mean of the Maximum Thermometer.	Monthly Mean of the Minimum Thermometer.
	°	°		°	°
January	44·3	42·0	July	(67·4)	66·1
February	45·3	42·5	August.....	68·3	66·7
March	48·2	46·3	September.....	(64·7)	63·5
April	51·5	49·4	October	(54·2)	52·8
May.....	59·9	57·2	November	(47·6)	46·0
June.....	73·0	70·8	December.....	(37·6)	34·9

During parts of the months of July, September, November, and December, the maximum thermometer was not in use; the mean excess of the readings of the maximum thermometer above those of the minimum thermometer on those days on which both were in use, was 1°·1 in July, 1°·2 in September, 1°·6 in November, and 2°·7 in December; and the mean reading of the maximum thermometer for each of those months has been inferred by the application of these numbers to the mean reading of the minimum thermometer for the month. During the whole month of October the maximum thermometer was not in use; and the mean of the maximum readings for that month is inferred from the mean of the minimum readings, by the application of 1°·4 to the latter, this number being the mean value of the excess of the maximum over the minimum in the preceding and following months.

The mean of all the observations of the maximum thermometer is 55°·2, and the mean of all the observations of the minimum thermometer is 53°·2. The mean temperature of the water of the Thames for the year 1846 was 54°·2; the water therefore, on the average of the whole year, was 2°·9 warmer than the air.

T 2

Abstracts of the Results of the Observations of the Wet-bulb Thermometer.

TABLE XLI.—Mean Daily Temperature of Evaporation, as deduced from the Mean of the 12 Observations of the Wet-bulb Thermometer, taken on every Civil Day (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Time, corrected by the application of 0° ·2, being the difference between the Readings of the Dry and Wet Thermometers, when under the same circumstances.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	38·3	*S*	*S*	48·3	49·3	57·2	56·7	67·5	56·5	51·1	*S*	28·6
2	33·3	40·5	47·5	49·2	54·7	56·8	62·5	*S*	56·9	57·0	48·5	32·2
3	34·0	45·6	48·3	42·6	*S*	57·4	62·1	60·9	56·2	53·1	51·8	31·6
4	*S*	40·9	47·4	43·8	52·8	59·1	61·4	60·9	56·5	*S*	52·0	31·2
5	31·5	41·0	44·2	*S*	51·7	59·5	*S*	64·6	61·5	56·4	53·0	33·1
6	40·9	39·3	42·2	43·5	52·0	62·0	56·5	68·4	*S*	54·8	41·9	*S*
7	44·4	43·4	42·7	41·9	50·1	*S*	53·9	66·1	61·6	52·5	41·2	36·5
8	44·1	*S*	*S*	43·2	50·8	62·2	56·4	61·6	60·6	50·9	*S*	37·8
9	40·7	31·2	38·1	41·8	52·9	58·8	60·3	*S*	61·1	53·9	40·0	40·3
10	36·5	29·9	41·0	Good Friday	*S*	59·9	59·4	58·5	62·1	55·1	40·6	37·9
11	*S*	32·8	41·9	47·2	49·0	61·3	54·8	57·5	63·0	*S*	42·4	27·5
12	32·8	35·7	43·1	*S*	49·2	63·3	*S*	59·9	62·0	49·8	43·1	29·3
13	38·7	38·9	43·0	50·2	50·9	61·2	62·1	57·9	*S*	45·9	43·2	*S*
14	40·7	39·3	47·4	49·3	46·5	*S*	63·3	54·0	58·0	47·0	44·2	23·8
15	44·5	*S*	*S*	49·0	44·9	62·0	59·2	59·0	58·1	49·1	*S*	23·8
16	43·5	42·3	44·0	50·3	47·8	62·0	60·3	*S*	59·5	51·7	38·9	28·6
17	44·5	41·1	36·1	48·3	*S*	61·6	56·6	57·0	59·0	51·3	46·3	31·1
18	*S*	40·8	32·8	45·9	48·6	62·1	57·4	57·1	54·2	*S*	48·9	26·8
19	47·2	41·1	32·0	*S*	50·4	63·5	*S*	56·8	50·7	51·7	49·2	40·4
20	42·2	41·5	33·4	41·0	50·8	64·9	57·8	57·8	*S*	48·6	48·0	*S*
21	48·2	46·7	35·8	39·5	51·2	*S*	58·7	59·7	55·3	47·4	46·0	44·6
22	49·6	*S*	*S*	42·0	52·6	66·2	56·7	58·2	57·5	44·4	*S*	34·7
23	47·1	51·3	41·2	42·9	55·0	58·2	58·9	*S*	58·8	42·0	46·1	35·5
24	46·5	51·3	40·9	46·0	*S*	53·1	58·9	59·2	56·9	46·3	53·5	32·2
25	*S*	48·8	41·0	47·7	55·8	52·0	55·6	55·1	55·2	*S*	50·6	Christ. Day.
26	47·3	47·7	41·0	*S*	52·3	55·0	*S*	58·2	55·8	43·6	44·2	29·6
27	45·7	50·0	40·9	37·6	51·2	57·6	62·0	61·1	*S*	40·9	38·7	*S*
28	45·1	50·7	39·8	42·5	50·5	*S*	64·6	60·2	51·4	39·2	35·7	28·7
29	45·1		*S*	41·3	52·0	58·3	64·5	60·4	48·0	45·5	*S*	32·0
30	45·7		39·2	45·1	54·3	56·5	66·0	*S*	48·2	47·0	29·5	27·3
31	48·3		43·0		*S*		68·0	58·4		41·0		24·1

The letter *S* denotes that the day was Sunday.

Taking the difference between the numbers contained in this table and the numbers contained in Table XIII., the next table is formed.

TABLE XLII.—True Difference between the Mean Daily Temperature, as shewn by the Dry-bulb Thermometer, and the Mean Daily Temperature of Evaporation, as shewn by the Wet-bulb Thermometer.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	3·3	*S*	*S*	1·7	2·5	4·4	4·6	3·7	2·9	3·1	*S*	0·3
2	2·0	1·3	2·3	1·7	2·0	5·4	3·6	*S*	5·0	0·8	1·8	0·8
3	1·9	1·1	2·2	3·7	*S*	7·0	4·4	3·2	3·7	2·0	1·8	1·7
4	*S*	2·5	2·0	1·6	2·6	5·8	9·2	3·0	3·2	*S*	1·0	1·4
5	1·0	1·0	1·4	*S*	3·7	6·7	*S*	1·7	3·8	2·2	0·3	1·2
6	0·5	2·3	2·5	1·2	2·1	6·5	3·0	3·4	*S*	1·5	0·6	*S*
7	1·4	3·0	2·8	0·9	3·6	*S*	5·3	2·1	3·3	3·3	0·5	1·5
8	1·7	*S*	*S*	2·1	4·2	4·5	3·2	2·9	3·5	2·7	*S*	1·3
9	1·1	1·7	2·7	3·5	4·5	5·2	1·8	*S*	2·6	2·2	1·7	0·5
10	0·9	1·2	1·9	Good Friday	*S*	3·0	0·9	4·1	1·9	3·0	2·1	1·1
11	*S*	2·0	1·8	2·3	4·3	6·2	4·2	5·6	2·2	*S*	1·8	1·1
12	0·9	0·7	1·0	*S*	4·2	6·6	*S*	2·6	3·2	0·9	1·9	0·7

TABLE XLII.—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	1·3	2·2	1·5	2·3	2·1	6·2	6·0	2·3	*S*	2·6	2·0	*S*
14	1·1	1·8	1·9	1·4	4·7	*S*	6·1	5·3	3·3	1·0	1·5	0·7
15	0·6	*S*	*S*	1·0	4·5	7·4	5·2	3·9	3·3	0·8	*S*	0·4
16	0·9	1·3	3·1	1·6	2·6	7·4	2·8	*S*	4·2	1·3	1·9	1·2
17	0·4	2·3	3·3	1·5	*S*	6·6	5·7	4·0	4·3	1·4	0·5	1·0
18	*S*	2·0	3·3	1·3	2·3	6·7	3·8	3·5	3·2	*S*	1·1	0·7
19	0·8	1·4	1·8	*S*	2·8	6·7	*S*	3·4	3·9	2·0	1·7	0·7
20	2·5	2·0	1·3	2·4	1·9	6·3	4·8	1·7	*S*	2·1	2·5	*S*
21	0·6	0·9	2·1	2·8	2·6	*S*	4·1	2·3	3·1	2·6	2·0	1·2
22	1·8	*S*	*S*	3·0	4·2	6·6	7·5	3·1	3·4	2·2	*S*	0·7
23	0·8	0·5	2·5	2·7	2·7	2·8	6·4	*S*	2·1	3·4	1·2	0·8
24	0·6	2·1	1·9	1·2	*S*	3·5	1·8	3·0	2·3	1·9	0·4	0·9
25	*S*	1·8	1·3	1·8	4·3	5·9	4·6	3·7	2·7	*S*	0·8	Christ. Day.
26	0·7	2·4	2·3	*S*	4·8	2·9	*S*	2·6	2·0	0·4	1·5	1·4
27	1·5	2·1	2·4	3·9	5·3	3·4	3·5	4·6	*S*	0·3	0·5	*S*
28	1·7	1·7	1·9	3.9	5·0	*S*	5·3	5·2	1·6	0·2	1·3	0·8
29	2·0		*S*	3·7	4·5	6·2	4·9	2·2	3·0	0·2	*S*	1·1
30	1·1		3·3	3·9	5·6	4·7	7·6	*S*	1·5	0·9	0·4	1·2
31	1·9		2·8		*S*		6·2	5·2		0·2		1·1

The letter *S* denotes that the day was Sunday.

TABLE XLIII.—Mean Monthly Temperature of Evaporation at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month. (The difference 0°·2 between the Readings of the Dry and Wet Thermometers when under the same circumstances has been applied.)

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	42·0	41·1	38·5	41·7	46·9	54·9	56·4	57·0	53·8	47·4	43·9	30·7
16	41·2	40·5	38·2	41·2	46·0	54·2	55·8	56·6	53·4	47·4	43·6	30·5
18	40·8	40·1	37·8	40·9	46·6	55·1	56·3	57·1	52·7	47·5	43·3	30·5
20	40·9	40·4	39·5	43·7	50·8	59·9	59·0	58·8	54·6	47·6	43·3	30·5
22	41·7	41·5	42·6	46·2	53·1	64·0	61·8	61·5	59·1	49·9	44·5	31·0
0	44·0	43·8	44·0	47·8	54·9	64·4	63·2	62·6	61·2	51·1	46·1	33·1
2	44·9	44·8	45·0	48·5	55·5	64·5	63·6	63·0	61·9	51·6	47·0	34·6
4	44·4	44·5	44·6	48·3	55·2	63·6	62·8	63·3	61·4	50·8	46·6	34·2
6	43·0	43·2	43·1	47·2	54·0	62·2	61·9	62·0	59·7	49·3	45·4	32·8
8	42·3	42·3	40·9	45·2	51·5	59·7	60·3	60·1	57·3	48·3	44·7	32·2
10	42·1	41·9	40·2	43·9	49·6	57·6	58·5	58·6	55·7	47·6	44·1	31·6
12	42·0	41·9	39·0	42·8	48·4	56·1	57·4	57·6	54·3	46·9	43·9	31·2

By taking the difference between the numbers contained in this table and those contained in Table XVIII., the next table is formed.

TABLE XLIV.—True Difference between the Mean Temperature of the Air as shewn by the Dry-bulb Thermometer, and the Mean Temperature of Evaporation as shewn by the Wet-bulb Thermometer, at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	0·8	1·4	1·2	1·0	1·4	1·3	1·5	1·1	0·7	0·8	1·1	0·9
16	1·1	1·1	1·1	1·0	1·2	0·9	1·2	1·0	0·5	0·9	1·0	0·8
18	1·0	0·9	0·9	0·9	1·1	1·1	1·2	0·4	0·5	0·8	1·1	0·7
20	1·0	1·0	0·5	1·2	2·3	3·2	3·2	1·6	1·1	0·9	0·9	0·7
22	1·1	1·3	1·4	2·6	5·1	6·7	5·4	4·3	3·4	1·7	1·1	0·7
0	1·4	2·2	3·5	3·8	5·7	9·6	7·9	6·7	6·5	2·8	1·8	1·3
2	1·8	2·8	4·0	4·0	6·5	11·3	8·9	7·4	7·3	3·3	2·3	1·4
4	2·0	3·1	4·2	4·2	6·1	11·2	8·7	6·9	7·1	3·2	2·0	1·2
6	1·7	2·2	3·1	3·4	5·4	9·6	7·8	5·3	4·9	2·1	1·4	1·1
8	1·4	1·9	2·2	2·5	3·8	6·6	5·6	2·9	2·5	1·5	1·2	0·9
10	1·2	1·7	1·8	1·8	2·7	3·4	3·4	1·8	1·3	1·2	1·0	0·9
12	1·1	1·5	1·8	1·3	1·9	2·0	2·2	1·2	0·8	1·0	1·0	0·9

For every even-hour observation, the temperature of the dew-point has been calculated from the simultaneous readings of the dry and wet-bulb thermometers, by means of the tables specified in the Introduction. The means of the twelve temperatures of the dew-point thus deduced every day, have been taken, and in this way the following table has been formed.

TABLE XLV.—Mean Daily Temperature of the Dew Point on every Civil Day (except Sundays, Good Friday, and Christmas Day), as deduced from the Air-Temperature and the Evaporation-Temperature.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	33·8	*S*	*S*	46·6	46·9	54·2	53·4	64·9	54·3	48·5	*S*	28·2
2	30·0	38·8	45·1	47·5	53·1	53·3	60·0	*S*	53·5	56·3	46·8	30·6
3	30·8	44·4	46·1	38·4	*S*	52·9	59·2	58·8	53·4	51·4	50·3	28·3
4	*S*	37·9	45·3	42·0	50·4	55·4	55·5	58·8	54·4	*S*	51·2	28·3
5	29·3	39·6	42·6	*S*	48·6	55·1	*S*	63·5	59·0	54·7	52·6	31·0
6	40·1	36·2	39·3	42·0	50·0	57·9	54·2	66·3	*S*	53·5	41·1	*S*
7	42·7	40·1	39·4	40·7	46·8	*S*	49·7	64·7	59·4	49·8	40·6	34·2
8	42·2	*S*	*S*	40·7	47·1	59·2	53·9	59·5	58·3	48·5	*S*	36·0
9	39·2	27·5	34·7	37·8	49·3	55·3	58·9	*S*	59·4	52·1	37·7	39·5
10	35·0	27·0	38·7	Good Friday	*S*	57·7	58·7	55·4	60·8	52·6	38·0	36·3
11	*S*	28·9	39·9	44·8	45·3	57·5	51·6	53·5	61·6	*S*	40·2	23·1
12	31·2	34·6	42·0	*S*	45·5	59·3	*S*	58·1	59·9	49·0	41·0	26·8
13	37·1	36·0	41·3	48·2	49·0	57·3	58·0	56·0	*S*	43·3	40·8	*S*
14	39·3	36·9	45·5	48·1	42·2	*S*	59·4	50·2	55·5	45·9	42·4	20·6
15	43·8	*S*	*S*	48·0	40·7	57·3	55·7	56·4	55·9	48·2	*S*	21·4
16	42·5	40·6	40·7	48·9	45·4	57·3	58·2	*S*	56·7	50·6	36·4	24·8
17	44·1	38·2	31·7	46·9	*S*	57·5	52·3	54·1	56·3	50·1	45·6	29·0
18	*S*	38·4	27·5	44·3	46·4	57·9	54·6	54·8	51·5	*S*	47·8	24·6
19	46·4	39·3	27·1	*S*	47·8	59·4	*S*	54·2	47·7	50·0	47·5	39·5
20	39·2	39·1	31·3	38·0	49·2	60·9	54·5	56·4	*S*	46·6	45·5	*S*
21	47·2	44·8	32·4	36·1	49·0	*S*	55·8	57·9	52·8	44·9	43·8	43·2
22	47·8	*S*	*S*	38·6	49·4	61·8	51·5	55·9	55·1	41·8	*S*	33·7
23	46·3	50·7	38·4	40·1	52·8	55·8	54·5	*S*	57·3	38·1	44·6	34·2
24	45·8	49·3	38·6	44·8	*S*	50·1	57·7	57·0	55·2	44·2	53·1	30·0
25	*S*	46·9	39·4	46·0	52·4	47·4	52·2	52·3	53·1	*S*	49·7	Christ. Day.
26	46·5	45·3	38·4	*S*	48·3	52·7	*S*	56·3	54·2	43·1	42·5	26·1
27	44·1	48·0	38·1	32·8	46·9	55·1	59·6	58·2	*S*	40·4	38·0	*S*
28	43·2	48·9	37·5	38·5	46·4	*S*	61·3	56·9	50·0	38·9	33·5	26·3
29	42·9		*S*	37·2	48·4	54·1	61·3	58·8	45·3	45·3	*S*	29·4
30	44·3		35·1	41·1	50·3	53·0	61·0	*S*	46·9	46·1	28·1	21·5
31	46·4		40·0		*S*		64·0	54·9		40·8		18·1

The letter *S* denotes that the day was Sunday.

The highest mean daily temperature of the dew-point during the year 1846 was 66°·3 on the 6th of August, and the lowest was 18°·1 on the 31st of December.

By taking the differences between the numbers contained in this table and those contained in Table XIII., the next table is formed.

TABLE XLVI.—True Difference between the Mean Daily Temperature of the Air and the Mean Daily Temperature of the Deduced Dew-Point.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	7·8	*S*	*S*	3·4	4·9	7·4	7·9	6·3	5·1	5·7	*S*	0·7
2	5·3	3·0	4·7	3·4	3·6	8·9	6·1	*S*	8·4	1·5	3·5	2·4
3	5·1	2·3	4·4	7·9	*S*	11·5	7·3	5·3	6·5	3·7	3·3	5·0
4	*S*	5·5	4·1	3·4	5·0	9·5	15·1	5·1	5·3	*S*	1·8	4·3
5	3·2	2·4	3·0	*S*	6·8	11·1	*S*	2·8	6·3	3·9	0·7	3·3
6	1·3	5·4	5·4	2·7	4·1	10·6	5·3	5·5	*S*	2·8	1·4	*S*
7	3·1	6·3	6·1	2·1	6·9	*S*	9·5	3·5	5·5	6·0	1·1	3·8
8	3·6	*S*	*S*	4·6	7·9	7·5	5·7	5·0	5·8	5·1	*S*	3·1
9	2·6	5·4	6·1	7·5	8·1	8·7	3·2	*S*	4·3	4·0	4·0	1·3
10	2·4	4·1	4·2	Good Friday	*S*	5·2	1·6	7·2	3·2	5·5	4·7	2·7
11	*S*	5·9	3·8	4·7	8·0	10·0	7·4	9·6	3·6	*S*	4·0	5·5
12	2·5	1·8	2·1	*S*	7·9	10·6	*S*	4·4	5·3	1·7	4·0	3·2

TABLE XLVI.—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	2·9	5·1	3·2	4·3	4·0	10·1	10·7	4·2	*S*	5·2	4·4	*S*
14	2·5	4·2	3·8	2·6	9·0	*S*	10·0	9·1	5·8	2·1	3·3	3·9
15	1·3	*S*	*S*	2·0	8·7	12·1	8·7	6·5	5·5	1·7	*S*	2·8
16	1·9	3·0	6·4	3·0	5·0	12·1	4·9	*S*	7·0	2·4	4·4	5·0
17	0·8	5·2	7·7	2·9	*S*	10·7	10·0	6·9	7·0	2·6	1·2	3·1
18	*S*	4·4	8·6	2·9	4·5	10·9	6·6	5·8	5·9	*S*	2·2	2·9
19	1·6	3·2	6·7	*S*	5·4	10·8	*S*	6·0	6·9	3·7	3·4	1·6
20	5·5	4·4	3·4	5·4	3·5	10·3	8·1	3·1	*S*	4·1	5·0	*S*
21	1·6	3·8	5·5	6·2	4·8	*S*	7·0	4·1	5·6	5·1	4·2	2·6
22	3·6	*S*	*S*	6·4	7·4	11·0	12·7	5·4	5·8	4·8	*S*	1·7
23	1·6	1·1	5·3	5·5	4·9	5·2	10·8	*S*	3·6	7·3	2·7	2·1
24	1·3	4·1	4·2	2·4	*S*	6·5	3·0	5·2	4·0	4·0	0·8	3·1
25	*S*	3·7	2·9	3·5	7·7	10·5	8·0	6·5	4·8	*S*	1·7	Christ. Day.
26	1·5	4·8	4·9	*S*	8·8	5·2	*S*	4·5	3·6	0·9	3·2	4·9
27	3·1	4·1	5·2	8·7	9·6	5·9	5·9	7·5	*S*	0·8	1·2	*S*
28	3·6	3·5	4·2	7·9	9·1	*S*	8·6	8·5	3·0	0·5	3·5	3·2
29	4·2		*S*	7·8	8·1	10·4	8·1	3·8	5·7	0·4	*S*	3·7
30	2·5		7·4	7·9	9·6	8·2	12·6	*S*	2·8	1·8	1·8	7·0
31	3·8		5·8		*S*		10·2	8·7		0·4		7·1

The letter *S* denotes that the day was Sunday.

The greatest mean daily depression in the year was 15°·1 on the 4th of July. The number of large depressions during the year 1846 was greater than usual.

TABLE XLVII.—Mean Temperature of the Deduced Dew-Point at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Gottingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	40·8	39·0	36·7	40·4	45·3	53·8	55·1	56·1	53·3	46·6	42·5	28·2
16	39·9	38·8	36·2	39·9	44·6	53·3	54·8	55·8	52·9	46·5	42·3	28·0
18	39·3	38·7	36·3	39·7	45·4	54·2	55·3	56·6	52·2	46·6	42·0	28·3
20	39·4	38·7	37·6	42·3	48·7	57·5	57·2	57·5	53·7	46·8	42·1	28·3
22	40·2	39·8	39·6	43·4	49·0	59·6	58·1	58·3	56·5	48·4	43·1	28·7
0	42·3	41·1	40·2	44·1	50·3	58·5	58·0	58·1	56·8	48·6	44·1	30·3
2	42·8	41·6	40·7	44·7	50·4	57·7	57·9	58·1	57·0	48·7	44·6	31·9
4	42·0	41·1	39·9	44·2	50·5	56·6	57·1	59·0	56·7	48·0	44·5	31·8
6	41·0	40·6	39·6	43·7	49·7	56·1	56·8	58·3	56·2	47·3	43·7	30·2
8	40·5	39·8	38·1	42·5	48·1	55·0	56·5	57·8	55·3	46·8	43·4	29·7
10	40·5	39·7	37·8	41·7	47·0	55·0	56·0	57·2	54·6	46·4	42·8	29·1
12	40·6	39·7	37·1	41·2	46·5	54·5	55·6	56·6	53·6	45·9	42·6	28·6

By taking the mean of the numbers in each column the next table is formed.

TABLE XLVIII.—Mean Temperature of the Deduced Dew-Point in each Month, deduced from the Mean of all the Two-hourly Results of the Observations in each Month.

1846, Month.	Mean Temperature of the Dew-Point.	1846, Month.	Mean Temperature of the Dew-Point.
	°		°
January	40·8	July	56·5
February	39·9	August.....	57·5
March	38·3	September	54·9
April	42·3	October	47·2
May.....	48·0	November	43·1
June.....	56·0	December.....	29·4

The mean of all the monthly results is 46°·2.

From the numbers in Table XLVII. the next table is formed, Spring, Summer, Autumn, and Winter being defined as before.

TABLE XLIX.—Mean Temperature of the Deduced Dew-Point, at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

Hour of Observation.	1846.				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h	°	°	°	°	°
14	40·8	55·0	47·5	36·0	44·8
16	40·2	54·6	47·2	35·6	44·4
18	40·5	55·4	46·9	35·4	44·6
20	42·9	57·4	47·5	35·5	45·8
22	44·0	58·7	49·3	36·2	47·1
0	44·9	58·2	49·8	37·9	47·7
2	45·3	57·9	50·1	38·8	48·0
4	44·9	57·6	49·7	38·3	47·6
6	44·3	57·1	49·1	37·3	47·0
8	42·9	56·4	48·5	36·7	46·1
10	42·2	56·1	47·9	36·4	45·7
12	41·6	55·6	47·4	36·3	45·2

From this table it appears that in Spring the maximum took place at 2^h and the minimum at 16^h
" Summer " 22^h " 16^h
" Autumn " 2^h " 18^h
" Winter " 2^h " 18^h
" for the Year " 2^h " 16^h

The difference between the maximum and minimum in Spring was $5°·1$
" " Summer " $4°·1$
" " Autumn " $3°·2$
" " Winter " $3°·4$
" " the Year " $3°·6$

The mean temperature for Spring was $42°·9$
" Summer " $56°·7$
" Autumn " $48°·4$
" Winter " $36°·7$
" the Year " $46°·2$

And the mean temperature at 8^h is in every period nearly the mean for that period.

By taking the differences between the numbers in Table XLVII. and in Table XVIII. the next table is formed.

TABLE L.—Difference between the Mean Daily Temperature of the Air and the Mean Daily Temperature of the Deduced Dew-Point, at every Even Hour of Göttingen Mean Time in the Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	2·0	3·5	3·0	2·3	3·0	2·4	2·8	2·0	1·2	1·6	2·5	3·4
16	2·4	2·8	3·1	2·3	2·6	1·8	2·2	1·8	1·0	1·8	2·3	3·3
18	2·5	2·3	2·4	2·1	2·3	2·0	2·2	0·9	1·0	1·7	2·4	2·9
20	2·5	2·7	2·4	2·6	4·4	5·6	5·0	2·9	2·0	1·7	2·1	2·9
22	2·6	3·0	4·4	5·4	9·2	11·1	9·1	7·5	6·0	3·2	2·5	3·0
0	3·1	4·9	7·3	7·5	10·3	15·5	13·1	11·2	10·9	5·3	3·8	4·1
2	3·9	6·0	8·3	7·8	11·6	18·1	14·6	12·3	12·2	6·2	4·7	4·1
4	4·4	6·5	8·9	8·3	10·8	18·2	14·4	11·2	11·8	6·0	4·1	3·6
6	3·7	4·8	6·6	6·9	9·7	15·7	12·9	9·0	8·4	4·1	3·1	3·7
8	3·2	4·4	5·0	5·2	7·2	11·3	9·4	5·2	4·5	3·0	2·5	3·4
10	2·8	3·9	4·2	4·0	5·3	6·0	5·9	3·2	2·4	2·4	2·3	3·4
12	2·5	3·7	3·7	2·9	3·8	3·6	4·0	2·2	1·5	2·0	2·3	3·5

TABLE LI.—Mean Daily Elastic Force of Vapour for every Civil Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·213	*S*	*S*	0·332	0·336	0·431	0·419	0·615	0·432	0·355	*S*	0·174
2	0·186	0·253	0 316	0·343	0·415	0·418	0·523	*S*	0·421	0·462	0·335	0·190
3	0·191	0·308	0·327	0·250	*S*	0·412	0·509	0·503	0·419	0·392	0·377	0·175
4	*S*	0·246	0·318	0·283	0·379	0·449	0·450	0·503	0·434	*S*	0·389	0·175
5	0·181	0·261	0·289	*S*	0·356	0·444	*S*	0·588	0·506	0·438	0·408	0·192
6	0·265	0·231	0·258	0·283	0·373	0·488	0·431	0·644	*S*	0·421	0·275	*S*
7	0·290	0·265	0·259	0·271	0·335	*S*	0·370	0·611	0·513	0·371	0·270	0·216
8	0·285	*S*	*S*	0·271	0·338	0·509	0·426	0·515	0·494	0·355	*S*	0·230
9	0·257	0·170	0·219	0·245	0·365	0·447	0·504	*S*	0·513	0·401	0·244	0·260
10	0·222	0·167	0·253	Good Friday	*S*	0·485	0·501	0·449	0·537	0·408	0·246	0·232
11	*S*	0·178	0·263	0·312	0·318	0·481	0·394	0·421	0·552	*S*	0·266	0·145
12	0·194	0·219	0·283	*S*	0·320	0·511	*S*	0·491	0·521	0·361	0·274	0·165
13	0·239	0·230	0·277	0·351	0·361	0·478	0·489	0·458	*S*	0·297	0·272	*S*
14	0·258	0·237	0·320	0·350	0·285	*S*	0·513	0·376	0·450	0·324	0·287	0·132
15	0·302	*S*	*S*	0·349	0·271	0·478	0·453	0·464	0·456	0·351	*S*	0·136
16	0·288	0·270	0·271	0·360	0·319	0·478	0·493	*S*	0·469	0·381	0·233	0·154
17	0·305	0·248	0·197	0·336	*S*	0·481	0·404	0·429	0·462	0·375	0·321	0·179
18	*S*	0·250	0·170	0·307	0·330	0·488	0·437	0·440	0·393	*S*	0·346	0·153
19	0·330	0·258	0·167	*S*	0·346	0·513	*S*	0·431	0·345	0·373	0·343	0·260
20	0·257	0·256	0·194	0·246	0·363	0·539	0·435	0·464	*S*	0·332	0·320	*S*
21	0·339	0·312	0·202	0·231	0·361	*S*	0·455	0·488	0·411	0·313	0·302	0·296
22	0·346	*S*	*S*	0·252	0·366	0·555	0·393	0·456	0·444	0·282	*S*	0·212
23	0·329	0·382	0·250	0·265	0·411	0·455	0·435	*S*	0·478	0·247	0·310	0·216
24	0·323	0·365	0·252	0·312	*S*	0·375	0·485	0·473	0·445	0·306	0·415	0·186
25	*S*	0·336	0·259	0·326	0·405	0·342	0·402	0·404	0·415	*S*	0·370	Christ. Day
26	0·331	0·318	0·250	*S*	0·352	0·409	*S*	0·462	0·431	0·295	0·288	0·161
27	0·305	0·349	0·247	0·205	0·336	0·444	0·516	0·493	*S*	0·268	0·246	*S*
28	0·296	0·360	0·242	0·251	0·330	*S*	0·546	0·472	0·373	0·254	0·210	0·163
29	0·292		*S*	0·240	0·354	0·429	0·546	0·503	0·318	0·318	*S*	0·182
30	0·307		0·223	0·275	0·377	0·414	0·541	*S*	0·336	0·327	0·173	0·137
31	0·330		0·264		*S*		0·597	0·441		0·272		0·121

The letter *S* denotes that the day was Sunday.

The mean elastic force of vapour was greater on August 6 than on any other day in the year, being $0^{in.}644$; and it was less on December 31 than on any other day, being $0^{in.}121$.

TABLE LII.—Mean Elastic Force of Vapour at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May	June	July	August.	September.	October.	November.	December.
h	in.	in.	in.	in.	in.	in.	in	in.	in.	in.	in.	in
14	0·272	0·255	0·235	0·268	0·318	0·425	0·444	0·459	0 418	0·332	0·288	0·174
16	0·263	0·253	0·231	0·263	0·310	0·418	0·440	0·455	0·412	0·331	0·286	0·173
18	0·258	0·253	0·232	0·262	0·319	0·431	0·447	0·467	0·402	0·332	0·283	0·175
20	0·259	0·253	0·243	0·286	0·357	0·481	0·476	0·481	0·423	0·335	0·284	0·175
22	0·266	0·263	0·261	0·298	0·361	0·516	0·491	0·494	0·465	0·354	0·295	0·177
0	0·286	0·275	0·266	0·305	0·377	0·498	0·489	0·491	0·470	0·356	0·305	0·188
2	0·291	0·280	0·271	0·311	0·379	0·485	0·488	0·491	0·473	0·357	0·310	0·198
4	0·283	0·275	0. 263	0·306	0·380	0·467	0·475	0·506	0·469	0·349	0·309	0·198
6	0·274	0·270	0·261	0·301	0·370	0·459	0·470	0·494	0·461	0·340	0·301	0·187
8	0·269	0·263	0·247	0·288	0·350	0·442	0·465	0·486	0·447	0·335	0·298	0·184
10	0·269	0·262	0·245	0·281	0·337	0·442	0·458	0·476	0·437	0·330	0·291	0·180
12	0·270	0·262	0·239	0·276	0·331	0·435	0·452	0·467	0·422	0·324	0·289	0·177

By taking the means of the numbers in each month the next table is formed.

TABLE LIII.—Mean Elastic Force of Vapour, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Elastic Force of Vapour.	1846, Month.	Mean Elastic Force of Vapour.
	in.		in.
January	0·272	July	0·466
February	0·264	August.....	0·481
March	0·250	September.....	0·442
April	0·287	October	0·340
May.....	0·349	November	0·295
June.....	0·458	December	0·182

The mean of all the monthly results is $0^{in}{\cdot}341$.

From the numbers in Table LII. the next table is formed, Spring, Summer, Autumn, and Winter being defined as before.

TABLE LIV.—Mean Elastic Force of Vapour at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

Hour of Göttingen Mean Time.	1846.				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h	in.	in.	in.	in.	in.
14	0·274	0·443	0·346	0·234	0·324
16	0·268	0·438	0·343	0·230	0·320
18	0·271	0·448	0·339	0·229	0·322
20	0·295	0·479	0·347	0·239	0·340
22	0·307	0·500	0·371	0·235	0·353
0	0·316	0·493	0·377	0·250	0·359
2	0·320	0·488	0·380	0·256	0·361
4	0·316	0·483	0·376	0·252	0·357
6	0·310	0·474	0·367	0·244	0·349
8	0·295	0·464	0·360	0·239	0·340
10	0·288	0·459	9·353	0·237	0·334
12	0·282	0·451	0·345	0·236	0·329

From this table it appears the force is nearly constant at all periods between 0^h and 4^h, except in the summer period, when the force continues declining after 22^h.

The maximum force took place in Spring at $^h2$
" " Summer " 22
" " Autumn " 2
" " Winter " 2
" " for the Year " 2

The mean force in Spring was $^{in}0{\cdot}295$
" Summer " 0·468
" Autumn " 0·359
" Winter " 0·240
" for the Year " 0·341

And the force at $^h14$ is less than the mean for the whole year by $^{in}0{\cdot}017$
" 16 " " 0·021
" 18 " " 0·019
" 20 " " 0·001
the force at 22 is greater than the mean for the whole year by 0·012
" 0 " " 0·018
" 2 " " 0·020
" 4 " " 0·016
" 6 " " 0·008
the force at 8 is less than the mean for the whole year by 0·001
" 10 " " 0·007
" 12 " " 0·012

The mean elastic force of vapour at 8^h was, therefore, very nearly the same as the mean elastic force for the year.

TABLE LV.—Mean Weight, in Grains, of Vapour in a Cubic Foot of Air, for every Civil Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
1	2·5	*S*	*S*	3·8	3·8	4·8	4·7	6·9	4·8	4·0	*S*	2·0
2	2·2	2·9	3·6	3·9	4·7	4·6	5·6	*S*	4·7	5·1	3·8	2·3
3	2·3	3·6	3·7	2·9	*S*	4·6	5·7	5·6	4·7	4·4	4·3	2·1
4	*S*	2·8	3·6	3·3	4·3	5·0	5·2	5·6	4·8	*S*	4·4	2·0
5	2·2	3·0	3·3	*S*	4·0	5·0	*S*	6·5	5·6	4·9	4·7	2·3
6	3·1	2·7	3·0	3·3	4·2	5·5	4·8	7·2	*S*	4·8	3·2	*S*
7	3·4	3·0	3·0	3·2	3·4	*S*	4·1	6·8	5·7	4·2	3·1	2·5
8	3·3	*S*	*S*	3·1	3·8	5·7	4·8	5·8	5·5	4·0	*S*	2·7
9	3·0	2·1	2·5	2·8	4·1	5·0	5·7	*S*	5·7	4·5	2·8	3·1
10	2·6	2·0	2·9	Good Friday.	*S*	5·4	5·6	5·0	6·0	4·6	2·8	2·7
11	*S*	2·2	3·0	3·6	3·5	5·4	4·4	4·7	6·1	*S*	3·1	1·7
12	2·3	2·6	3·3	*S*	3·6	5·8	*S*	5·4	5·8	4·1	3·1	2·0
13	2·8	2·7	3·2	4·0	4·1	5·4	5·5	5·1	*S*	3·4	3·1	*S*
14	3·0	2·8	3·6	4·0	3·2	*S*	5·8	4·1	5·0	3·7	3·3	1·6
15	3·5	*S*	*S*	4·0	3·0	5·4	5·1	5·2	5·1	3·7	*S*	1·7
16	3·3	3·1	3·1	4·1	3·6	5·4	5·5	*S*	5·3	4·4	2·7	1·8
17	3·3	2·9	2·3	3·8	*S*	5·4	4·5	4·8	5·1	4·2	3·7	2·1
18	*S*	2·9	2·0	3·5	3·7	5·5	4·9	4·9	4·4	*S*	4·0	1·8
19	3·8	3·0	2·1	*S*	3·9	5·8	*S*	4·8	3·8	4·2	3·9	3·0
20	3·0	2·9	2·2	2·8	4·1	6·1	4·8	5·2	*S*	3·8	3·6	*S*
21	3·9	3·6	2·4	2·6	4·1	*S*	5·1	5·1	4·6	3·6	3·5	3·4
22	4·0	*S*	*S*	2·9	4·1	6·3	4·4	5·1	4·9	3·2	*S*	2·5
23	4·0	4·4	2·9	3·0	4·6	5·0	4·9	*S*	5·3	2·8	3·6	2·6
24	3·7	4·1	2·9	3·6	*S*	4·2	5·4	5·3	5·0	3·5	4·7	2·3
25	*S*	3·9	3·0	3·7	4·6	3·8	4·5	4·5	4·6	*S*	4·2	Christ. Day.
26	3·8	3·6	2·9	*S*	3·8	4·6	*S*	5·2	4·9	3·4	3·3	1·9
27	3·5	4·0	2·8	2·3	3·7	5·0	5·8	5·4	*S*	3·1	2·9	*S*
28	3·4	4·1	2·8	2·8	3·7	*S*	6·1	5·3	4·2	3·0	2·5	1·9
29	3·4		*S*	2·7	3·9	4·8	6·2	5·6	3·6	3·7	*S*	2·2
30	3·6		2·6	3·1	4·2	4·6	6·2	*S*	3·8	3·7	2·1	1·7
31	3·8		3·0		*S*		6·7	4·9		3·2		1·5

The letter *S* denotes that the day was Sunday.

The mean weight of vapour in a cubic foot of air was greater on August 6 than on any other day in the year, being 7·2 grains; and it was less on December 31 than on any other day, being 1·5 grains.

TABLE LVI.—Mean Weight, in Grains, of Vapour in a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
14	3·2	3·0	2·8	3·1	3·7	4·8	5·0	5·2	4·7	3·8	3·3	2·1
16	3·0	3·0	2·8	3·1	3·6	4·8	5·0	5·1	4·7	3·8	3·3	2·1
18	3·0	3·0	2·7	3·1	3·7	4·9	5·1	5·3	4·6	3·8	3·3	2·1
20	3·0	3·0	3·0	3·3	4·0	5·4	5·2	5·4	4·8	3·8	3·3	2·1
22	3·1	3·1	3·2	3·4	4·0	5·9	5·5	5·6	5·2	4·0	3·4	2·2
0	3·3	3·2	3 0	3·5	4·3	5·6	5·6	5·6	5·3	4·0	3·5	2·3
2	3·4	3·2	3·1	3·5	4·3	5·5	5·6	5·6	5·4	4·0	3·5	2·4
4	3·3	3·1	3·1	3·5	4·3	5·3	5·5	5·7	5·3	3·9	3·5	2·4
6	3·1	3·1	3·0	3·4	4·1	5·3	5·4	5·6	5·2	3·9	3·5	2·3
8	3·1	3·0	2·9	3·3	4·0	5·0	5·2	5·4	5·0	3·8	3·4	2·3
10	3·1	3·0	2·8	3·2	3·8	5·0	5·2	5·4	4·9	3·8	3·4	2·2
12	3·1	3·1	2·7	3·2	3·8	4·9	5·1	5·4	4·8	3·7	3·4	2·2

By taking the means of the numbers in each column of this table, the next table is formed.

TABLE LVII.—Mean Weight, in Grains, of Vapour in a Cubic Foot of Air in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Weight of Vapour.	1846, Month.	Mean Weight of Vapour.
	gr.		gr.
January	3·1	July	5·3
February	3·1	August	5·4
March	2·9	September	5·0
April	3·3	October	3·9
May	4·0	November	3·4
June	5·2	December	2·2

The mean of all the monthly results is 3·9 grains.

The means of the numbers contained in Table LVI. were taken, Spring, Summer, Autumn, and Winter being defined as before; and thus the following table has been formed:—

TABLE LVIII.—Mean Weight, in Grains, of Vapour in a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr.	gr.
14	3·2	5·0	3·9	2·8	3·7
16	3·2	5·0	3·9	2·7	3·7
18	3·2	5·1	3·9	2·7	3·7
20	3·4	5·3	4·0	2·7	3·9
22	3·5	5·7	4·2	2·8	4·1
0	3·6	5·6	4·3	2·9	4·1
2	3·6	5·6	4·3	3·0	4·1
4	3·6	5·5	4·2	2·9	4·1
6	3·5	5·4	4·2	2·8	4·0
8	3·4	5·2	4·1	2·8	3·9
10	3·3	5·2	4·0	2·8	3·8
12	3·2	5·1	4·0	2·8	3·8

The mean weight of vapour in a cubic foot of air in	Spring	was	gr. 3·4
,,	,,	Summer	,, 5·3
,,	,,	Autumn	,, 4·1
,,	,,	Winter	,, 2·8
,,	,,	for the Year	,, 3·9

TABLE LIX.—Mean additional Weight of Vapour required for complete Saturation of a Cubic Foot of Air, on every Civil Day of the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
1	0·8	*S*	*S*	0·5	0·7	1·4	1·4	1·4	0·9	0·9	*S*	0·1
2	0·4	0·3	0·6	0·5	0·8	1·7	1·6	*S*	1·5	0·3	0·5	0·2
3	0·4	0·3	0·6	1·0	*S*	2·2	1·5	1·1	1·2	0·6	0·5	0·4
4	*S*	0·6	0·6	0·4	0·8	1·9	3·0	1·0	1·0	*S*	0·3	0·5
5	0·2	0·3	0·4	*S*	1·1	2·1	*S*	0·6	1·3	0·7	0·1	0·3
6	0·1	0·6	0·7	0·3	0·6	2·2	1·0	1·3	*S*	0·5	0·2	*S*
7	0·4	0·8	0·7	0·2	1·0	*S*	1 6	0·8	1·2	1·0	0·1	0·4
8	0·5	*S*	*S*	0·6	1·2	1·5	1·0	1·0	1·2	0·9	*S*	0·3
9	0·3	0·4	0·7	0·9	1·3	1·7	0·6	*S*	0·9	0·7	0·4	0·1
10	0·2	0·3	0·5	Good Friday	*S*	1·0	0·3	1·3	0·7	0·9	0·5	0·3

TABLE LIX—*continued.*

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
11	*S*	0·4	0·5	0·7	1·2	1·9	1·3	1·8	0·8	*S*	0·5	0·4
12	0·2	0·2	0·3	*S*	1·2	2·2	*S*	1·0	1·1	0·3	0·5	0·2
13	0·3	0·5	0·4	0·7	0·6	2·0	2·2	0·8	*S*	0·7	0·5	*S*
14	0·3	0·4	0·5	0·4	1·3	*S*	2·1	1·6	1·1	0·3	0·4	0·3
15	0·4	*S*	*S*	0·3	1·2	2·4	1·7	1·3	1·1	0·2	*S*	0·2
16	0·2	0·3	0·8	0·5	0·7	2·4	0·9	*S*	1·4	0·4	0·5	0·4
17	0·4	0·6	0·8	0·4	*S*	2·2	1·8	1·3	1·5	0·4	0·1	0·3
18	*S*	0·5	0·7	0·4	0·7	2·3	1·2	1 1	1·0	*S*	0·3	0·3
19	0·4	0·4	0·4	*S*	0·8	2·3	*S*	1·1	1·1	0·6	0·5	0·2
20	0·7	0·5	0·3	0·6	0·6	2·2	1·5	0·6	*S*	0·6	0·7	*S*
21	0·2	0·5	0·5	0·7	0·8	*S*	1·3	0·8	1·0	0·7	0·6	0·3
22	0·5	*S*	*S*	0·8	1·2	2·4	2·3	1·0	1·1	0·6	*S*	0·2
23	0·2	0·2	0·6	0·7	0·9	1·1	2·0	*S*	0·7	0·9	0·3	0·2
24	0·2	0·6	0·5	0·3	*S*	1·1	0·6	1·0	0·8	0·5	0·1	0·2
25	*S*	0·5	0·4	0·5	1·3	1·7	1·4	1·2	0·9	*S*	0·3	Christ. Day.
26	0·2	0·7	0·6	*S*	1·5	0·9	*S*	0·9	0·6	0·1	0·4	0·4
27	0·4	0·6	0·6	0·9	1·5	1·1	1·2	1·6	*S*	0·1	0·1	*S*
28	0·5	0·5	0·5	1·0	1·4	*S*	1·9	1·7	0·5	0·1	0·3	0·3
29	0·5		*S*	0·9	1·3	2·0	1·7	0·7	0·9	0·1	*S*	0·3
30	0·3		0·9	1·0	1·7	1·5	2·8	*S*	0·3	0·3	0·2	0·4
31	0·6		0·7		*S*		2·4	1·7		0·1		0·4

The letter *S* denotes that the day was Sunday.

TABLE LX.—Mean additional Weight of Vapour required for complete Saturation of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
14	0·2	0·4	0·3	0·3	0·4	0·4	0·2	0·4	0·2	0·2	0·3	0·2
16	0·3	0·3	0·3	0·3	0·3	0·3	0·4	0·3	0·2	0·3	0·3	0·1
18	0·3	0·2	0·2	0·3	0·3	0·4	0·4	0·1	0·2	0·2	0·3	0·2
20	0·3	0·3	0·1	0·3	0·7	1·1	1·1	0·5	0·3	0·3	0·2	0·2
22	0·3	0·3	0·4	0·7	1·5	2·3	1·8	1·5	1·1	0·5	0·3	0·2
0	0·4	0·6	0·9	1·1	1·7	3·4	2·7	2·2	2·1	0·8	0·5	0·3
2	0·5	0·7	1·1	1·1	2·0	4·1	3·1	2·5	2·4	1·0	0·7	0·3
4	0·5	0·8	1·1	1·2	1·8	3·9	2·9	2·3	2·3	0·9	0·6	0·3
6	0·4	0·6	0·8	0·9	1·6	3·2	2·5	1·8	1·6	0·6	0·4	0·2
8	0·4	0·5	0·6	0·6	1·1	2·3	1·9	1·0	0·8	0·4	0·3	0·2
10	0·3	0·4	0·5	0·5	0·8	1·1	1·1	0·6	0·4	0·2	0·3	0·2
12	0·3	0·4	0·4	0·4	0·5	0·6	0·7	0·4	0·3	0·3	0·3	0·2

By taking the means of the numbers in each month the next table is formed.

TABLE LXI.—Mean additional Weight of Vapour, required for complete Saturation of a Cubic Foot of Air in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Additional Weight of Vapour.	1846, Month.	Mean Additional Weight of Vapour.	1846, Month.	Mean Additional Weight of Vapour.
	gr.		gr.		gr.
January	0·4	May	1·1	September	1·0
February	0·5	June	1·9	October	0·5
March	0·6	July	1·6	November	0·4
April	0·6	August	1·1	December	0·2

The mean of all the monthly results is $0^{gr}\cdot8$.

By taking the means of the numbers in Table LX. for quarterly periods, each period being defined as before, the next table has been formed.

TABLE LXII.—Mean additional Weight of Vapour required for complete Saturation of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr.	gr.
14	0·3	0·3	0·2	0·3	0·3
16	0·3	0·3	0·3	0·2	0·3
18	0·3	0·3	0·2	0·2	0·3
20	0·4	0·9	0·3	0·3	0·5
22	0·9	1·9	0·6	0·3	0·9
0	1·2	2·8	1·1	0·4	1·4
2	1·4	3·2	1·4	0·5	1·6
4	1·4	3·0	1·3	0·5	1·5
6	1·1	2·5	0·9	0·4	1·5
8	0·8	1·7	0·5	0·4	0·9
10	0·6	0·9	0·3	0·3	0·5
12	0·5	0·6	0·3	0·3	0·4

The mean additional weight required in Spring	was	gr.	0·8
,, Summer	,,		1·5
,, Autumn	,,		0·6
,, Winter	,,		0·3
,, for the Year	,,		0·8

TABLE LXIII.—Mean Degree of Humidity (complete Saturation = 1) for every Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	0·761	S	S	0·886	0·844	0·775	0·764	0·836	0·840	0·813	S	0·942
2	0·836	0·900	0·850	0·887	0·884	0·732	0·783	S	0·751	0·952	0·881	0·922
3	0·846	0·926	0·856	0·752	S	0·678	0·794	0·839	0·801	0·876	0·888	0·853
4	S	0·814	0·866	0·885	0·845	0·728	0·634	0·847	0·876	S	0·934	0·797
5	0·903	0·915	0·898	S	0·784	0·700	S	0·916	0·814	0·876	0·980	0·898
6	0·961	0·830	0·822	0·912	0·869	0·720	0·835	0·849	S	0·910	0·958	S
7	0·901	0·795	0·804	0·938	0·796	S	0·722	0·900	0·834	0·809	0·955	0·878
8	0·878	S	S	0·848	0·757	0·791	0·825	0·852	0·824	0·857	S	0·895
9	0·915	0·846	0·798	0·760	0·754	0·748	0·900	S	0·866	0·867	0·868	0·962
10	0·923	0·858	0·853	Good Friday	S	0·844	0·949	0·792	0·898	0·831	0·839	0·909
11	S	0·836	0·864	0·847	0·746	0·737	0·772	0·727	0·887	S	0·868	0·821
12	0·922	0·939	0·925	S	0·751	0·723	S	0·843	0·841	0·942	0·859	0·891
13	0·897	0·835	0·888	0·855	0·867	0·725	0·718	0·871	S	0·829	0·854	S
14	0·915	0·864	0·872	0·907	0·717	S	0·739	0·722	0·823	0·928	0·892	0·852
15	0·955	S	S	0·930	0·722	0·691	0·751	0·803	0·824	0·944	S	0·912
16	0·933	0·903	0·788	0·898	0·833	0·691	0·854	S	0·792	0·916	0·863	0·823
17	0·893	0·829	0·753	0·901	S	0·718	0·721	0·789	0·785	0·910	0·965	0·895
18	S	0·848	0·737	0·908	0·852	0·714	0·800	0·813	0·819	S	0·924	0·872
19	0·942	0·890	0·848	S	0·828	0·719	S	0·818	0·771	0·877	0·887	0·946
20	0·822	0·851	0·889	0·822	0·880	0·734	0·761	0·905	S	0·864	0·837	S
21	0·956	0·873	0·827	0·794	0·840	S	0·794	0·876	0·828	0·830	0·861	0·916
22	0·883	S	S	0·789	0·773	0·725	0·657	0·833	0·819	0·845	S	0·941
23	0·942	0·968	0·817	0·812	0·845	0·827	0·708	S	0·887	0·766	0·915	0·931
24	0·957	0·869	0·855	0·915	S	0·800	0·902	0·843	0·870	0·869	0·973	0·915
25	S	0·882	0·895	0·879	0·773	0·690	0·759	0·798	0·847	S	0·949	Christ. Day
26	0·950	0·843	0·829	S	0·737	0·835	S	0·858	0·888	0·970	0·892	0·825
27	0·895	0·865	0·824	0·723	0·712	0·818	0·828	0·780	S	0·976	0·956	S
28	0·783	0·892	0·860	0·742	0·721	S	0·770	0·755	0·897	0·984	0·885	0·880
29	0·861		S	0·746	0·749	0·710	0·785	0·882	0·808	0·993	S	0·899
30	0·927		0·761	0·750	0·714	0·759	0·689	S	0·899	0·935	0·929	0·804
31	0·874		0·803		S		0·740	0·747		0·983		0·779

The day on which the degree of humidity was greater than on any other day in the year was October 29, it being 0·993; and the day on which it was less than on any other day was July 4, it being 0·634; the difference between these numbers is 0·359, which represents the yearly range of the mean daily degree of moisture in the atmosphere for the year 1846.

TABLE LXIV.—Mean Degree of Humidity (complete Saturation = 1) at every Even Hour of Göttingen Mean Time in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·934	0·890	0·902	0·915	0·903	0·922	0·915	0·934	0·954	0·944	0·916	0 903
16	0·902	0·915	0·911	0·915	0·915	0·941	0·929	0·943	0·967	0·937	0·927	0·908
18	0·923	0·931	0·924	0·930	0·924	0·933	0·931	0·976	0·968	0·944	0·918	0·917
20	0·922	0·923	0·962	0·912	0·856	0·835	0·815	0·911	0·935	0·938	0·933	0·917
22	0·920	0·904	0·895	0·827	0·728	0·719	0·756	0·797	0·824	0·886	0·922	0·926
0	0·897	0·844	0·766	0·779	0·713	0·623	0·678	0·716	0·714	0·829	0·875	0·890
2	0·872	0·814	0·744	0·757	0·685	0·574	0·645	0·694	0·684	0·807	0·846	0·884
4	0·858	0·794	0·734	0·749	0·698	0·575	0·652	0·712	0·698	0·807	0·866	0·901
6	0·874	0·842	0·786	0·785	0·718	0·623	0·680	0·760	0·765	0·865	0·904	0·913
8	0·897	0·861	0·835	0·828	0·778	0·705	0·741	0·844	0·863	0·901	0·918	0·915
10	0·906	0·873	0·859	0·873	0·832	0·818	0·822	0·900	0·923	0·919	0·923	0·915
12	0·911	0·885	0·863	0·904	0·874	0·886	0·878	0·931	0·948	0·928	0·927	0·908

By taking the means of the numbers in each column the next table is formed.

TABLE LXV.—Mean Degree of Humidity (complete Saturation = 1) in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Degree of Humidity.	1846, Month.	Mean Degree of Humidity.
January	0·901	July	0·787
February	0·873	August.....	0·843
March	0·848	September	0·853
April	0·848	October	0·892
May	0·802	November	0·906
June.....	0·763	December.....	0·908

The mean of all the monthly results is 0·852.

By taking the means of the numbers in Table LXIV. in quarterly groups, each period being defined as before, the next table was formed.

TABLE LXVI.—Mean Degree of Humidity (complete Saturation = 1) at every Even Hour of Göttingen Mean Time, for Quarterly Periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h					
14	0·907	0·924	0·938	0·909	0·920
16	0·914	0·938	0·944	0·908	0·926
18	0·926	0·947	0·943	0·924	0·935
20	0·910	0·854	0·935	0·921	0·905
22	0·817	0·757	0·877	0·917	0·842
0	0·753	0·672	0·803	0·877	0·776
2	0·729	0·638	0·779	0·857	0·751
4	0·727	0·646	0·790	0·851	0·754
6	0·763	0·688	0·845	0·876	0·793
8	0·814	0·763	0·897	0·891	0·841
10	0·855	0·847	0·922	0·898	0·881
12	0·880	0·898	0·934	0·901	0·903

Thus it appears that at 2^h or 4^h the least degree of humidity prevails, and at 16^h or 18^h the greatest.

The mean degree of humidity in Spring was 0·833
" Summer " 0·798
" Autumn " 0·884
" Winter " 0·894
" the Year " 0·852

Comparing this last number, viz., 0·852, with those contained in the last column of the preceding table, we find that

At 14^h	the degree of humidity was	0·068	greater than the mean for the year.
16	"	0·074	"
18	"	0·083	"
20	"	0·053	"
22	"	0·010	less than the mean for the year.
0	"	0·076	"
2	"	0·101	"
4	"	0·098	"
6	"	0·059	"
8	"	0·011	"
10	"	0·029	greater than the mean for the year.
12	"	0·051	"

And thus it appears that the degrees of humidity at 22^h and 8^h agree more nearly than at any other observation-hour with the degree of humidity for the year.

TABLE LXVII.—Mean Weight, in Grains, of a Cubic Foot of Air, for every Civil Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	grs.	grs.	grs.	grs.	grs.	grs.	grs.	grs.	grs.	grs.	grs.	grs.
1	544·6	S	S	530·0	540·7	528·6	525·9	509·9	531·8	532·1	S	559·7
2	561·0	543·9	537·8	523·8	534·0	528·6	520·9	S	530·3	525 0	537·6	547·7
3	563·0	539·4	535·1	531·3	S	526·3	522·4	520·0	531·7	527·0	535·0	550·9
4	S	546·0	529·4	533·1	531·1	524·8	517·8	521·4	531·0	S	536·8	554·9
5	561·6	544·4	535·3	S	526·0	523·0	S	517·7	523·2	517·8	537·4	555·6
6	549·8	547·5	538·5	527·1	525·2	519·2	519·5	510·9	S	521·2	550·1	S
7	543·0	543·4	539·3	530·0	528·7	S	523·9	512·8	519·6	522·0	552·7	551·7
8	538·1	S	S	530·5	530·5	516·9	524·0	517·1	521·2	525·7	S	555·0
9	559·5	561·5	552·7	538·3	529·1	519·8	518·3	S	523·5	524·5	556·6	551·7
10	561·9	567·3	553·6	Good Friday	S	522·8	523·1	524·5	527·3	521·8	554·9	547·6
11	S	559·1	554·5	529·7	536·1	521·7	530·1	524·9	527·4	S	550·6	556·7
12	557·8	562·3	556·3	S	533·7	519·8	S	524·9	529·9	527·9	550·8	555·5
13	543·3	551·4	552·9	528·8	530·3	521·4	517·8	522·7	S	536·7	550·4	S
14	538·6	551·7	541·5	531·5	535·5	S	512·2	526·2	530·1	528·3	548·3	560·7
15	539·9	S	S	532·1	537·8	520·2	520·5	519·1	529·7	520·5	S	559·5
16	541·8	549·8	532·5	535·5	530·1	522·2	517·6	S	526·4	520·7	551·7	556·5
17	538·9	548·6	539·7	537·4	S	523·4	514·8	522·8	523·4	523·3	540·4	553·4
18	S	547·1	546·1	540·5	520·9	520·9	515·2	518·8	528·1	S	535·2	567·4
19	525·9	547·6	549·4	S	525·7	517·7	S	520·4	528·9	529·4	533·8	546·4
20	533·1	548·0	549·2	547·8	526·3	517·1	522·7	523·5	S	529·8	528·0	S
21	527·5	524·4	543·8	548·0	529·8	S	522·2	521·1	521·3	522·6	533·6	528 1
22	521·1	S	S	542·0	533·2	510·9	521·1	525·7	519·6	527·4	S	537·8
23	526·4	532·8	531·9	540·0	533·3	518·9	519·4	S	515·9	538·3	537·3	532·8
24	531·9	527·0	534·8	537·5	S	521·3	522·9	527·3	518·2	532·4	527·1	544·2
25	S	530·6	535·8	536·9	530·1	521·5	526·7	532·2	525·0	S	527·7	Christ. Day.
26	525·9	534·3	537·8	S	532·7	523·5	S	528·0	524·9	545·8	529·9	565·7
27	532·7	529·8	542·0	546·4	532·7	520·4	525·9	520·2	S	553·2	538·2	S
28	532·8	531·5	540·1	541·5	535·7	S	519·4	520·4	526·7	553·9	543·5	572·2
29	533·2		S	548·2	536·6	518·9	517·6	523·0	527·3	544·5	S	567·7
30	540·4		548·4	545·1	531·9	524·4	511·8	S	533·0	543·8	559·9	575·2
31	537·1		537·7		S		510·2	526·1		550·7		578·1

The letter S denotes that the day was Sunday.

The day in the year when the mean weight of a cubic foot of air was the greatest was December 31, and the day on which it was the least was August 1; the weights were respectively 578·1 grains and 509·9 grains; the difference between these numbers is 68·2 grains.

TABLE LXVIII.—Mean Weight, in Grains, of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time, in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr	gr
14	542·1	546·4	546·6	541·4	538·5	531·2	528·3	527·2	532·0	533·8	543·4	556·5
16	543·0	547·2	546·7	541·9	539·6	532·0	528·1	527·7	532·5	533·4	543·6	556·9
18	543·9	547·6	547·4	542·6	539·3	531·0	527·6	527·6	533·4	533·4	543·8	556·8
20	543·6	547·3	545·9	539·3	533·4	523·5	522·5	524·7	530·8	533·2	544·1	556·8
22	542·8	546·1	541·4	535·0	528·0	515·4	517·4	519·2	523·6	530·1	542·7	556·4
0	539·9	542·7	537·6	531·7	525·3	512·4	513·4	515·5	518·3	527·5	539·9	553·2
2	538·2	541·0	535·7	530·5	523·6	510·6	511·8	514·3	516·6	526·3	538·1	551·1
4	538·7	540·8	535·7	530·1	525·0	511·5	512·9	514·3	517·0	527·3	538·7	551·8
6	540·9	543·0	538·4	532·2	526·0	514·1	514·7	517·2	521·0	530·8	540·8	553·8
8	542·2	544·9	542·3	535·7	530·8	520·3	518·5	521·6	526·1	532·2	542·0	555·0
10	542·7	545·7	543·5	538·4	534·0	525·9	523·9	524·7	529·4	533·4	542·9	555·7
12	542·9	545·8	544·9	540·3	536·2	528·8	525·2	526·5	531·4	534·4	543·1	556·2

By taking the means of the numbers in each column the next table is formed.

TABLE LXIX.—Mean Weight of a Cubic Foot of Air in each Month, deduced from all the Two-hourly Observations in each Month.

1846, Month.	Mean Weight.	1846, Month.	Mean Weight.	1846, Month.	Mean Weight.
	gr.		gr.		gr.
January	541·7	May	531·6	September	526·0
February	544·9	June	521·4	October	531·3
March	542·2	July	520·4	November	541·9
April	536·6	August	521·7	December	555·0

The mean of all the monthly results is 534·6 grains.

By taking the means of the numbers in Table LXVIII. in quarterly periods, the next table is formed, each period being defined as before.

TABLE LXX.—Mean Weight, in Grains, of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time, in Quarterly Periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr	gr.
14	542·2	528·9	536·4	548·3	539·0
16	543·1	529·3	536·5	549·0	539·5
18	543·1	528·7	536·9	549·4	539·5
20	539·5	523·6	536·1	549·2	537·1
22	534·8	517·3	532·1	548·4	533·2
0	531·5	513·8	528·6	545·3	529·8
2	529·9	512·2	527·0	543·4	528·1
4	530·3	512·9	527·7	543·8	528·6
6	532·2	515·3	530·9	545·9	531·1
8	536·3	520·1	533·4	547·1	534·2
10	538·6	524·8	535·2	548·0	536·7
12	540·5	526·8	536·3	548·3	538·0

The even hour here shewn as that at which the mean weight of a cubic foot of air is the least is 2^h, and the hours at which it is the greatest are 16^h and 18^h in spring, 16^h in summer, and 18^h in autumn and winter.

The mean weight for Spring was 536·8 grains
,, Summer ,, 521·1 ,,
,, Autumn ,, 533·1 ,,
,, Winter ,, 547·2 ,,
,, the Year ,, 534·6 ,,

The mean weight at $^{h}14$ exceeds the mean weight for the year by 4·4 grains.
" 16 " " 4·9 "
" 18 " " 4·9 "
" 20 " " 2·5 "
The mean weight of 22 is less than the mean weight for the year by 1·4 "
" 0 " " 4·8 "
" 2 " " 6·5 "
" 4 " " 6·0 "
" 6 " " 3·5 "
" 8 " " 0·4 "
The mean weight of 10 exceeds the mean weight for the year by 2·1 "
" 12 " " 3·4 "

Abstracts of the Results derived from Osler's Anemometer.

Osler's Anemometer was in use from January 5 to the end of the year.

In every month, the mean force of the wind and its direction (supposing the circumference divided into sixteen equal parts) at every hour was copied from the anemometer sheets as recorded by the anemometer, when the pressure on a square foot was more than a quarter of a pound. From this summary a first abstract was formed, by collecting at each hour all the cases in which the wind had blown in each of these sixteen directions, with the forces at the corresponding times. A second abstract was formed by taking the sums of the forces of the wind in each direction in every hour, as inserted in the first abstract; and the number of hours during which the wind blew in that direction, at that hour in the month, was inserted opposite to the sum of the forces.

Adding together the numbers in each month for every hour, the following table was formed:—

TABLE LXXI.—Sums of the Pressures of the Winds for different Directions in every Month, without Distinction of Hours; and Number of Hours during which the Wind blew in each Direction with a recorded Pressure greater than ¼lb. to the Square Foot; the Directions being referred to Sixteen Points of the Azimuthal Circle.

1846, Month.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January															18½	12
February ...					½	1									3¼	5
March															5	2
April	6	6	17¾	26	1¼	3	2	4	1¼	3	½	1	½	1	1½	3
May					4¾	4	28½	29	3	4	1	2			7¼	6
June.....	1	2	½	1			½	1								
July			2¼	2	1	2	1¼	2	4¼	8	1¾	2			1½	3
August.....	6¼	12	5¾	9	¼	1	4¾	7	4½	4	½	1			½	1
September..	¾	3	9½	16			3½	6	5¾	7						
October					¼	1					½	1	1	1	11¼	21
November ..					5½	7	4¼	5	½	1	2½	3				
December...	3¾	8	1½	3			1	2								

TABLE LXXI—*continued.*

1846, Month.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.	
	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.	Sums of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January	22	10	62¾	25	219½	82	90¼	48	5¼	4	9	5	5	1		
February ...	3	4	54¼	35	29	17	115¾	47	7¾	7	16½	14			4¼	6
March	5¼	4	30¼	51	155¾	99	61¼	38	1¼	3	5¼	5			¾	3
April.....	½	1	77¼	44	37	19	91	32	3½	2	2	1	¾	2	13½	19
May.....	6¾	6	34¾	31	14	12	7½	9	1	2						
June.....			16	17	44¾	29	9½	12			¼	1				
July.....	½	1	60	57	106	81	68¼	51	16¾	10	1	2				
August.....	3¼	7	32¼	32	4¾	10	6½	13	3½	5	½	1	½	1	2¾	5
September..			1¾	3	2¾	4	3	4	¼	1					½	1
October....	18¾	8	114	60	103	54	81¼	38	12½	6					42½	21
November..	14	3	68	46	8	15	2	2								
December...	3½	5	28¾	26	27¼	22	3	3	¼	1	10¼	14	8¼	10	20¼	25

The largest number contained in this table is that ranging with January, and under S. W.; the next in order of magnitude is that ranging with March, and under S. W.; the next in February, and under W. S. W.; the next in October, and under S. S. W.; the next in July, and under S. W.; and the next in October, and under S. W.

The first strong wind in the year, of some duration, was from January 19 to January 22, during which there were frequent pressures of 3 lbs. to 8 lbs., occasional pressures of 9 lbs. and 10 lbs., and once the pressure amounted to 12 lbs.; this was the greatest recorded pressure during the year. [See pages (10), (11,) and (12).] The direction of the wind was chiefly S. S. W. From January 28 to January 31 the wind for the most part was blowing strongly, principally from the W. S. W., during which there were occasional pressures of 4 lbs. to 7 lbs. [See page (16).] The next strong wind was on February 6 and 7, from the W. S. W., in which pressures from 3 lbs. to 7 lbs. were recorded. [See pages (22) and (23).] On February 23 and 24 the wind blew from the S. S. W. principally, at times rather strongly, during which pressures of 2 lbs. to 3½ lbs. were recorded. [See page (32).] On March 2 and 3 the wind blew from the S. W., with pressures varying from 2 lbs. to 6lbs. On March 14, 15, and 16, the wind blew strongly on every day; the direction was W. S. W. on the 14th, and S. W. on the 15th and 16th; during these days pressures from 3 lbs. to 6 lbs. were frequent; and on the 16th there were occasional pressures from 7 lbs. to 11 lbs. [See pages (44) and (46).] On March 21, 23, 25, and 26, the wind blew strongly on every day from the S. S. W., and pressures from 2 lbs. to 5 lbs. were recorded. [See pages (48), (50), and (52).] The next strong wind was on April 1, 2, and 3, from the S. S. W. on the 1st, and from the W. S. W. on the 2nd and 3rd; during those days pressures of 3 lbs. to 7 lbs. were recorded frequently. [See pages (54) and (56).] On April 4 and 5 there were occasional pressures from 2 lbs. to 4 lbs. [See page (56).] On April 12 and 13 the wind was blowing strongly from the S. S. W., recording pressures from 1 lb. to 4 lbs. [See page (60).] On May 4, during the early afternoon hours, the direction of the wind was E. N. E., and pressures from 1 lb. to 3½ lbs. were recorded. [See page (72).] On May 13 and 14 the wind blew strongly from the E. N. E. on both days, and pressures from 2 lbs. to 4 lbs. were recorded. [See page (78).] On May 18 and 19 an almost steady wind blew from the S. or S. W., recording pressures from 1 lb. to 5 lbs. [See page (80).] During the early afternoon hours of June 28, 29, and 30, the wind blew strongly, on the 28th from the S. by W., and on the 29th and 30th from the S. W., recording pressures from 2 lbs. to 4 lbs. [See pages (100) and (102).] On July 1 and 2 the wind was blowing constantly, with pressures varying from 1 lb. to 3 lbs. The direction was S. W. [See page (102).] On July 5 and 6 the direction of the wind varied from the S. to the W., and pressures of 1 lb. to 4 lbs. were recorded frequently. [See page (104).] On July 17 and 18 the wind blew strongly; from the W. S.W on the former, and from the S. W. on the latter day; recording pressures of 3 lbs. to 4 lbs. frequently; and on the 18th pressures of 5 lbs. were frequent, and some of 9 lbs. were occasionally recorded. [See pages (110) and (112).] On July 21 the direction of the wind was S. W., and pressures of 3 lbs. were frequent. [See page (114).] On August 13 and 18 there were occasional pressures of 3½ lbs., the direction of the wind being S. S. W. at both times. The next strong wind of any continuance took place on October 5, 6, 7, 8, 9, 10, and 11, the direction on those days varied from S. to W., and pressures from 3 lbs. to 5 lbs. were frequent, and occasionally the pressure amounted to 7 lbs., 8 lbs., or 9 lbs. The period of time between October 5 and October 11 was the longest period of the air being in quick motion during the year. [See pages (160) to (164).] On October 13 the wind blew strongly

from the N.N.W., and for some hours the recorded pressures were from 3 lbs. to 5 lbs. On October 20, 21, 22, and 23, the air was almost always in quick motion, passing from the S. or the S.W., and pressures from 1 lb. to 8 lbs. were recorded. The next strong wind was on November 19 and 20; the direction was chiefly S., and pressures to 3 lbs., 4 lbs., and 5 lbs. were recorded. On November 22nd, at $2^h.20^m$, there was a sudden gust of wind of 11 lbs. pressure, which occurred during a squall. After this time, to the end of the year, there was no strong wind of any long continuance. From the preceding remarks it will be seen, that the whole year 1846 was free from any wind at all approaching to a gale, and by comparison with other years was distinguished by an almost total absence of very strong winds; those winds which were relatively strong during the year, with trifling exceptions, blew from directions included between the S. and W. The columns under the head of E.S.E. and S.E. are nearly blank, therefore these winds have been insignificant in amount during the year, and in this respect the result for this year accords with those deduced from all the preceding years.

At all the hours in every month, when the wind was blowing without recording pressure, and which, consequently, are not included in the preceding table, the direction has been copied from the anemometer sheets, from which the number of hours of each wind not recording pressure in every month has been found, and thus the following table is formed:—

TABLE LXXII.—Number of Hours in each Month during which the Wind blew in each Direction without recording Pressure, the Directions being referred to Sixteen Points of the Azimuthal Circle.

1846, Month.	N.	N.N.E.	NE.	ENE.	E.	E.S.E.	S.E	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Number of Hours in each Month during which the Wind blew without recording Pressure.
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
January									7	52	37	74	7				177
February ...	9		1	1				6	5	70	39	67	13	21	15	18	265
March	1			4	6	3	3	4	20	62	60	33	4	4	5	16	225
April.....	33	36	26	34	21	9	15	11	8	25	10	18	12	4	11	43	316
May.....	21	19	13	27	41	10	5	10	15	54	40	41	17	8	8	32	361
June.....	5	17	31	39	31	52	6	5	9	45	55	23	5	2		3	328
July	4	3	4	13	12	4		4	11	57	49	51	1	7	4	4	228
August.....	45	94	44	11		1	5	9	13	57	23	33	4	1	7	23	370
September ..	27	81	30	34	13	16	8	8	24	47	12	34	3	2	5	6	350
October	12	11	1			3	12	9	26	74	22	6	1	2	2	28	209
November ..	5	10	34	22	30	23	15	29	13	83	34	2			20	26	346
December...	34	23	2	2	2	5		4	2	42	55	49	4	8	26	97	355

By adding together all the quantities for each wind in Tables LXXI. and LXXII. we find that during the year

The	N.	wind blew	31	hours, recording a pressure of	$17\frac{3}{4}$	lbs., and it blew	196 hours without recording any pressure.
	N.N.E.	,,	57	,,	$37\frac{1}{4}$	,,	294 ,,
	N.E.	,,	19	,,	$13\frac{1}{2}$	,,	186 ,,
	E.N.E.	,,	56	,,	$45\frac{1}{2}$	,,	187 ,,
	E.	,,	27	,,	$19\frac{1}{4}$	,,	156 ,,
	E.S.E.	,,	10	,,	$6\frac{3}{4}$	,,	126 ,,
	S.E.	,,	2	,,	$1\frac{1}{2}$	,,	69 ,,
	S.S.E.	,,	53	,,	$48\frac{3}{4}$	,,	99 ,,
	S.	,,	49	,,	$77\frac{1}{2}$	,,	153 ,,
	S.S.W.	,,	427	,,	600	,,	668 ,,
	S.W.	,,	444	,,	$751\frac{3}{4}$	,,	436 ,,
	W.S.W.	,,	297	,,	$539\frac{1}{4}$	,,	431 ,,
	W.	,,	41	,,	52	,,	71 ,,
	W.N.W.	,,	43	,,	$44\frac{3}{4}$	,,	59 ,,
	N.W	,,	14	,,	$14\frac{1}{2}$	,,	103 ,,
	N.N.W	,,	80	,,	$84\frac{1}{2}$	,,	296 ,,

The sum of all the pressures is 2354½ lbs., and the number of hours during which air was in motion without recording pressure is 3530. The S.W. wind has the greatest number opposite to it, and the next in order of magnitude are the S.S.W., W.S.W., N.N.W., and S.

Resolving the sum of the pressures for each direction of the wind into two component forces in the two cardinal directions between which it is included, according to the usual rule in mechanics (by multiplying each force by the cosine of the angle which its direction makes with the cardinal direction), the following results are obtained:—

TABLE LXXIII.—Total Pressures of the Wind during the Year resolved in the Directions of the Cardinal Points of the Compass.

Direction of Wind.	Whole recorded Pressure.	Resolved Parts in the Direction of			
		N.	E.	S.	W.
	lbs.	lbs.	lbs.	lbs.	lbs.
N.	17·8	17·8			
N.N.E.	37·3	34·5	14·3		
N.E.	13·5	9·5	9·5		
E.N.E.	45·5	17·4	42·0		
E.	19·3		19·3		
E.S.E.	6·8		6·3	2·6	
S.E.	1·5		1·1	1·1	
S.S.E.	48·8		18·7	45·1	
S.	77·5			77·5	
S.S.W.	600·0			554·3	229·6
S.W.	751·8			531·6	531·6
W.S.W.	539·3			206·4	498·3
W.	52·0				52·0
W.N.W.	44·8	17·1			41·4
N.W.	14·5	10·3			10·3
N.N.W.	84·5	78·1			32·3
	Sums...	184·7	111·2	1418·6	1395·5

TABLE LXXIV.—Sums of the Pressures of the Wind at every Hour, Greenwich Mean Time (Astronomical Reckoning), independently of Direction, and Number of Hours of its Duration in each Month when a Pressure of more than ¼ lb. was recorded by the Anemometer.

1846, Month.	13h		14h		15h		16h		17h		18h		19h		20h		21h	
	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January..	16¼	7	20¼	6	17	7	18¼	7	13½	6	11½	4	11½	5	12½	7	17¼	8
February.	13	6	7¼	3	7½	2	8	2	6½	3	5¼	3	4¾	3	9¼	4	9	5
March...	6¼	7	8¼	8	5¼	6	4½	5	5¼	5	4¾	4	6¾	5	10¼	7	14	9
April....	6½	2	4¾	3	3¼	2	1¾	1	3½	1	1¾	2	6¾	7	9½	9	11	9
May.....	4⅛	3	3¾	3	1¾	3	½	1	¼	1	1½	3	2¾	3	3½	3	4½	2
June.....									¾	1	¼	1	2¼	2	2	2	2½	2
July.....	4¼	4	3¼	4	3½	4	3¼	4	2½	3	3¼	5	7¼	9	7¼	9	8¾	10
August...	¾	1	¼	1	½	1			½	1			2	4	1½	4	3¾	6
September																	1	2
October..	15½	5	12¾	5	9	5	13¼	7	13½	7	18	8	21	8	15½	8	10½	9
November	1¾	4	1½	3	1¾	4	4½	5	3¾	4	4	4	3½	2	3½	1	2¾	2
December.	2	2	3½	4	3	5	5¼	5	8½	4	7¼	6	6¼	5	4¾	5	5½	5

TABLE LXXIV.—*continued.*

1846, Month.	22h		23h		0h		1h		2h		3h		4h		5h		6h	
	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January ..	16	6	21	8	23	10	30	11	20¾	10	18½	10	19½	11	23	11	15¼	9
February .	11	6	11½	8	14¼	10	15¾	9	15¼	9	14¼	9	9¼	8	10¾	7	10	8
March ...	12	9	18	13	24¼	17	25½	14	25	13	24¼	13	20¾	12	14	9	15	11
April.....	12½	9	17	10	14	12	20¾	12	20	13	21½	12	20¼	14	12	11	12¾	10
May.....	7½	6	5½	8	10	9	9½	8	11½	8	6¾	10	6½	7	7¼	8	3¾	6
June.....	5	4	7¼	5	9¼	6	7	6	7¾	7	8¼	8	7½	7	5	4	3½	4
July	10	11	14	15	19¼	17	22¾	17	29¼	18	26¼	17	26½	17	17¼	11	18¼	13
August...	4¾	10	4	11	8½	12	11	10	9¼	10	8½	11	8	6	6	7	3¼	6
September	4	4	3¼	4	3¼	5	2¾	5	3¼	7	4¼	5	2	3	1¼	3	¼	1
October ..	21½	12	24½	12	29	15	23	14	25¾	16	20¾	11	15	9	17	8	11	7
November	5¾	2	5	2	8½	5	7¼	6	4¾	4	6½	3	3	3	3	2	4¼	3
December.	7¼	3	6	4	6½	5	7¾	6	9¾	9	5¼	7	5½	8	1½	4	3¼	5

	7h		8h		9h		10h		11h		12h		Whole Sum of Pressures.	Whole Number of Hours.
													lbs.	
January ..	15¾	9	17	8	14	7	18¼	7	19	7	23¼	6	432¼	187
February .	12½	6	8	5	9	6	6¼	4	6¼	5	9¾	5	234¼	136
March ...	10	6	9¼	7	6½	6	4¼	6	5¼	6	5½	7	284¾	205
April	10¾	7	13	6	9	7	7	4	8	2	9	2	256¼	167
May.....	1¼	2	½	1	½	1	5	3	5	3	5	3	108½	105
June.....	1½	2	¼	1							2½	1	72½	63
July	10½	8	7½	8	6½	5	3¾	4	4½	5	5	3	264½	221
August...	2¼	4	1	2	¾	2							76½	109
September			1	2	¼	1	½	1	¼	1	¼	1	27½	45
October ..	13½	8	12¼	9	11	8	8	8	11½	6	12¼	6	385	211
November	5½	5	5¼	4	8	5	4¾	3	3½	3	2¾	3	104¾	82
December.	2½	6	2¾	6	1¾	3	2	4	2	4	3	4	108	120

During the months of May, June, September, November, and December the sums are very small; these months were the calmest in the year. The calmest periods were the morning hours in June, and those in September.

			h		lbs.
In January, the maximum sum of pressures occurred at			1,	and it was	30
February	,,	,,	1	,,	15¾
March	,,	,,	1	,,	25½
April	,,	,,	3	,,	21½
May	,,	,,	2	,,	11¼

			h		lbs.
In June	the maximum sum of pressures	occurred at	0	and it was	9½
July	,,	,,	2	,,	29¼
August	,,	,,	1	,,	11
September	,,	,,	3	,,	4½
October	,,	,,	0	,,	29
November	,,	,,	0	,,	8½
December	,,	,,	2	,,	9¾

Thus it appears, that at 1^h in January the sum of the pressures was greater than at any other hour in the year; and the two next in order of magnitude were at 2^h in July and at 0^h in October, respectively.

The ratio of the maximum pressure to the minimum pressure was	,,	,,	in January 3 to 1
	,,	,,	February 3 to 1
	,,	,,	March 6 to 1
	,,	,,	April 11 to 1
	,,	,,	May 46 to 1
	,,	,,	June 37 to 1
	,,	,,	July 12 to 1
	,,	,,	August 44 to 1
	,,	,,	September 17 to 1
	,,	,,	October 4 to 1
	,,	,,	November 6 to 1
	,,	,,	December 6 to 1

The ratios which most nearly approach to equality are those of January, February, and October, and therefore the strength of the wind was more uniform throughout the whole of the day during those months than in any of the other months. The ratio of greatest inequality is that in May.

TABLE LXXV.—Shewing for every Hour of Greenwich Mean Time the Number of Calm Hours in each Month, and also the Number of Hours during which the Wind was blowing without recording Pressure, independently of Direction.

1846, Month.	13^h		14^h		15^h		16^h		17^h		18^h		19^h		20^h		21^h	
	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
January ..	10	9	11	9	10	8	10	8	11	8	11	10	11	9	10	8	10	7
February .	11	11	12	13	12	14	13	13	13	12	12	13	12	13	12	12	11	12
March ...	14	10	16	7	15	10	15	11	17	9	15	12	16	10	15	9	15	7
April	15	12	16	10	16	11	15	13	15	13	15	12	14	8	13	7	11	9
May.....	21	6	20	7	21	6	20	9	19	10	16	11	11	16	7	20	5	22
June.....	20	6	20	6	21	5	20	6	19	6	19	6	15	11	12	14	7	19
July.....	21	6	24	3	24	3	22	5	23	5	20	6	15	7	10	12	10	11
August...	18	12	16	14	13	17	15	16	14	16	13	18	13	14	12	15	8	17
September	17	13	16	14	18	12	17	13	19	11	19	11	18	12	13	17	10	18
October ..	16	10	16	10	15	11	14	10	15	9	16	7	15	8	17	6	13	9
November	16	10	15	12	14	12	13	12	13	13	14	12	14	14	14	15	13	15
December.	10	19	13	14	15	11	16	10	17	10	15	10	15	11	14	12	13	13

TABLE LXXV.—*continued.*

1846, Month.	22h		23h		0h		1h		2h		3h		4h		5h		6h	
	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.	Calm Hours.	Hours of Wind not recording Pressure.
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
January ..	10	11	11	8	11	6	11	5	12	5	12	5	13	3	12	4	12	6
February .	7	15	5	15	7	11	8	10	8	10	6	13	8	12	12	9	14	6
March ...	11	11	11	7	9	5	8	9	8	10	9	9	9	9	9	12	10	10
April	3	18	3	17	3	15	1	17	1	16	0	17	0	15	2	16	5	14
May.....	1	24	1	22	1	20	1	21	3	19	1	19	4	19	4	18	7	17
June.....	1	25	1	24	0	24	2	21	1	20	1	19	1	17	2	19	2	19
July.....	3	17	2	14	2	12	4	10	3	10	3	11	4	10	5	15	5	13
August...	5	16	5	15	4	15	4	17	4	17	4	16	5	20	5	19	9	16
September	6	20	6	20	5	20	7	18	7	15	7	17	7	19	9	17	11	18
October ..	8	11	8	11	7	9	8	9	7	8	8	12	11	11	13	10	14	10
November	11	17	10	18	10	15	7	17	8	18	9	18	9	18	9	19	11	16
December.	9	19	10	17	8	18	7	18	7	15	9	15	8	15	9	18	10	16

	7h		8h		9h		10h		11h		12h		Whole Number of Calm Hours during the Month.	Whole Number of Hours during the Month at which the Wind was blowing without recording Pressure.
January ..	12	6	11	8	12	8	12	8	11	9	12	9	268	177
February .	14	8	14	9	16	6	15	9	15	8	12	11	269	265
March ...	13	12	14	10	15	10	15	10	17	8	16	8	312	225
April	9	13	8	15	11	11	14	11	14	13	14	13	218	316
May.....	12	16	12	17	15	14	15	12	18	9	20	7	255	361
June.....	7	16	10	14	17	9	18	8	19	7	18	7	253	328
July.....	7	16	13	10	15	11	18	9	21	5	21	7	295	228
August...	15	12	14	15	15	14	17	14	19	12	18	13	265	370
September	14	16	19	9	19	10	19	10	19	10	19	10	321	350
October ..	15	8	16	6	19	4	19	4	16	9	18	7	324	209
November	11	14	14	12	15	10	15	12	13	14	14	13	292	346
December.	10	15	11	14	12	16	11	16	9	18	12	15	270	355

By adding together the numbers for each month contained in this table and in Table LXXIV., between 6^h and 19^h, and between 20^h and 5^h, the next two tables are formed.

TABLE LXXVI.

1846, Month.	Between what Hours.	Sum of Pressures.	Number of Hours of Wind		Number of Hours		Total Number of Hours in the Period.
			Recording Pressure.	Not recording Pressure.	Of Calm.	Instrument out of Order.	
	h h	lbs.	h	h	h	h	h
January	6 and 19	230¾	95	115	156	68	434
February		114	61	146	185		392
March		96¾	89	137	208		434
April		97¾	56	169	181	14	420
May		36	36	157	227	14	434
June.....		11	12	126	225	57	420
July		83¼	79	106	249		434
August.....		11¼	22	203	209		434
September.....		2½	7	169	244		420
October		182½	97	113	224		434
November		54¾	52	176	192		420
December.....		53	63	195	176		434

The sum of all the pressures between 6^h and 19^h was 973½ lbs.; the number of hours of wind recording pressure was 669; the number of hours of wind not recording pressure was 1812; the number of hours of calm was 2476; and the number of hours during which the instrument was out of order was 153. The total number of hours in the period was 5110; the total number of hours of effective working of the instrument was 4957; and as wind with pressure was recorded at 669 hours the pressure was equal to or greater than ¼ lb. on the square foot for one hour out of $7^h.25^m$ during the period. The air was in motion for 2481 hours out of 4957, and therefore for one hour out of $2^h.0^m$; and as there were 2476 hours of calm out of 4957, the air was not in motion for one hour out of $2^h.0^m$.

TABLE LXXVII.

1846, Month.	Between what Hours.	Sum of Pressures.	Number of Hours of Wind		Number of Hours		Total Number of Hours in the Period.
			Recording Pressure.	Not recording Pressure.	Of Calm.	Instrument out of Order.	
	h h	lbs.	h	h	h	h	h
January	20 and 5	201½	92	62	112	44	310
February		120¼	75	119	84	2	280
March		188	116	88	104	2	310
April		158¼	111	147	37	5	300
May		72½	69	204	28	9	310
June.....		61½	51	202	28	19	300
July		181¼	142	122	46		310
August.....		65¼	87	167	56		310
September.....		25	38	181	77	4	300
October		202½	114	96	100		310
November		50	30	170	100		300
December.....		54	56	160	94		310

The sum of all the pressures between 20^h and 5^h was 1380 lbs.; the number of hours of wind recording pressure was 981; the number of hours of wind not recording pressure was 1718; the number of hours of calm was 866; the number of hours during which the instrument was out of order was 85. The total number of hours in the period was 3650; the total number of hours of effective working of the instrument was 3565; and as wind with pressure was recorded at 981 hours, the pressure was equal to or greater than ¼ lb. on the square foot for one hour out of $3^h.38^m$ during the period. The air was in motion for 2699 hours out of 3565, and therefore for one hour out of $1^h.19^m$; and as there were 866 hours of calm out of 3565, the air was not in motion during one hour out of $4^h.7^m$.

In each of the years 1841, 1842, and 1843, a marked difference was found between the sums of the pressures included between 6^h and 19^h and those between 20^h and 5^h; in the year 1844 this difference was found to be less strongly marked. In 1845 a decided difference was found

between the sums of the pressures between 7^h and 20^h and those between 21^h and 6^h. In this table there is also a decided difference between the same times.

By taking the sums of all the quantities at each hour, the next table is formed.

TABLE LXXVIII.

1846, Hour,	Sum of Pressures.	Number of Hours of Wind		Number of Hours		Total Number of Hours.
		Recording Pressure.	Not recording Pressure.	Of Calm.	Instrument out of Order.	
h	lbs.	h	h	h	h	h
13	70¾	41	124	189	11	365
14	65½	40	119	195	11	365
15	52½	39	120	194	12	365
16	59½	37	126	190	12	365
17	58½	36	122	195	12	365
18	57½	40	128	185	12	365
19	74¾	53	133	169	10	365
20	79½	59	147	149	10	365
21	90½	69	159	126	11	365
22	112¼	82	204	75	4	365
23	137	100	188	73	4	365
0	169¾	123	170	67	5	365
1	183	118	172	68	7	365
2	182¼	124	163	69	9	365
3	165	116	171	69	9	365
4	143¾	105	168	79	13	365
5	118	85	176	91	13	365
6	100½	83	161	110	11	365
7	86	63	152	139	11	365
8	77¾	59	139	156	11	365
9	67¼	51	123	181	10	365
10	59¾	44	123	188	10	365
11	65¼	42	122	191	10	365
12	78¼	41	120	194	10	365

Therefore, there has been a minimum pressure somewhat before sunrise, and a maximum at about 1^h or 2^h; from which time the sum of the pressures is less at each succeeding hour till 10^h; from this time there is an alternate increase and decrease till about the time of sunrise, after which the sum increases hour by hour.

The sum of all the pressures is 2354½ lbs. The number of hours during which the wind was blowing while recording pressure was 1650; the number of hours during which it was blowing without recording pressure was 3530; and the number of hours that were calm was 3342, as shewn by Osler's Anemometer, from January 5 to the end of the year. Osler's Anemometer was out of order 238 hours during the period it was in use.

From the numbers in Table LXXIV. the following table is immediately formed:—

TABLE LXXIX.—Mean Pressure of the Wind in every Month, at each Hour, independently of Direction, when the Wind blew so as to record a Pressure of more than ¼ lb on the Square Foot.

1846.	13^h	14^h	15^h	16^h	17^h	18^h	19^h	20^h	21^h	22^h	23^h	0^h	1^h	2^h	3^h	4^h	5^h	6^h	7^h	8^h	9^h	10^h	11^h	12^h
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
January.....	2·3	3·4	2·4	2·6	2·3	2·9	2·3	1·8	2·2	2·7	2·6	2·3	2·7	2·1	1·9	1·8	2·1	1·7	1·7	2·1	2·0	2·6	2·7	3·9
February	2·2	2·4	3·8	4·0	2·2	1·7	1·6	2·3	1·8	1·8	1·4	1·4	1·7	1·7	1·6	1·2	1·5	1·3	2·1	1·6	1·5	1·6	1·2	1·9
March.....	0·9	1·0	0·9	0·9	1·1	1·2	1·4	1·5	1·6	1·3	1·4	1·4	1·8	1·9	1·9	1·7	1·6	1·4	1·7	1·3	1·1	0·7	0·9	0·8
April	3·3	1·6	1·6	1·7	3·5	0·9	1·0	1·1	1·2	1·4	1·7	1·2	1·7	1·5	1·8	1·4	1·1	1·3	1·5	2·2	1·3	1·8	4·0	4·5
May.....	1·5	1·3	0·6	0·5	0·2	0·5	0·9	1·2	2·3	1·3	0·7	1·1	1·2	1·4	0·7	0·9	0·9	0·6	0·6	0·5	0·5	1·7	1·7	1·7
June.....					0·8	0·3	1·2	1·0	1·3	1·3	1·5	1·5	1·2	1·1	1·0	1·1	1·3	0·9	0·8	0·3				2·5
July.....	1·1	0·8	0·9	0·8	0·8	0·7	0·8	0·8	0·9	0·9	0·9	1·1	1·3	1·6	1·5	1·6	1·6	1·4	1·3	0·9	1·3	0·9	0·9	1·7
August.....	0·8	0·2	0·5		0·5		0·5	0·2	0·6	0·5	0·4	0·7	1·1	0·9	0·8	1·3	0·9	0·5	0·6	0·5	0·4			
September...									0·5	1·0	0·8	0·6	0·5	0·5	0·9	0·7	0·4	0·3		0·5	0·3	0·5	0·3	0·2
October.....	3·1	2·6	1·8	1·9	1·9	2·3	2·6	1·9	1·2	1·8	2·0	1·9	1·6	1·6	1·9	1·7	2·1	1·6	1·7	1·4	1·4	1·0	1·9	2·0
November...	0·4	0·5	0·4	0·9	0·9	1·0	1·8	3·5	1·4	2·9	2·5	1·7	1·2	1·2	2·2	1·0	1·5	1·4	1·1	1·3	1·6	1·6	1·2	0·9
December....	1·0	0·9	0·6	1·1	2·1	1·2	1·3	1·0	1·1	0·8	1·5	1·3	1·3	1·1	0·8	0·7	0·4	0·7	0·4	0·5	0·6	0·5	0·5	0·8

TABLE LXXX.—Sums of the Pressures of each Wind, at Every Hour of Greenwich Mean Time, and Number of Hours during which it blew with a recorded Pressure not less than $\frac{1}{4}$ lb on the Square Foot, in the Year 1846.

Direction of Wind.	13h		14h		15h		16h		17h		18h		19h		20h		21h	
	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.	Sum of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
N.																		
N.N.E.											$\frac{1}{4}$	1	$1\frac{1}{4}$	3	1	3	$3\frac{1}{4}$	5
N.E.							$\frac{1}{2}$	1	$\frac{3}{4}$	1							$\frac{3}{4}$	2
E.N.E.	$\frac{1}{2}$	1	$\frac{1}{2}$	1	$\frac{1}{2}$	1					$\frac{3}{4}$	1	$1\frac{1}{2}$	1	$2\frac{1}{4}$	3	$3\frac{1}{2}$	3
E.																		
E.S.E.											$1\frac{1}{2}$	1						
S.E.							1	1										
S.S.E.	$\frac{1}{2}$	1	$\frac{3}{4}$	1	1	2	$\frac{1}{2}$	1	1	1	1	2	$1\frac{3}{4}$	2	$3\frac{1}{2}$	2	$4\frac{1}{2}$	2
S.	1	2	$\frac{1}{2}$	1	1	2	2	1	$\frac{1}{2}$	1	$4\frac{1}{2}$	1	$6\frac{1}{4}$	2	$1\frac{1}{2}$	2	$1\frac{1}{2}$	2
S.S.W.	$23\frac{1}{4}$	10	9	12	$5\frac{1}{2}$	9	$13\frac{1}{4}$	12	$13\frac{1}{2}$	12	$8\frac{1}{4}$	8	$15\frac{3}{4}$	13	$19\frac{3}{4}$	14	$22\frac{3}{4}$	18
S.W.	18	14	28	11	$25\frac{1}{2}$	13	$19\frac{1}{2}$	10	$22\frac{1}{4}$	11	$22\frac{3}{4}$	13	$29\frac{1}{2}$	18	$31\frac{3}{4}$	20	35	20
W.S.W.	23	10	$21\frac{1}{4}$	10	$15\frac{1}{2}$	8	$18\frac{3}{4}$	7	$9\frac{1}{2}$	6	$9\frac{1}{4}$	8	$12\frac{1}{4}$	9	$15\frac{1}{2}$	11	15	12
W.	1	1							$6\frac{1}{2}$	2	$4\frac{1}{4}$	1					$1\frac{1}{4}$	1
W.N.W.					$\frac{1}{4}$	1	$1\frac{1}{2}$	2	$1\frac{1}{2}$	1	$1\frac{1}{4}$	1	$1\frac{1}{2}$	1	$\frac{3}{4}$	1	$\frac{1}{2}$	1
N.W.	$\frac{1}{2}$	1	$\frac{1}{2}$	1														
N.N.W.	3	1	5	3	$3\frac{1}{4}$	3	$2\frac{1}{4}$	2	3	1	$3\frac{3}{4}$	3	5	4	$3\frac{1}{2}$	3	3	3

	22h		23h		0h		1h		2h		3h		4h		5h		6h	
N.	$\frac{1}{2}$	1	1	3	$\frac{3}{4}$	2	1	1	2	4	$1\frac{1}{2}$	2	$4\frac{1}{2}$	4	$1\frac{1}{4}$	3	3	6
N.N.E.	$2\frac{1}{4}$	4	$2\frac{3}{4}$	3	5	4	$1\frac{3}{4}$	2	$2\frac{1}{2}$	3	$2\frac{3}{4}$	3	2	3	$2\frac{1}{2}$	4	$3\frac{1}{4}$	5
N.E.	$2\frac{1}{2}$	2	$1\frac{1}{2}$	3					$\frac{1}{2}$	1	$\frac{1}{2}$	1	$1\frac{1}{2}$	1	$\frac{1}{2}$	1	$\frac{1}{4}$	1
E.N.E.	$3\frac{1}{2}$	4	$2\frac{3}{4}$	3	6	6	$6\frac{1}{4}$	7	8	9	$3\frac{1}{4}$	6	$\frac{1}{2}$	1	$1\frac{1}{4}$	3	$\frac{1}{4}$	1
E.	$2\frac{1}{2}$	1	1	3	$4\frac{1}{4}$	5	6	7	3	5	$1\frac{1}{4}$	3	1	2	$\frac{1}{4}$	1		
E.S.E.					1	2					$1\frac{1}{4}$	2	$1\frac{1}{2}$	2	$\frac{1}{2}$	1	$\frac{1}{2}$	1
S.E.													$\frac{1}{2}$	1				
S.S.E.	2	4	$2\frac{1}{2}$	4	$1\frac{1}{2}$	3	$1\frac{3}{4}$	3	$3\frac{1}{2}$	5	$3\frac{1}{2}$	5	1	2	$\frac{1}{2}$	1	$4\frac{1}{4}$	3
S.	$9\frac{1}{4}$	5	$6\frac{1}{4}$	5	$8\frac{3}{4}$	6	3	2	$3\frac{3}{4}$	2	$\frac{3}{4}$	1			5	2	$4\frac{1}{4}$	2
S.S.W.	$26\frac{3}{4}$	19	$41\frac{1}{4}$	31	40	25	$51\frac{3}{4}$	33	$40\frac{3}{4}$	26	42	27	$43\frac{1}{2}$	32	36	23	23	20
S.W.	35	18	$38\frac{1}{2}$	19	$58\frac{1}{4}$	39	$49\frac{1}{2}$	27	$62\frac{1}{2}$	31	58	30	$45\frac{1}{2}$	22	$38\frac{1}{2}$	25	$33\frac{3}{4}$	23
W.S.W.	20	15	$23\frac{1}{2}$	14	$27\frac{3}{4}$	15	$46\frac{1}{4}$	22	$36\frac{3}{4}$	23	$42\frac{1}{4}$	25	$31\frac{1}{2}$	22	$17\frac{1}{4}$	11	$19\frac{1}{2}$	11
W.	1	3	$2\frac{1}{4}$	3	$2\frac{3}{4}$	5	$3\frac{1}{4}$	4	$7\frac{1}{2}$	3			$7\frac{1}{2}$	5	$5\frac{1}{2}$	4	$2\frac{3}{4}$	4
W.N.W.	$\frac{3}{4}$	1	$6\frac{1}{4}$	4	2	2	$2\frac{1}{4}$	2	$4\frac{1}{2}$	3	3	3	$1\frac{1}{4}$	3	$2\frac{3}{4}$	2	$3\frac{1}{2}$	3
N.W.			$1\frac{1}{4}$	1	3	2			$1\frac{1}{2}$	2	$1\frac{1}{4}$	1			5	1	$\frac{1}{4}$	1
N.N.W.	$6\frac{1}{4}$	5	$6\frac{1}{4}$	5	$7\frac{3}{4}$	7	$10\frac{1}{4}$	8	6	7	$4\frac{1}{4}$	7	$2\frac{1}{2}$	5	$1\frac{1}{4}$	3	2	2

	7h		8h		9h		10h		11h		12h		Sums of the Pressures for the Year.	Sums of the Hours.
N.	$1\frac{3}{4}$	3					$\frac{1}{2}$	1	$\frac{1}{4}$	1			$17\frac{3}{4}$	31
N.N.E.	$1\frac{1}{4}$	3	$2\frac{3}{4}$	5	$\frac{3}{4}$	2	1	2	$\frac{1}{4}$	1	$\frac{1}{4}$	1	$37\frac{1}{4}$	57
N.E.	1	1	$\frac{3}{4}$	1	2	2	$\frac{1}{2}$	1					$13\frac{1}{2}$	19
E.N.E.	$\frac{1}{2}$	1	$\frac{3}{4}$	1			$1\frac{1}{2}$	1	1	1	$\frac{1}{2}$	1	$45\frac{1}{2}$	56
E.													$19\frac{1}{4}$	27
E.S.E.			$\frac{1}{2}$	1									$6\frac{3}{4}$	10
S.E.													$1\frac{1}{2}$	2
S.S.E.	$2\frac{3}{4}$	3	$5\frac{1}{2}$	2	$5\frac{1}{4}$	3	$\frac{1}{2}$	1					$48\frac{3}{4}$	53
S.	$4\frac{3}{4}$	2	$2\frac{3}{4}$	2	$\frac{1}{2}$	1	8	2	1	1	$1\frac{1}{4}$	2	$77\frac{1}{2}$	49
S.S.W.	$18\frac{1}{2}$	14	$15\frac{1}{4}$	14	$20\frac{1}{2}$	16	$16\frac{1}{4}$	12	$24\frac{3}{4}$	15	29	12	600	427
S.W.	32	19	$22\frac{1}{2}$	16	$14\frac{3}{4}$	13	14	14	$6\frac{1}{2}$	8	$10\frac{3}{4}$	10	$751\frac{3}{4}$	444
W.S.W.	19	10	$20\frac{1}{4}$	10	$19\frac{1}{2}$	9	$15\frac{1}{2}$	8	29	11	$31\frac{1}{2}$	10	$539\frac{1}{2}$	297
W.	$\frac{3}{4}$	2	$1\frac{1}{2}$	1	$\frac{1}{2}$	1			1	1	$1\frac{1}{2}$	1	52	41
W.N.W.	2	2	$3\frac{3}{4}$	3	$3\frac{1}{2}$	4	$1\frac{3}{4}$	1	$\frac{1}{4}$	1	$\frac{1}{2}$	1	$44\frac{3}{4}$	43
N.W.			$\frac{1}{2}$	1			$\frac{1}{4}$	1	$\frac{1}{4}$	1	$\frac{1}{2}$	1	$14\frac{1}{2}$	14
N.N.W.	$1\frac{1}{4}$	3	1	2					1	1	3	2	$84\frac{1}{2}$	80

TABLE LXXXI.—Mean Pressure of each Wind for every Hour, Greenwich Mean Time, during the whole of the Year.

Direction of Wind.	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	0h
	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.	Mean Pressure.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
N.										0·5	0·3	0·4
N.N.E.						0·3	0·4	0·3	0·7	0·6	0·9	1·2
N.E.				0·5	0·8				0·4	1·3	0·5	
E.N.E.	0·5	0·5	0·5			0·8	1·5	0·7	1·2	0·9	0·9	1·0
E.										1·5	0·3	0·8
E.S.E.						1·5						0·5
S.E.				1·0								
S.S.E.	0·5	0·8	0·5	0·5	1·0	0·5	0·9	1·8	2·3	0·5	0·6	0·5
S.	0·5	0·5	0·5	2·0	0·5	4·5	3·1	0·8	0·8	1·8	1·2	1·5
S.S.W.	2·3	0·8	0·6	1·1	1·1	1·0	1·2	1·4	1·3	1·4	1·3	1·6
S.W.	1·3	2·5	2·0	2·0	2·0	1·7	1·6	1·6	1·8	2·0	2·0	1·5
W.S.W.	2·3	2·1	1·9	2·7	1·6	1·1	1·4	1·4	1·3	1·3	1·7	1·8
W.	1·0				3·3	4·3			1·3	0·3	1·1	0·6
W.N.W.			0·3	0·8	1·5	1·3	1·5	0·8	0·5	0·8	1·6	1·0
N.W.	0·5	0·5									1·3	1·5
N.N.W.	3·0	1·7	1·1	1·1	3·0	1·3	1·3	1·2	1·0	1·2	1·2	1·1

	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h
N.	1·0	0·5	0·6	1·1	0·4	0·5	0·6			0·5	0·3	
N.N.E.	0·9	0·8	0·9	0·7	0·6	0·7	0·4	0·6	0·4	0·5	0·3	0·3
N.E.		0·5	0·5	1·5	0·5	0·3	1·0	0·8	1·0	0·5		
E.N.E.	0·9	0·9	0·5	0·5	0·4	0·3	0·5	0·8		1·5	1·0	0·5
E.	0·9	0·6	0·4	0·5	0·3							
E.S.E.			0·6	0·8	0·5	0·5		0·5				
S.E.				0·5								
S.S.E.	0·6	0·7	0·6	0·5	0·5	1·4	0·9	2·8	1·7	0·5		
S.	1·5	1·9	0·8		2·5	2·1	2·4	1·4	0·5	4·0	1·0	0·6
S.S.W.	1·6	1·6	1·6	1·4	1·6	1·2	1·3	1·1	1·3	1·4	1·6	2·4
S.W.	1·8	2·0	1·9	2·1	1·5	1·5	1·7	1·4	1·1	1·0	0·8	1·1
W.S.W.	2·1	1·5	1·7	1·4	1·6	1·8	1·9	2·0	2·2	1·9	2·6	3·1
W.	0·8	2·5		1·5	1·4	0·7	0·4	1·5	0·5		1·0	1·8
W.N.W.	1·1	1·4	1·0	0·4	1·4	1·2	1·0	1·2	0·9	1·8	0·3	0·3
N.W.		0·8	1·3		5·0	0·3		0·5		0·3	0·3	0·3
N.N.W.	1·3	0·9	0·6	0·5	0·4	1·0	0·4	0·5			1·0	1·5

Abstracts of the Results of Whewell's Anemometer.

On 1846, February 10^d, the instrument was received from the maker after repair.

In every month from this time, the numbers of inches through which the pencil had descended, corresponding to each direction of the wind (supposing the circumference divided into sixteen equal parts) have been collected together, and their sums taken, and thus the following table has been formed:—

TABLE LXXXII.—Sums of the Descents of the Pencil of Whewell's Anemometer in Inches, for different Directions, in every Month, the Directions being referred to Sixteen Points of the Azimuthal Circle.

Period of Observation.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Sums independently of Direction.
d h d h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Feb. 10. 22 to 27. 22		1·00							17·31	19·21	7·43	0·84	3·23	1·13	1·38		51·53
Mar. 0. 22 to 30. 22	0·82	0·14			1·25	1·70			2·06	29·81	51·47	23·81	3·50	2·08	0·18	4·68	121·50
April 0. 22 to 29. 22	10·53	1·15	2·92	1·27	2·28	1·90	0·92	3·40	0·92	19·47	12·28	18·79		0·70	1·12	6·69	84·34
May 0. 22 to 30. 22	0·50	2·59	4·67	4·30	8·37			1·08	8·37	19·02	12·36	3·76	3·28	1·88	0·67	4·65	75·50
June 0. 22 to 29. 22	0·37		2·80	0·78	13·66	6·35			0·66	12·18	15·44	14·97	0·55	0·80			68·56
July 0. 22 to 30. 22	0·70				3·89	0·94		0·21	5·14	18·11	44·75	32·73	6·30	0·64	1·44	0·61	115·46
Aug. 0. 22 to 30. 22	11·78	8·12	7·50	1·05	1·30				4·42	9·80	18·46	8·72	4·39	0·81			76·35
Sep. 0. 22 to 29. 22	9·92	5·83	1·11	3·88	4·47	3·17	0·92		1·55	6·73	7·22	6·74	3·24		1·08	1·17	57·03
Oct. 0. 22 to 30. 22	1·61	0·27			1·18	2·55		7·62	8·70	29·32	34·01	28·33	0·65	0·81	1·83	13·32	130·20
Nov. 0. 22 to 29. 22			6·40	5·02	12·58	4·38	0·90	4·07	7·73	22·20	26·55	11·92	0·05	0·75	4·11	2·85	109·51
Dec. 0. 22 to 30. 22	10·47	2·07	0·70	0·30	3·29			3·76	4·48	3·15	2·38	29·03	5·80	2·22	5·50	31·90	105·05

By taking the sums of the numbers in each column we find that:—

From Feb. 10^d. 22^h to Dec. 30^d. 22^h the descent of the pencil with the		N.	wind was	46·70 inches.
,,	,,	N.N.E.	,,	21·17
,,	,,	N.E.	,,	26·10
,,	,,	E.N.E.	,,	16·60
,,	,,	E.	,,	52·27
,,	,,	E.S.E.	,,	20·99
,,	,,	S.E.	,,	2·74
,,	,,	S.S.E.	,,	20·14
,,	,,	S.	,,	61·34
,,	,,	S.S.W.	,,	189·00
,,	,,	S.W.	,,	232·35
,,	,,	W.S.W.	,,	179·64
,,	,,	W.	,,	30·99
,,	,,	W.N.W.	,,	11·82
,,	,,	N.W.	,,	17·31
,,	,,	N.N.W.	,,	65·87

And the whole descent was 995·03 inches.

Resolving these numbers into the cardinal directions, as for Osler's Anemometer, we have,

TABLE LXXXIII.—Sums of the Descents of the Pencil of Whewell's Anemometer resolved in the Directions of the Cardinal Points.

Direction of Wind.	Whole Descent of Pencil.	Resolved Parts in the Direction of			
		N.	E.	S.	W.
	in.	in.	in.	in.	in.
N.	46·70	46·70			
N.N.E.	21·17	19·56	8·10		
N.E.	26·10	18·46	18·46		
E.N.E.	16·60	6·35	15·34		
E.	52·27		52·27		
E.S.E.	20·99		19·39	8·03	
S.E.	2·74		1·94	1·94	
S.S.E.	20·14		7·71	18·61	
S.	61·34			61·34	
S.S.W.	189·00			174·62	72·33
S.W.	232·35			164·30	164·30
W.S.W.	179·64			68·74	165·97
W.	30·99				30·99
W.N.W.	11·82	4·52			10·92
N.W.	17·31	12·24			12·24
N.N.W.	65·87	60·86			25·21
	Sums	168·69	123·21	497·58	481·96

By taking the sum of all the quantities for each day inserted in the ordinary observations, the following table is immediately formed:

TABLE LXXXIV.—Shewing the whole Descent of the Pencil in the Twenty-four Hours previous to reading the Instrument.

Day and Hour of Reading the Instrument, 1846.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
0.22		3·35	4·82	1·88	0·80	6·00	0·20	2·98	1·63	0·05	1·49
1.22		5·65	7·28	3·47	1·65	7·25	0·85	3·40	2·22	0·90	1·40
2.22		7·50	10·42	1·23	1·17	4·55	0·65	1·00	2·75	4·35	1·15
3.22		9·40	4·50	2·70	1·88	1·73	1·90	0·73	1·75	3·25	1·69
4.22		4·55	6·82	2·50	0·32	0·94	0·85	1·33	4·35	2·43	3·36
5.22		4·56	3·62	4·75	1·53	7·03	1·75	2·19	7·50	1·82	4·20
6.22		6·30	3·06	2·47	0·85	10·00	2·10	0·40	5·82	1·80	4·66
7.22		1·50	1·55	2·38	2·37	1·86	0·60	1·10	8·38	0·72	5·03
8.22		1·75	1·32	0·35	2·73	1·69	3·85	1·75	7·35	2·79	2·47
9.22		0·15	3·11	2·25	3·00	2·55	2·37	0·70	9·65	3·59	2·43
10.22	1·30	1·52	1·29	3·40	2·88	1·83	4·41	1·52	7·00	4·25	6·22
11.22	1·17	0·30	2·30	2·12	1·34	1·44	2·77	0·48	3·33	3·85	4·05
12.22	0·25	1·58	5·82	2·94	0·93	3·33	2·55	3·65	5·02	4·10	3·03
13.22	0·78	5·60	3·55	4·66	1·03	0·18	4·73	2·35	4·25	3·00	3·82
14.22	0·60	7·50	1·60	2·80	1·82	5·20	1·42	1·25	5·73	0·70	2·68
15.22	0·75	7·65	1·01	1·38	1·00	3·25	3·82	1·25	2·55	3·48	3·82
16.22	1·25	8·30	0·94	2·15	1·50	5·75	1·63	2·05	1·70	3·32	5·15
17.22	1 48	0·25	3·05	3·29	1·80	6·25	3·90	0·35	1·85	3·90	3·55
18.22	0·45	0·57	2·68	7·70	1·50	6·20	7·10	0·93	4·65	5·20	6·20
19.23	0·49	0·18	3·62	5·63	0·37	4·23	4·05	0·95	2·65	7·45	6·15
20.22	2·54	0·14	1·15	2·99	2·68	3·75	0·70	2·80	6·85	9·15	8·28
21.22	4·67	7·82	0·28	1·08	2·48	7·25	2·95	2·20	10·15	6·00	5·10
22.22	7·63	5·00	1·62	1·98	3·02	4·00	1·93	3·50	8·08	6·75	4·00
23.22	6·00	5·95	0·90	0·32	4·95	4·70	1·89	3·56	5·05	5·00	2·50
24.22	7·62	5·00	0·52	0·56	3·25	2·45	3·23	5·64	4·10	4·55	2·40
25.22	5·65	5·85	1·00	2·24	3·05	2·47	3·00	2·00	2·68	6·80	3·57
26.22	5·20	4·48	3·31	1·85	2·88	3·18	2·18		0·36	2·60	1·50
27.22	3·70	3·22		2·23	4·48	2·45	3·04		0·11	3·10	0·45
28.22		1·40	1·18	1·00	4·87	0·21	3·23	3·55	0·27	2·54	0·94
29.22		1·53	2 02	0·80	6·43	1·34	2·40	3·42	1·61	2·07	2·86
30.22		2·95		0·40		2·40	0·30		0·81		0·90

By taking the sums of the numbers in each column, we find that,

In February the sum of all the descents of the pencil was			51·53 inches.
March	,,	,,	121·50
April	,,	,,	84·34
May	,,	,,	75·50
June	,,	,,	68·56
July	,,	,,	115·46
August	,,	,,	76·35
September	,,	,,	57·03
October	,,	,,	130·20
November	,,	,,	109·51
December	,,	,,	105·05

And the sum of all the descents was 995·03 inches.

Abstract of the Changes of the Direction of the Wind, as derived from Osler's Anemometer.

In the volume for 1845 the abstract of the changes of the direction of the wind was inadvertently omitted; it is here prefixed to the similar abstract for 1846. By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c.; by *retrograde*, is meant in the order N., W., S., E., N., &c.

TABLE LXXXV.—Monthly Changes of the Wind, as derived from Osler's Anemometer, in the years 1845 and 1846.

	d	h	
1844. Dec.	31.	12.	The direction of the wind was E. N. E.
1845. Jan.	31.	12.	,, ,, N. N. W., which implies apparent retrograde motion 90°.
Jan.	12.	9.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Jan.	22.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of retrograde motion during the month of January was 90°.

	d	h	
1845. Jan.	31.	12.	The direction of the wind was N. N. W.
Feb.	28.	12.	,, ,, E. S. E., which implies apparent retrograde motion 225°.
Feb.	8.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Feb.	16.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Feb.	25.	8.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Feb.	26.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Feb.	27.	21.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of direct motion during the month of February was 855°.

	d	h	
1845. Feb.	28.	12.	The direction of the wind was E. S. E.
March	31.	12.	,, ,, S. E., which implies apparent direct motion 382½°.
March	1.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
March	24.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion during the month of March was 382½°.

	d	h	
1845. March	31.	12.	The direction of the wind was S. E.
April	30.	12.	,, ,, S. W., which implies apparent retrograde motion 270°.
April	7.	9.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
April	9.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion during the month of April was 270°.

	d	h	
1845. April	30.	12.	The direction of the wind was S. W.
May	31.	12.	,, ,, S., which implies apparent retrograde motion 45°.
May	6.	8.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion during the month of May was 315°.

	d	h	
1845. May	31.	12.	The direction of the wind was S.
June	30.	12.	,, ,, S. S. W., which implies apparent direct motion 22½°.
June	15.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
June	17.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
June	19.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
June	26.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion during the month of June was 1462½°.

	d	h	
1845. June	30.	12.	The direction of the wind was S. S. W.
July	31.	12.	,, ,, S. S. W., which implies no apparent change.
July	26.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion during the month of July was 360°.

	d	h	
1845. July	31.	12.	The direction of the wind was S. S. W.
August	31.	12.	,, ,, N. N. E., which implies apparent direct motion 180°.
August	12.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion during the month of August was 180°.

	d	h	
1845. August	31.	12.	The direction of the wind was N. N. E.
Sep.	30.	12.	,, ,, W. S. W., which implies apparent retrograde motion 135°.
Sep.	13.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep.	15.	6.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Sep.	24.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion during the month of September was 225°.

	d	h	
1845. Sep.	30.	12.	The direction of the wind was W. S. W.
Oct.	31.	12.	,, ,, N., which implies apparent direct motion 112½.
Oct.	6.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion during the month of October was 247½°.

	d	h	
1845. Oct.	31.	12.	The direction of the wind was N.
Nov.	26.	12.	,, ,, W. S. W., which implies apparent retrograde motion 112½°.
Nov.	4.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Nov.	21.	9.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of November, to the 26th day, was 112½°.
After this time, Osler's Anemometer was taken down for the purpose of alterations.
The whole excess of direct motion during the year was 2700°.

	d	h	
1846. Jan.	5.	12.	The direction of the wind was S. S. W.
Jan.	31.	12.	,, ,, W. S. W., which implies apparent direct motion 45°.

Therefore the whole excess of direct motion in the month of January, from the 5th day, was 45°.

	d	h	
1846. Jan.	31.	12.	The direction of the wind was W. S. W.
Feb.	28.	12.	,, ,, W. S. W., which implies no apparent change.
Feb.	1.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Feb.	5.	2.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of February was 720°.

	d	h	
1846. Feb.	28.	12.	The direction of the wind was W. S. W.
March	31.	12.	,, ,, S. S. W., which implies apparent retrograde motion 45°.
March	28.	4.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
March	29.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of March was 675°.

		d	h	
1846.	March	31.	12.	The direction of the wind was S.S.W.
	April	30.	12.	,, ,, W., which implies apparent direct motion 67½°.
	April	3.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	April	4.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	April	6.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	April	25.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	April	29.	19.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole extent of direct motion in the month of April was 1147½°.

		d	h	
1846.	April	30.	12.	The direction of the wind was W.
	May	31.	12.	,, ,, E., which implies apparent retrograde motion 180°.
	May	4.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	9.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	16.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	May	23.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	28.	19.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	30.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole extent of direct motion in the month of May was 540°.

		d	h	
1846.	May	31.	12.	The direction of the wind was E.
	June	30.	12.	,, ,, S.S.W., which implies apparent direct motion 112½°.
	June	7.	3.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	June	12.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	June	16.	19.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	June	18.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	June	19.	19.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	June	22.	8.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of June was 1327½°.

		d	h	
1846.	June	30.	12.	The direction of the wind was S.S.W.
	July	31.	12.	,, ,, E.N.E., which implies apparent retrograde motion 135°.

Therefore the whole excess of retrograde motion in the month of July was 135°.

		d	h	
1846.	July	31.	12.	The direction of the wind was E.N.E.
	August	31.	12.	,, ,, N., which implies apparent direct motion 292½°.
	August	1.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	August	4.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	August	5.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	August	14.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of August was 1012½°.

		d	h	
1846.	August	31.	12.	The direction of the wind was N.
	Sep.	30.	12.	,, ,, W.N.W., which implies apparent retrograde motion 67½°.
	Sep.	6.	5.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Sep.	18.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Sep.	23.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of direct motion in the month of September was 292½°.

		d	h	
1846.	Sep.	30.	12.	The direction of the wind was W.N.W.
	Oct.	31.	12.	,, ,, W., which implies apparent retrograde motion 22½°.
	Oct.	17.	22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of October was 382½°.

		d h	
1846.	Oct.	31. 12.	The direction of the wind was W.
	Nov.	30. 12.	„ „ N. N. W., which implies apparent direct motion $67\frac{1}{2}°$.

Therefore the whole excess of direct motion in the month of November was $67\frac{1}{2}°$.

		d h	
1846.	Nov.	30. 12.	The direction of the wind was N. N. W.
	Dec.	31. 12.	„ „ S. E., which implies apparent retrograde motion $202\frac{1}{2}°$.
	Dec.	23. 2.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	Dec.	23. 22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Dec.	24. 22.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of December was $562\frac{1}{2}$.

The whole excess of direct motion from Jan. $5^d.\ 12^h$ to the end of the year was $652\frac{1}{2}°$.

Amount of Cloud in the Year 1846.

TABLE LXXXVI.—Mean Amount of Cloud as deduced from the Twelve Observations taken Daily at the Even Hours of Göttingen Mean Time for every Day in the Year (except Sundays, Good Friday, and Christmas Day). (The number 10 denotes that the Sky was completely covered with Clouds.)

Days of the Month 1846.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	4·5	*S*	*S*	7·3	10·0	0·0	7·1	7·7	8·8	6·8	*S*	7·5
2	2·8	9·3	6·4	9·0	9·6	0·9	9·8	*S*	3·5	10·0	7·0	9·8
3	8·0	10·0	8·9	6·2	*S*	0·0	5·8	8·3	0·0	5·8	6·9	6·8
4	*S*	4·6	8·3	10·0	9·1	1·6	0·0	7·3	1·3	*S*	4·5	2·9
5	3·0	9·5	7·0	*S*	8·3	4·5	*S*	7·0	3·7	8·4	8·9	6·3
6	9·1	5·9	6·8	9·4	8·6	5·2	8·5	8·1	*S*	9·3	10·0	*S*
7	9·6	6·3	7·8	9·9	6·9	*S*	10·0	8·3	5·1	8·7	10·0	9·7
8	10·0	*S*	*S*	8·9	8·5	8·2	9·9	8·3	6·8	5·3	*S*	8·8
9	10·0	4·5	4·0	5·6	6·8	5·2	9·8	*S*	6·4	9·2	9·1	9·9
10	10·0	6·8	3·3	Good Friday.	*S*	8·7	8·0	9·9	8·7	6·3	5·2	9·2
11	*S*	4·8	6·8	9·5	3·5	7·7	6·8	8·3	6·6	*S*	4·6	5·6
12	10·0	8·7	8·3	*S*	3·1	5·4	*S*	7·2	8·3	6·7	7·7	7·6
13	7·1	9·8	6·7	6·3	9·9	2·8	3·0	7·4	*S*	8·1	10·0	*S*
14	8·1	7·4	10·0	7·2	3·2	*S*	4·8	3·5	8·1	8·5	10·0	1·7
15	8·2	*S*	*S*	10·0	1·9	1·2	4·3	5·6	5·8	6·5	*S*	3·2
16	9·6	9·9	9·7	7·3	7·8	2·5	10·0	*S*	3·8	7·1	9·3	1·9
17	8·6	9·9	5·8	9·6	*S*	0·4	7·3	7·5	5·0	7·1	9·8	6·3
18	*S*	10·0	8·3	10·0	9·2	1·4	8·3	7·5	3·5	*S*	5·2	3·9
19	9·9	10·0	8·3	*S*	7·1	6·3	*S*	9·0	3·7	2·7	5·3	10·0
20	3·8	10·0	9·3	6·6	6·9	6·0	7·5	9·8	*S*	7·3	5·6	*S*
21	10·0	7·3	6·4	6·4	6·8	*S*	9·4	7·2	9·1	8·8	4·4	7·5
22	7·3	*S*	*S*	6·3	4·6	6·5	7·4	6·9	6·3	9·7	*S*	6·1
23	7·5	9·0	5·2	6·6	8·4	9·3	4·7	*S*	7·3	5·5	9·8	10·0
24	7·6	7·1	5·3	7·7	*S*	8·1	8·6	9·6	9·2	7·4	9·2	9·9
25	*S*	7·6	6·7	9·0	4·8	6·3	3·0	8·3	6·5	*S*	8·1	Christ. Day.
26	8·5	5·4	5·5	*S*	8·0	9·0	*S*	8·7	7·4	9·4	4·0	0·3
27	7·6	7·1	3·3	4·7	5·7	6·4	9·8	6·5	*S*	9·2	9·9	*S*
28	6·8	4·6	8·1	7·3	4·2	*S*	8·1	5·6	8·5	10·0	6·0	9·8
29	8·0		*S*	3·3	5·9	3·5	2·3	8·1	2·6	10·0	*S*	8·9
30	7·3		5·8	6·6	0·8	4·6	0·2	*S*	6·6	9·1	5·8	9·1
31	8·3		5·2		*S*		5·5	5·1		10·0		3·1

The letter *S* denotes that the day was Sunday.

From this table it appears that there were four days in the year free from cloud, viz., June 1 and 3, July 4, and September 3. There were however three additional that may be considered cloudless, viz., June 17, July 30, and December 26. The periods about June 3, 16, and September 3 were the longest clear periods in the year. There were twenty-six totally cloudy days, viz., January 8, 9, 10, 12, and 21; February 3, 18, 19, and 20; March 14; April 4, 15, and 18; May 1; July 7 and 16; October 2, 28, 29, and 31; November 6, 7, 13, and 14; December 19 and 23. Besides these there were twenty-nine days that may be considered totally cloudy, viz., January 7, 16, and 19; February 5, 13, 16, and 17; March 16; April 7, 11, and 17; May 2 and 13; July 2, 8, 9, and 27; August 10, 20, and 24; October 22; November 17, 23, and 27; December 2, 7, 9, 24, and 28. Or there were only seven days in the year that can be considered cloudless, and there were fifty-five days in the year that may be considered quite cloudy.

TABLE LXXXVII.—Mean Amount of Cloud in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1846, Month.	Mean Amount of Cloud 0–10.	1846, Month.	Mean Amount of Cloud 0–10.
January	7·8	July	6·7
February	7·7	August.....	7·6
March	6·8	September.....	5·9
April	7·6	October	7·9
May.....	6·5	November	7·4
June.....	4·7	December	6·8

The mean of all the monthly results is 7·0.

TABLE LXXXVIII.—Mean Amount of Cloud at every Even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month.

1846, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	7·2	8·1	5·6	6·6	6·4	4·3	6·8	7·8	5·1	7·8	7·7	6·3
16	7·6	7·2	6·8	6·8	6·0	4·8	6·6	8·4	5·7	8·6	7·6	7·4
18	7·9	6·9	6·1	6·8	6·6	5·4	7·3	8·5	7·1	8·4	7·3	7·0
20	7·8	8·3	6·3	6·8	6·6	4·5	6·6	8·3	7·0	8·2	8·8	7·1
22	8·6	7·5	7·6	7·9	6·8	4·6	7·5	8·0	6·8	8·2	7·9	7·0
0	8·9	7·7	8·2	8·4	7·9	5·2	7·5	8·2	7·3	8·3	7·6	7·5
2	8·4	8·3	8·4	8·8	7·3	5·1	7·2	8·2	7·8	8·2	7·3	7·2
4	7·5	8·6	8·4	8·6	7·0	5·1	6·8	7·2	6·0	8·2	7·5	6·4
6	7·6	8·0	7·5	9·0	6·3	4·7	6·1	6·7	5·5	8·0	7·4	6·1
8	7·3	7·3	6·1	7·9	5·1	4·4	6·1	6·4	4·0	6·6	6·7	6·8
10	6·8	7·3	5·8	7·1	6·0	3·4	5·7	6·2	4·0	6·5	6·3	6·2
12	8·1	7·7	4·9	6·7	6·4	4·7	5·6	6·9	4·2	7·5	7·2	6·1

Generally the largest quantities of cloud prevail during the day and the least during the night.

The next table is formed in the usual way from the numbers in the above table.

TABLE LXXXIX.—Mean Amount of Cloud in Quarterly Periods, and for the Year.

1846, Hour, Göttingen Mean Time.	Mean Amount of Cloud in				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h					
14	6·2	6·3	6·9	7·2	6·7
16	6·5	6·6	7·3	7·4	7·0
18	6·5	7·1	7·6	7·3	7·1
20	6·6	6·5	8·0	7·7	7·2
22	7·4	6·7	7·6	7·7	7·4
0	8·2	7·0	7·7	8·0	7·7
2	8·2	6·8	7·8	8·0	7·7
4	8·0	6·4	7·2	7·5	7·3
6	7·6	5·8	7·0	7·2	6·9
8	6·4	5·6	5·8	7·1	6·2
10	6·3	5·1	5·6	6·8	6·0
12	6·0	6·4	6·3	7·3	6·5

The greatest quantity of cloud in Spring was at 0^h and 2^h, and the least quantity was at 12^h.

,, Summer ,, 18 ,, 10

,, Autumn ,, 20 ,, 10

,, Winter ,, 0 and 2 ,, 10

,, for the Year ,, 0 and 2 ,, 10

The difference between the greatest and least amounts in Spring was 2·2
" " Summer " 2·0
" " Autumn " 2·4
" " Winter " 1·2
" " for the Year " 1·7

The mean quantity of cloud in Spring was 7·0
" Summer " 6·4
" Autumn " 7·1
" Winter " 7·4
And the mean for the Year " 7·0

Records of the Rain Gauges.

TABLE XC.—Amount of Rain collected in each Month in the several Gauges.

1846, Month.	Monthly Amount of the Rain collected in the Gauge, At Osler's Anemometer.	On the Roof of the Library.	Crosley's.	Cylinder partly sunk in the Ground.	Cylinder partly sunk in the Ground at the Royal Naval Hospital Schools.
	in.	in.	in.	in.	in.
January	0·85	2·48	2·520	2·82	2·66
February ...	0·67	1·45	1·320	1·47	0·91
March	0·20	0·88	1·070	0·88	3·56
April	1·81	3·07	3·200	3·05	
May	0·95	1·47	1·745	1·50	1·46
June.....	0·36	0·47	0·670	0·50	0·43
July	1·14	1·37	1·715	1·50	5·87
August.....	2·98	3·17	4·230	4·00	
September ..	0·98	1·73	1·790	1·79	1·73
October	2·43	4·47	5·130	5·13	5·14
November ..	0·66	1·37	1·455	1·52	1·53
December...	0·43	0·70	1·015	1·13	1·08

TABLE XCI.—Quarterly Amounts of Rain.

1846.	At Osler's Anemometer.	On the Roof of the Library.	In Crosley's Gauge.	In Cylinder partly sunk in the Ground.	Cylinder partly sunk in the Ground at the Royal Naval Hospital Schools.
	in.	in.	in.	in.	in.
Spring	2·96	5·42	6·015	5·43	5·02
Summer.....	4·48	5·01	6·615	6·00	6·30
Autumn	4·07	7·57	8·375	8·44	8·40
Winter.....	1·95	4·63	4·855	5·42	4·65

The receiving surface of Osler's Anemometer-gauge is about 50 feet above the ground; that of the gauge on the top of the Library is about 24 feet above the ground; that of Crosley's gauge is 1 foot 11 inches above the ground; and that of the cylindrical gauge is $5\frac{1}{2}$ inches above the ground. The proportions of the sums collected are,

1846.	Gauge of Osler's Anemometer.	Gauges on the Roof of the Library.	Crosley's Gauge.	Cylindrical Gauge.	Cylindrical Gauge at R. H. Schools.
In Spring.....	54	100	111	100	93
In Summer ...	75	84	110	100	105
In Autumn....	48	90	99	100	100
In Winter	36	85	90	100	86

The sums of the amounts fallen at each gauge during the year are as follows:—

		ft.	in.		in.
At Osler's Anemometer-gauge, whose receiving surface is		205.	6	above the mean level of the sea,	13·46
At the gauge above the Library	,,	177.	2	,,	22·63
At Crosley's gauge	,,	156.	6	,,	25·86
At the Cylindrical gauge	,,	155.	3	,,	25·29
At the Cylindrical gauge in R. H. Schools	,,	35.	0	,,	24·37

Abstracts of the Observations made with the Actinometer.

TABLE XCII.

Month and Day, 1846.	Greenwich Astronomical Mean Time.	Altitude of the Sun.	Mean Radiation per Minute, in Parts of the Scale.	GENERAL REMARKS.
d	h m s	°	div.	
February 5	22.48.45	21	15·1	The glass off: a whitish blue sky, but the Sun shines brightly: a gentle air.
	23. 2.30	22	14·0	The glass on.
	23. 9.45	22	14·8	The glass off.
	23.32. 0	22	12·3	The glass on: light clouds occasionally passing before the Sun.
	23.51.45	22	12·3	The Sun is obscured by cloud.
February 6	0. 1.30	23	16·5	Light clouds are about the Sun's place.
February 20	23. 9. 0	26	30·0	Gusts of wind.
	23.27. 0	26	25·3	The Sun is partly obscured by clouds.
	23.44. 0	27	23·1	The Sun was in a light cloud for 10 seconds.
April 24	22.57.45	49	22·7	The Sun is in a thin cloud.
	23. 3. 0	49	3·0	The Sun is in a dense cloud: a very faint shadow.
	23. 6.45	49	0·0	The Sun is in a thick cloud: no shadow cast.
	23.30. 0	51	19·9	There was no shadow for 10 seconds: afterwards there was a faint shadow.
	23.44.15	51	0·0	A faint shadow for 30 seconds: no shadow for the remainder of the time.
	23.54.15	51	0·0	A faint shadow.
	23.57. 0	51	22·8	Between $23^h.56^m.0^s$ and $23^h.57^m.0^s$ the sky was clear.
April 25	0. 0.15	52	0·0	
	0.23.30	51	12·2	Cloudless.
June 2	1.20.30	55	39·5	Cloudless.
	1.36.15	55	39·9	
	1.51.15	53	40·9	
	2.54. 0	47	33·6	

TABLE XCII.—*continued.*

Month and Day, 1846.	Greenwich Astronomical Mean Time.	Altitude of the Sun.	Mean Radiation per Minute, in Parts of the Scale.	GENERAL REMARKS.
d	h m s	°	div.	
June 2	6. 9.45	17	23·4	Cloudless.
	6.21.45	14	24·0	
	23.21.15	59	34·3	,, the glass off.
June 3	2. 7.30	47	33·3	Cloudless : the glass on.
	2.21.30	47	36·3	,,
	2.40.30	47	36·4	,,
	3.51.45	31	29·6	,, light airs from the E.
	4. 3. 0	31	30·5	
	4.14.15	30	34·3	
	4.34.30	30	33·3	
	4.47.15	27	34·4	
	5.40.45	25	29·0	
	5.53.30	25	28·4	
	22.38. 0	54	30·1	,, the glass off.
	23.42.30	58	29·4	,, ,,
June 4	1. 3. 0	56	30·9	Cloudless : occasional light gusts.
	1.12.45	56	30·4	
	2.14. 0	53	28·6	The glass on : frequent light gusts of wind.
June 15	2.49.15	45	28·4	
	21.53. 0	53	27·8	
	23.33.45	58	29·8	Frequent gusts of wind.
	23.45. 0	62	31·2	
	23.56.15	62	30·9	
June 16	1.35.30	58	30·3	Frequent gusts of wind.
	2.30. 0	45	29·6	
	2.41.15	45	27·4	
	6.16.30	18	15·0	
	6.30.45	18	11·6	
June 17	4. 4.30	36	28·3	
	5.41. 0	20	23·4	
	7. 0.30	11	9·1	The Sun was in a cirrus cloud.
December 13	22.58. 0	14	9·2	Light cirri.
	23. 9.15	14	9·9	
	23.53. 0	15	9·0	A few fleecy clouds near the Sun's place.
December 14	0. 4.15	15	9·9	Cloudless.
	0.39.15	15	9·3	Light clouds about the Sun's place.
	0.49. 0	14	10·3	Hazy.
	1.24.30	14	8·8	The glass on.
	1.34.30	13	9·5	The glass off.

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