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MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

1844:

UNDER THE DIRECTION OF

GEORGE BIDDELL AIRY, ESQ. M.A.

ASTRONOMER ROYAL.

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ERRATA.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1842.

PAGE

72 Table LXXIII. In sub-heading, *for* Cubit, *read* Cubic.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1843.

xlvii In last line of first column, *for* 49·1, *read* 49·9.

16 In the fifth line from bottom, *for* March, *read* April.

31 Table L. In the heading, *for* for, *read* from.

103 Table XCIII. Sum of Numbers under N., *for* 741·9, *read* 641·9.

PAGE

107 In the 5th line beneath Table XCVII, *for* 1902, *read* 2765; and *for* $1^h.55^m$, *read* $1^h.19^m$.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS FOR 1844.

xxxvii In the tenth line from the bottom, *for* 1844, *read* 1843.

(48) Under stand of rain-gauge No. 1, *insert* 3·55 at every 22^h.

(54) Under Whewell's Anemometer, *omit* N.

(88) June $21^d.20^h$, Barometer corrected, *for* 20·638, *read* 29·638.

75 Table LII. In the heading: *for* deduced Dew-Point, *read* Dew-Point.

86 Table LXX. In the month of July, and ranging with 12^h, *for* 5·67, *read* 4·67.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1844.

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 outhouse. 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 "watchman'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 occasional 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, is fixed the stand carrying the thermometers.

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 to 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 tripod wooden 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: this moveable upright piece carries at its top the pulleys for suspension of the magnet; and 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 collimator object-glass in front of the theodolite object-glass, 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.

Observations relating to the permanent Adjustments of the Declination Magnet and its Theodolite.

1. Determination of the inequality of the pivots of the theodolite-telescope.

1843, January 13. The theodolite was clamped, so that the transit axis was at right angles to the Astronomical meridian. The illuminated end of the axis of the telescope was first to the East: the level was applied, and its scale was read: the level was then reversed, and its scale was again read; it was then again reversed, and again read: and so on successively six times. The illuminated end of the telescope was then placed to the West, and the level was applied and read as before. The above process was repeated ten times, and the following are the results. Observers, Messrs. Glaisher and Hind.

The West end of the axis in the successive observations, was apparently the highest by the following quantities:

		div.			dir.
With Illuminated End of Axis	East	− 4·1	With Illuminated End of Axis	East	− 8·0
,,	West	− 1·8	,,	West	+ 1·2
,,	East	− 10·0	,,	East	− 9·1
,,	West	− 7·4	,,	West	− 3·8
,,	East	− 10·6	,,	East	− 8·3
,,	West	− 5·2	,,	West	− 3·5
,,	East	− 9·8	,,	East	− 10·8
,,	West	− 3·6	,,	West	− 7·6
,,	East	− 9·9	,,	East	− 13·3
,,	West	− 2·4	,,	West	− 2·9

		div.
Hence that end of the level which is placed on the illuminated end is too high	by 1st and 2nd sets......	1·15
,,	3rd and 4th sets......	1·30
,,	5th and 6th sets......	2·70
,,	7th and 8th sets......	3·10
,,	9th and 10th sets......	3·75
,,	11th and 12th sets......	4·60
,,	13th and 14th sets......	2·65
,,	15th and 16th sets......	2·40
,,	17th and 18th sets......	1·60
,,	19th and 20th sets......	5·20

The mean of these numbers is $2^{div.}85$, which appears to be the quantity by which that end of the level which was placed on the illuminated end was too high. The angles of the level forks and those of the Y's are nearly $90°$; therefore we may conclude that, when the level indicates the axis to be horizontal, the axis at the illuminated end is really too low by $1^{div.}43$. And this quantity has been taken into account in the reduction of all the observations with the theodolite, for the determination of the theodolite-reading for the Astronomical meridian. One division of the level scale was found by Mr. Simms to be equal to $1''\cdot0526$.

2. Value of one revolution of the micrometer-screw of the theodolite-telescope.

By the mean of seven results of observations made on January 1, of the year 1842, between $92^{rev.}$ and $115^{rev.}$, and of six similar results obtained on January 3 of the same year, it appeared that the value of one revolution was very accurately $1'.34''\cdot271$, and the value used in 1841, viz. $1'.34''\cdot07$, was so nearly equal to this that it did not appear necessary to construct new tables. The same value, viz., $1'.34''\cdot07$, has been used, without fresh trial, during the year 1844.

3. Determination of the micrometer reading for the line of collimation of the theodolite-telescope.

1843, December 27. The vertical axis of the theodolite had been adjusted to verticality, and the transit axis was made horizontal. The declination magnet was made to rest on blocks, and the cross-wires carried by it were used as a collimator for determining the line of collimation of the telescope of the theodolite. The telescope was reversed after each observation. Observers, Messrs. Glaisher and Dunkin.

Position of Micrometer Head.	Micrometer Reading.	Position of Micrometer Head.	Micrometer Reading.
	r		r
E	98 ·845	W	101 ·786
W	101 ·850	E	98 ·813
E	98 ·788	W	101 ·773
W	101 ·826	E	98 ·860
E	98 ·823	W	101 ·772

Position of Micrometer Head.	Micrometer Reading.	Position of Micrometer Head.	Micrometer Reading.
	r		r
E	98·797	E	98·853
W	101·775	W	101·763
E	98·862	E	98·840
W	101·782	W	101·763
E	98·823	E	98·840
W	101·778	W	101·787
E	98·875	E	98·868
W	101·763	W	101·788
E	98·834	E	98·871
W	101·777	W	101·771
E	98·842	E	98·865
W	101·773	W	101·790
E	98·863	E	98·858
W	101·768	W	101·772
E	98·823	E	98·878
W	101·768	W	101·764

The mean of these readings is $100^r{\cdot}312$, and this reading is used as the reading for the line of collimation throughout the year.

In the year 1840, observations were made by which it appeared that the clock draws the marked end of the magnet towards itself, or towards the West, through an arc of $9''{\cdot}41$, and therefore causes the micrometer reading to be too small by this amount: the correction $9''{\cdot}41$ has, therefore, been added to every observation throughout 1844.

In the year 1841, were also made experiments by which the compound effect of the two other magnets upon the declination magnet is shewn, which is to cause the marked end of the magnet to approach the East by $55''{\cdot}22$ of arc. As the effect is to increase all the micrometer readings, the correction is subtractive; and, therefore, from all theodolite readings $55''{\cdot}22$ has been subtracted. It is thought proper to repeat here in detail the observations on which these results are founded.

4. Determination of the effect of the mean-time clock on the declination magnet. Observers, Messrs. Glaisher and Hind.

The clock was put in its place; the micrometer of the theodolite was read, corresponding to the position of the cross carried by the magnet; the clock was then removed, and the micrometer was again read for the corresponding position of the cross, and so on successively. The following table contains the results :—

Day, 1840.	Clock Removed or in its place.	Mean Micrometer Reading of the Theodolite.	Mean of Micrometer Readings, the one preceding and the other following that for Clock in its place.	Reading with Clock away − Reading with Clock in its place.	Mean.
		r	r	r	r
Dec. 2	Removed	99·627			
	In its place	99·454	99·637	+ 0·183	
	Removed	99·647			
	In its place	99·477	99·582	+ 0·105	
	Removed	99·517			
	In its place	99·539	99·592	+ 0·053	
	Removed	99·668			
	In its place	99·495	99·616	+ 0·121	
	Removed	99·564			
	In its place	99·451	99·506	+ 0·055	
	Removed	99·448			
	In its place	99·426	99·546	+ 0·120	+ 0·080
	Removed	99·645			
	In its place	99·524	99·554	+ 0·030	
	Removed	99·463			
	In its place	99·442	99·528	+ 0·086	
	Removed	99·594			
	In its place	99·565	99·666	+ 0·101	
	Removed	99·738			
	In its place	99·915	99·843	− 0·072	
	Removed	99·948			
	In its place	99·831	99·927	+ 0·096	
	Removed	99·906			
Dec. 3	Removed	100·485			
	In its place	100·663	100·544	− 0·119	
	Removed	100·603			
	In its place	100·548	100·604	+ 0·056	
	Removed	100·606			
	In its place	100·484	100·694	+ 0·210	
	Removed	100·783			
	In its place	100·559	100·867	+ 0·308	+ 0·159
	Removed	100·951			
	In its place	100·444	100·903	+ 0·459	
	Removed	100·855			
	In its place	100·301	100·510	+ 0·219	
	Removed	100·165			
	In its place	100·265	100·248	− 0·017	
	Removed	100·356			

On Dec. 2, during the time of the experiments no magnetic change was going forward; but on Dec. 3 a change was going on, and the result is not entitled to more than one fourth of the weight of that of Dec. 2: under these circumstances it is considered that $0^{r}\cdot1$ is very near the truth. Now as the effect of the clock is to cause the micrometer reading to be too small, the correction is additive, and therefore $9''\cdot41$ has been added to every observation, as before stated.

5. Determination of the compound effect of the vertical force magnet and the horizontal force magnet on the declination magnet.

The vertical force magnet was placed in its Y's with its marked end to the East: the horizontal force magnet was placed transverse to the magnetic meridian with its marked end towards the West. While they were thus placed, the micrometer reading of the theodolite, corresponding to the position of the cross of the declination magnet, was registered by Mr. Paul. The vertical force magnet and the horizontal force magnet were then simultaneously removed to places where they had no effect on the declination magnet: the former by Mr. Glaisher, who was very careful in raising it out of, and dropping it into, its Y's: the latter by Mr. Hind. The micrometer reading was again registered for the corresponding position of the cross, and again when the two magnets were placed as before, and so on successively. The results are inserted in the following table:—

Day, 1841.	The Horizontal and Vertical Force Magnets away or in their places.	Micrometer Reading of the Theodolite.	Mean of Readings, the one preceding and the other following that for the Horizontal and Vertical Force Magnets in their places.	Reading with the Horizontal and Vertical Force Magnets away – Reading with the Horizontal and Vertical Force Magnets in their places.	Mean.
		r	r	r	r
May 26	Away	100·641			
	In their places	100·583	100·440	— 0·143	
	Away	100·239			
	In their places	100·512	100·176	— 0·336	
	Away	100·112			
	In their places	100·317	99·898	— 0·419	
	Away	99·683			
	In their places	100·020	99·483	— 0·537	
	Away	99·282			
	In their places	99·823	99·217	— 0·606	
	Away	99·151			
	In their places	99·824	99·171	— 0·653	
	Away	99·190			
	In their places	99·913	99·173	— 0·740	
	Away	99·156			
	In their places	99·843	99·109	— 0·734	— 0·587
	Away	99·062			
	In their places	99·722	99·164	— 0·558	
	Away	99·266			
	In their places	99·674	98·991	— 0·683	
	Away	98·715			
	In their places	99·665	98·800	— 0·855	
	Away	98·884			
	In their places	99·691	98·880	— 0·811	
	Away	98·876			
	In their places	99·299	98·873	— 0·426	
	Away	98·869			
	In their places	99·216	98·679	— 0·537	
	Away	98·488			
	In their places	99·287	98·537	— 0·750	
	Away	98·586			
	In their places	99·105	98·495	— 0·610	
	Away	98·403			

The compound effect is to cause the marked end of the declination magnet to approach the east by $0^{r}\cdot587$, or in arc $55''\cdot22$. As the effect is to increase all micrometer readings, the correction is subtractive; and, therefore, from all observations $55''\cdot22$ has been subtracted throughout the year 1844.

No new experiments were made during the year 1844 to determine the separate or the compound effect of the different causes of disturbance on the respective instruments.

6. Determination of the error of collimation for the plane glass in front of the boxes of the declination magnet.

1843, December 27. The magnet was made to rest entirely on blocks. The micrometer-head of the telescope was to the East. The plane glass has the word "top" engraved on it, and this word is always kept upwards. When the glass is so placed that the marked side is outside of the box, it is called its usual position. The cross wire carried by the collimator of the magnet was observed with the marked side of the glass alternately inside and outside of the box. Observers, Messrs. Glaisher and Dunkin.

Marked Side of the Glass.	Micrometer Reading.	Marked Side of the Glass.	Micrometer Reading.
	r		r
Out of the box	98 ·845	Out of the box	98 ·852
In the box	98 ·650	In the box	98 ·598
Out of the box	98 ·845	Out of the box	98 ·848
In the box	98 ·628	In the box	98 ·602
Out of the box	98 ·855	Out of the box	98 ·858
In the box	98 ·600	In the box	98 ·607
Out of the box	98 ·848	Out of the box	98 ·845
In the box	98 ·602	In the box	98 ·593
Out of the box	98 ·843	Out of the box	98 ·862
In the box	98 ·590	In the box	98 ·590

The mean of all the readings when the marked side of the glass was outside of the box is $98^{r}\cdot850$, and the mean of all the readings when the marked side of the glass was inside of the box is $98^{r}\cdot606$. These numbers were not satisfactory, and the result deduced from them was not thought worthy of being used alone.

1843, December 29. The following experiments were made in the same manner as those on December 27. Observers, Messrs. Glaisher and Dunkin.

Marked Side of the Glass.	Micrometer Reading.	Marked Side of the Glass.	Micrometer Reading.
	r		r
Out of the box	99 ·488	Out of the box	99 ·492
In the box	99 ·272	In the box	99 ·255
Out of the box	99 ·500	Out of the box	99 ·485
In the box	99 ·266	In the box	99 ·260
Out of the box	99 ·497	Out of the box	99 ·510
In the box	99 ·271	In the box	99 ·270
Out of the box	99 ·490	Out of the box	99 ·488
In the box	99 ·260	In the box	99 ·261
Out of the box	99 ·488	Out of the box	99 ·486
In the box	99 ·255	In the box	99 ·272

The mean of all the readings when the marked side of the glass was out of the box is $99^{r}\cdot492$, and the mean of all the readings when the marked side was inside of the box is $99^{r}\cdot264$. Half of the difference is $0^{r}\cdot114$.

1843, December 29. Another set of experiments was made in the usual way. Observers, Messrs. Glaisher and Paul.

Marked Side of the Glass.	Micrometer Reading.	Marked Side of the Glass.	Micrometer Reading.
	r		r
Out of the box	99 ·503	Out of the box	99 ·499
In the box	99 ·271	In the box	99 ·270
Out of the box	99 ·490	Out of the box	99 ·500
In the box	99 ·271	In the box	99 ·280
Out of the box	99 ·500	Out of the box	99 ·500
In the box	99 ·278	In the box	99 ·263
Out of the box	99 ·509	Out of the box	99 ·508
In the box	99 ·260	In the box	99 ·269
Out of the box	99 ·481	Out of the box	99 ·491
In the box	99 ·262	In the box	99 ·271

The mean of all the readings when the marked side of the glass was outside of the box is $99^{r}\cdot498$, and the mean of all the readings when the marked side of the glass was inside is $99^{r}\cdot269$. Half of the difference is $0^{r}\cdot115$.

		r
Therefore, the half difference from the set on December 27 is		0 ·122
,,	1st set on December 29 is	0 ·114
,,	2nd set on December 29 is	0 ·115

And the mean of these three values is $0^{r}\cdot117$, or $11''\cdot00$ in arc, which is the error of collimation of the plane glass. 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 this error is subtractive; and 11″ has consequently been subtracted from all readings for the bisections of the magnet-cross during the year 1844.

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

1843, December 27 and 28. A magnet of the same size was suspended in the building 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 26^s. The distance of the scale from the reflector was 4 feet 7 inches; one foot of the scale corresponded to $30^{div}\cdot 9$ exactly: and, consequently, the value of one division of the scale was 12′. 8″·21. One observer (Mr. Hind, on December 27, and Mr. Paul, on December 28,) observed this magnet at intervals of 26^s; 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:—

Day, 1843.	Position of Cross of Collimator.	Mean Micrometer Reading.	Mean Reading of Scale of Temporary Magnet.	Micrometer Reading reduced to Arc.	Scale Reading for Temporary Magnet reduced to Arc.	Excess of Micrometer Reading reduced to Arc, increased by 6°, over Scale Reading reduced to Arc.	Excess with Collimator East Excess—with Collimator West.	Half Difference or Error of Collimation
		r	div.	° ′ ″	° ′ ″	° ′ ″	′ ″	′ ″
Dec. 27	W	100·95	30·49	2. 38. 16	6. 10. 14	2. 28. 2	8. 8	4. 4
	E	105·43	30·40	2. 45. 18	6. 9. 8	2. 36. 10		
	W	101·84	30·41	2. 39. 40	6. 9. 16	2. 30. 24	5. 16	2. 38
	E	105·35	30·43	2. 45. 10	6. 9. 30	2. 35. 40		
	W	101·64	30·43	2. 39. 21	6. 9. 30	2. 29. 51	6. 48	3. 24
	E	106·29	30·47	2. 46. 39	6. 10. 0	2. 36. 39		
	W	102·80	30·44	2. 41. 10	6. 9. 37	2. 31. 33	4. 32	2. 16
	E	106·16	30·50	2. 46. 26	6. 10. 21	2. 36. 5		
	W	101·50	30·45	2. 39. 8	6. 9. 45	2. 29. 23	5. 15	3. 28
	E	104·92	30·46	2. 44. 30	6. 9. 52	2. 34. 38		
	W	102·12	30·54	2. 40. 6	6. 10. 51	2. 29. 15	6. 56	2. 38
	E	105·92	30·46	2. 46. 3	6. 9. 52	2. 36. 11		
	W	100·60	30·33	2. 37. 43	6. 8. 17	2. 29. 26	5. 47	2. 54
	E	104·06	30·30	2. 43. 9	6. 7. 56	2. 35. 13		
	W	100·71	30·27	2. 37. 54	6. 7. 34	2. 30. 20	3. 37	1. 48
	E	104·18	30·42	2. 43. 20	6. 9. 23	2. 33. 57		
Dec. 28	W	102·93	30·77	2. 41. 23	6. 13. 38	2. 27. 45	5. 30	2. 45
	E	106·98	30·84	2. 47. 44	6. 14. 29	2. 33. 15		
	W	103·21	30·80	2. 41. 49	6. 14. 0	2. 27. 49	6. 48	3. 24
	E	107·16	30·75	2. 48. 1	6. 13. 24	2. 34. 37		

The mean of the values in the last column is 2′.56″, and when the collimator is West of the magnet, as it was during the year 1844, the readings are too small by the above amount; therefore 2′.56″ has been added to all observations during the year 1844.

In the volume for 1841, observations are exhibited shewing that the oval copper bar, or damper, had but little or no effect on the magnet; the same bar has encircled the magnet throughout the year 1844.

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.

		° ′ ″
Micrometer equivalent for reading for line of collimation 100ʳ·312	—	2. 37. 16·35
Micrometer head of the theodolite East. Correction for the plane glass in the front of the box, in its usual position.	—	11·00
Correction due to the compound effect of the horizontal force magnet and the vertical force magnet	—	55·22
	—	2. 38. 22·57
Correction for the effect of the mean time clock	+	9·41
	—	2. 38. 13. 16
Cross wire of the collimator West of the magnet. Correction for Error of collimation	+	2. 56·00
	—	2. 35. 17·16

This was used throughout the year 1844.

In the volume for 1841, are exhibited observations, by which it appeared that the time of vibration was 30ˢ; since that time a few observations have been frequently taken, and as no reason has appeared for departing from the above determination, 30ˢ has been used as the time of vibration throughout the year 1844.

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

1844, December 28. Observers, Messrs. Glaisher and Dunkin.

The suspension-skein was without torsion, when the torsion circle read 227°.20′. The torsion circle was then turned through an angle of 70° on one side, and of 110° on the other side of this reading, and the theodolite was read for the position of the cross in each position of the torsion circle.

	° ′		° ′ ″	
With torsion-circle reading	297. 30,	the theodolite reading was	249. 47. 59·75	
,,	227. 30,	,,	249. 21. 2·77	
,,	117. 30,	,,	248. 44. 29·81	
,,	227. 30,	,,	249. 17. 58·77	

		°		′ ″
Therefore from the 1st	pair the difference for	70	was	26. 56·98
,,	2nd pair ,,	110	was	36. 32·96
,,	3rd pair ,,	110	was	33. 28·96

And the torsion-force from the 1st pair is $\frac{1}{156}$ of the earth's magnetic force.
,, 2nd pair is $\frac{1}{180}$,,
,, 3rd pair is $\frac{1}{195}$,,

1845, April 21. The suspension skein was without torsion when the torsion circle read 219°, and the following experiments were made, as on December 28, except that the theodolite was not moved during the experiments; and, consequently, the micrometer reading only was taken. Observer, Mr. Glaisher.

	°		° ′ ″
With torsion-circle reading	269,	the micrometer reading reduced to arc was	3. 2. 30·8
,,	169,	,,	2. 27. 46·1
,,	269,	,,	2. 59. 35·0
,,	169,	,,	2. 25. 49·8
,,	269,	,,	2. 57. 28·1
,,	169,	,,	2. 24. 29·8
,,	219,	,,	2. 40. 29·8

It is evident that a gradual magnetic change was going on during the time of the experiments, therefore the mean of the 1st and 3rd experiments has been taken and compared with that of the 2nd; also the mean of the 3rd and 5th has been taken and compared with that of the 4th, to deduce the change of micrometer reading corresponding to the change of the torsion-circle reading, as follows:—

	° ′ ″	
The mean from the 1st and 3rd experiments is	3. 1. 2·9	The difference for 100° is 33′. 16″·8
The 2nd experiment gives	2. 27. 46·1	
The mean from the 3rd and 5th experiments is	2. 58. 31·6	The difference for 100 is 32. 41·8
The 4th experiment gives	2. 25. 49·8	

The 5th experiment was then compared with the 6th; and again the 6th with the 7th, as follows:—

	° ′ ″	
The 5th experiment gives	2. 57. 28·1	The difference for 100° is 32′. 58″·3
The 6th experiment gives	2. 24. 29·8	
The 6th experiment gives	2. 24. 29·8	The difference for 50 is 16. 0·0
The 7th experiment gives	2. 40. 29·8	

Therefore, from the	1st result,	the torsion force is	$\frac{1}{182}$	of the earth's magnetic force
,,	2nd result,	,,	$\frac{1}{183}$	,,
,,	3rd result,	,,	$\frac{1}{182}$	,,
,,	4th result,	,,	$\frac{1}{188}$	,,

1846, January 1. The torsion-circle reading was 228°, when the suspension skein was without torsion. The following experiments were made in the usual way. Observer, Mr. Glaisher.

	°		° ′ ″
With torsion-circle reading	318,	the theodolite reading was	249. 54. 1 ·0
,,	228,	,,	249. 28. 43 ·5
,,	138,	,,	249. 2. 5 ·0
,,	228,	,,	249. 30. 58 ·6
,,	138,	,,	249. 2. 11 ·6
,,	228,	,,	249. 31. 6 ·9
,,	318,	,,	249. 57. 25 ·7
,,	228,	,,	249. 30. 11 ·9

			° ′ ″
Therefore from the	1st pair	the difference for 90 was	25. 17 ·5
,,	2nd pair	,,	26. 38 ·5
,,	3rd pair	,,	28. 53 ·6
,,	4th pair	,,	28. 47 ·0
,,	5th pair	,,	28. 55 ·3
,,	6th pair	,,	26. 18 ·8
,,	7th pair	,,	27. 13 ·8

And the torsion force, from the	1st pair is	$\frac{1}{210}$	of the earth's magnetic force
,,	2nd pair is	$\frac{1}{202}$	,,
,,	3rd pair is	$\frac{1}{187}$	,,
,,	4th pair is	$\frac{1}{187}$	,,
,,	5th pair is	$\frac{1}{187}$	,,
,,	6th pair is	$\frac{1}{204}$	,,
,,	7th pair is	$\frac{1}{200}$	,,

The results thus obtained for the value of $\frac{\text{torsion force}}{\text{earth's magnetic force}}$ from the time of the establishment of the Magnetic Observatory, are :—

1840, August 28 = $\frac{1}{180}$.
1840, December 11 = $\frac{1}{157}$.
1842, February 1 = $\frac{1}{213}$, $\frac{1}{193}$, and $\frac{1}{170}$.
1842, May 16 = $\frac{1}{161}$, $\frac{1}{195}$, and $\frac{1}{193}$.
1842, May 23 = $\frac{1}{167}$, $\frac{1}{161}$, and $\frac{1}{140}$.
1843, January 23 = $\frac{1}{209}$, $\frac{1}{196}$, $\frac{1}{185}$, $\frac{1}{189}$, $\frac{1}{192}$, $\frac{1}{190}$, and $\frac{1}{190}$.
1843, September 4 = $\frac{1}{192}$, $\frac{1}{188}$, $\frac{1}{184}$, $\frac{1}{192}$, $\frac{1}{184}$, $\frac{1}{196}$, and $\frac{1}{188}$.

1844, December 28 $= \frac{1}{156}, \frac{1}{180},$ and $\frac{1}{195}$.
1845, April 21 $= \frac{1}{182}, \frac{1}{183}, \frac{1}{182},$ and $\frac{1}{188}$.
1846, January 1 $= \frac{1}{210}, \frac{1}{202}, \frac{1}{187}, \frac{1}{187}, \frac{1}{187}, \frac{1}{204},$ and $\frac{1}{200}$.

The mean of these 39 results gives the torsion-force $= \frac{1}{186}$ of the earth's magnetic force.

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, and to the value of its scale, one division having been found by Mr. Simms to be equal to $1''{\cdot}0526$); and the azimuth reading is then corrected by the quantity, elevation of W. end of axis × 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 the following method, which is found convenient, and which involves a principle that may be found advantageous for application in many other instances.

The star is supposed to be so near to the meridian, that the fifth and higher powers of its hour angle are insensible. The star is supposed also to be near the upper meridian; but the investigation will be made to apply to the neighbourhood of the lower meridian, by changing the sign of the north polar distance.

Put a for the star's polar distance, b for the co-latitude, A for the azimuthal-angle, and C for the hour-angle. Then,

$$\tan. A = \frac{\sin. a \sin. C}{\cos. a \sin. b - \cos. b \sin. a \cos. C}.$$

Putting for sin. C and cos. C their expressions in series, to the extent above mentioned, this becomes

$$\tan. A = \frac{\sin. a \left(C - \frac{C^3}{6}\right)}{\cos. a \sin. b - \cos. b \sin. a \left(1 - \frac{C^2}{2}\right)}$$

$$= \frac{C \sin. a}{\sin. (b-a)} \times \left\{ 1 - \frac{C^2}{6} - \frac{\cos. b \sin. a}{\sin. (b-a)} \times \frac{C^2}{2} \right\}$$

and $A = \tan. A - \frac{1}{3} \tan.^3 A =$

$$\frac{C \sin. a}{\sin. (b-a)} \surd \left\{ 1 - \frac{C^2}{3} \times \frac{\sin. b \sin. a}{\sin. (b-a)} \left(\cot. a + 2 \cot. (b-a)\right) \right\}$$

Let the number of seconds of arc contained in a be $a_{\prime\prime}$; the number of seconds of arc contained in A be $A_{\prime\prime}$: and let the number of seconds of time contained in C be C_s; so that we may use indifferently,

$$\begin{aligned} &a \text{ or } a_{\prime\prime} \sin. 1'' \\ &A \text{ or } A_{\prime\prime} \sin. 1'' \\ &C \text{ or } C_s\, 15 \sin. 1''. \end{aligned}$$

Then the last equation becomes

$$A_{\prime\prime} \sin. 1'' = C_s 15 \sin. 1''. \frac{\sin. a}{\sin. (b-a)} \surd \left\{ 1 - \frac{C_s^{\,2}\, 15^2 \sin.^2 1''}{3} \times \frac{\sin. b \sin. a}{\sin. (b-a)} \left(\cot. a + 2 \cot. (b-a)\right) \right\}$$

$$\text{Make } \sin. \phi = C_s\, 15 \sin. 1'' \surd \left\{ \frac{\sin. b \sin. a}{3 \sin. (b-a)} \times \left(\cot. a + 2 \cot. (b-a)\right) \right\}$$

$$\text{Then } A_{\prime\prime} = C_s \frac{15 \sin. a}{\sin. (b-a)} \cos. \phi.$$

The variations of $\cos. \phi$ depending on the small changes in a are utterly insignificant, ϕ therefore may be regarded as depending on C_s only. A small table of log. cos. ϕ is therefore prepared, of which the argument is C_s.

In the computation of log. $\frac{15 \sin. a}{\sin. (b-a)}$, the peculiarity of principle, to which I have above alluded, is introduced. It proceeds on this assumption:—"when the variations of $a_{\prime\prime}$ are so small that their squares may be neglected, any function whatever of $a_{\prime\prime}$ may be expressed in the form

$$E \times (a_{\prime\prime} + F)$$

where E and F are constants."

This will be proved, and the values of E and F in the instance before us, will be determined by the following process:—

Let the general value of a be expressed by $a^\circ + \delta\, a$, where a° is constant. Then, for the assumed equation,

$$\frac{15 \sin. a}{\sin. (b-a)} = E \times (a_{\prime\prime} + F) = \frac{E}{\sin. 1''} \times (a + F \sin. 1'')$$

$$\text{or, h. log. } 15 + \text{h. log. sin. } a - \text{h. log. sin. } (b-a) =$$

$$\text{h. log.} \frac{E}{\sin. 1''} + \text{h. log.} (a + F \sin. 1'')$$

we may put

$$\text{h. log. } 15 + \text{h. log. sin. } (a^{\circ} + \delta a) - \text{h. log. sin. } (b - a^{\circ} - \delta a) =$$

$$\text{h. log.} \frac{E}{\sin. 1''} + \text{h. log.} (a^{\circ} + F \sin. 1'' + \delta a).$$

Expanding both sides to the first power of δa,

$$\left.\begin{array}{ll} \text{h. log. } 15 & \\ + \text{h. log. sin. } a^{\circ} & + \text{cotan. } a^{\circ}\, \delta a \\ - \text{h. log. sin.} (b-a^{\circ}) & + \text{cotan.} (b-a^{\circ})\, \delta a \end{array}\right\} = \left\{\begin{array}{l} \text{h. log.} \dfrac{E}{\sin. 1''} \\ + \text{h. log.} (a^{\circ} + F \sin. 1'') + \dfrac{\delta a}{a^{\circ} + F \sin. 1''}, \end{array}\right.$$

an equation which is evidently possible; since, by comparing the terms independent of δa and the terms multiplying δa, two equations are formed for determining the two quantities E and F.

The comparison of the terms multiplying δa gives,

$$\text{cotan. } a^{\circ} + \text{cotan.} (b-a^{\circ}) = \frac{1}{a^{\circ} + F \sin. 1''}$$

$$\text{or } \frac{\sin. b}{\sin. a^{\circ} \sin. (b-a^{\circ})} = \frac{1}{\sin. 1''} \cdot \frac{1}{a^{\circ}_{\prime\prime} + F}$$

$$\text{whence } a^{\circ}_{\prime\prime} + F = \frac{\sin. a^{\circ} \sin. (b-a^{\circ})}{\sin. b \sin. 1''}, \text{ and } F = \frac{\sin. a^{\circ} \sin. (b-a^{\circ})}{\sin. b \sin. 1''} - a^{\circ}_{\prime\prime}.$$

The comparison of the terms independent of δa, reverting from the logarithmic equation to the equation between the numbers, gives,

$$\frac{15 \sin. a^{\circ}}{\sin. (b-a^{\circ})} = \frac{E\,(a^{\circ} + F \sin. 1'')}{\sin. 1''} = E\,(a^{\circ}_{\prime\prime} + F)$$

$$\text{whence } E = \frac{15 \sin. a^{\circ}}{(a^{\circ}_{\prime\prime} + F) \sin. (b-a^{\circ})} = \frac{15 \sin. b \sin. 1''}{\sin.^2 (b-a^{\circ})}$$

The mean value of a may be used for a° in the computations of E and F, and the computation of the azimuthal reduction in any instance is effected by the formula

$$\log. A_{\prime\prime} = \log. C_{s} + \log. \cos. \phi + \log. E + \log. (a_{\prime\prime} + F)$$

The following table contains the values of these various quantities, as they have been used in the reduction of the observations.

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

Then $\log. A_{\prime\prime} = \log. C_s + \log. E + \log. (a_{\prime\prime} + F) + \log. \cos. \phi$,

where $A_{\prime\prime}$ = seconds in arc of azimuth,

C_s = seconds in time of hour-angle,

$a_{\prime\prime}$ = seconds of N.P.D. for the day of observation.

The following table contains the whole of the operations for determining the readings for the astronomical meridian in 1844:—

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

Day, 1844.	Object.	Reading of Micrometer Wire.	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.
d		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Feb. 22	Polaris S. P. . .	100 ·312	89. 43. 70	40	50	89. 43. 53 ·3	12. 54. 30	12. 53. 25	1. 2. 55	1. 30. 58	+ 5. 51. 6	89. 49. 44 ·9					
			89. 45. 60	25	32	89. 45. 39 ·0	12. 57. 23	12. 56. 18			+ 4. 4. 9	89. 49. 43 ·9					
			89. 47. 55	20	27	89. 47. 34 ·0	13. 0. 17	12. 59. 12			+ 2. 17. 6	89. 49. 51 ·6					
			89. 49. 35	0	10	89. 49. 15 ·0	13. 2. 54	13. 1. 49			+ 0. 40. 7	89. 49. 55 ·7					
			89. 50. 50	13	20	89. 50. 27 ·7	13. 5. 7	13. 4. 2			− 0. 41. 3	89. 49. 46 ·3	89. 49. 49 ·7	− 4 ·0	− 5 ·0	89. 49. 44 ·7	D
			89. 51. 85	50	60	89. 52. 5 ·0	13. 7. 35	13. 6. 30			− 2. 12. 6	89. 49. 52 ·4					
			89. 53. 45	15	23	89. 53. 27 ·7	13. 9. 54	13. 8. 49			− 3. 38. 4	89. 49. 49 ·3					
			89. 54. 85	55	60	89. 55. 6 ·7	13. 12. 28	13. 11. 23			− 5. 13. 3	89. 49. 53 ·3					
Mar. 6	Polaris S. P. . .	100 ·312	89. 44. 75	50	55	89. 45. 0 ·0	12. 57. 5	12. 55. 28	1. 2. 49	1. 31. 1	+ 4. 32. 2	89. 49. 32 ·2					
			89. 46. 40	10	15	89. 46. 21 ·7	12. 59. 23	12. 57. 46			+ 3. 7. 0	89. 49. 28 ·7					
			89. 47. 75	40	45	89. 47. 53 ·3	13. 1. 32	12. 59. 55			+ 1. 47. 4	89. 49. 40 ·7					
			89. 49. 62	30	35	89. 49. 42 ·3	13. 4. 21	13. 2. 44			+ 0. 3. 1	89. 49. 45 ·4	89. 49. 35 ·4	+ 2 ·4	+ 3 ·0	89. 49. 38 ·4	JH
			89. 50. 75	45	50	89. 50. 56 ·7	13. 6. 39	13. 5. 2			− 1. 22. 1	89. 49. 34 ·6					
			89. 51. 78	45	50	89. 51. 57 ·7	13. 8. 24	13. 6. 47			− 2. 26. 9	89. 49. 30 ·8					
Apr. 3	Polaris S. P. . .	100 ·312	89. 40. 60	30	35	89. 40. 41 ·7	12. 50. 53	12. 47. 59	1. 2. 44	1. 31. 10	+ 9. 6. 8	89. 49. 48 ·5					
			89. 41. 80	45	50	89. 41 ·58 ·3	12. 53. 6	12. 50. 12			+ 7. 44. 7	89. 49. 43 ·0					
			89. 43. 45	10	15	89. 43. 23 ·3	12. 55. 16	12. 52. 22			+ 6. 24. 4	89. 49. 47 ·8					
			89. 44. 75	40	47	89. 44. 54 ·0	12. 57. 31	12. 54. 37			+ 5. 1. 0	89. 49. 55 ·0	89. 49. 49 ·4	− 1 ·2	− 1 ·5	89. 49. 47 ·9	D
			89. 46. 35	0	7	89. 46. 14 ·0	12. 59. 45	12. 56. 51			+ 3. 38. 2	89. 49. 52 ·2					
			89. 47. 52	22	27	89. 47. 33 ·7	13. 1. 58	12. 59. 4			+ 2. 16. 0	89. 49. 49 ·7					
Apr. 4	Polaris S. P. . .	100 ·312	89. 36. 58	20	25	89. 36. 34 ·3	12. 44. 26	12. 41. 28	1. 2. 44	1. 31. 10	+13. 7. 9	89. 49. 42 ·2					
			89. 38. 45	7	15	89. 38. 22 ·3	12. 47. 27	12. 44. 29			+11. 16. 3	89. 49. 38 ·7					
			89. 39. 73	37	42	89. 39. 50 ·7	12. 49. 30	12. 46. 32			+10. 0. 5	89. 49. 51 ·2					
			89. 40. 80	35	40	89. 40. 51 ·7	12. 51. 31	12. 48. 33			+ 8. 45. 8	89. 49. 37 ·5	89. 49. 42 ·7	− 6 ·8	− 8 ·5	89. 49. 34 ·2	JH
			89. 43. 50	15	20	89. 43. 28 ·3	12. 55. 32	12. 52. 34			+ 6. 17. 0	89. 49. 45 ·4					
			89. 44. 72	35	40	89. 44. 49 ·0	12. 57. 49	12. 54. 51			+ 4. 52. 4	89. 49. 41 ·4					
May 17	Polaris S. P. . .	100 ·312	89. 38. 85	55	60	89. 39. 6 ·7	12. 46. 5	12. 46. 1	1. 3. 0	1. 31. 22	+10. 30. 8	89. 49. 37 ·5					
			89. 39. 80	50	55	89. 40. 1 ·7	12. 48. 0	12. 47. 56			+ 9. 19. 7	89. 49. 21 ·4					
			89. 40. 92	58	63	89. 41. 11 ·0	12. 49. 32	12. 49. 28			+ 8. 22. 8	89. 49. 33 ·8	89. 49. 36 ·0	− 4 ·5	− 5 ·6	89. 49. 30 ·4	JH
			89. 42. 57	15	22	89. 42. 31 ·3	12. 51. 34	12. 51. 30			+ 7. 7. 3	89. 49. 38 ·6					
			89. 43. 98	58	65	89. 44. 13 ·7	12. 54. 3	12. 53. 59			+ 5. 35. 1	89. 49. 48 ·8					
June 13	δ Ursæ Minoris	100 ·312	90. 14. 67	35	40	90. 14. 47 ·3	18. 8. 53	18. 6. 43	18. 22. 47	3. 24. 21	−24. 51. 8	89. 49. 55 ·5					
			90. 11. 48	15	23	90. 11. 28 ·7	18. 11. 2	18. 8. 52			−21. 32. 5	89. 49. 56 ·2					
			90. 7. 83	55	60	90. 8. 6 ·0	18. 13. 15	18. 11. 5			−18. 6. 9	89. 49. 59 ·1					
			90. 4. 67	35	42	90. 4. 48 ·0	18. 15. 22	18. 13. 12			−14. 50. 4	89. 49. 57 ·6					
			90. 1. 60	30	35	90. 1. 41 ·7	18. 17. 26	18. 15. 16			−11. 38. 5	89. 50. 3 ·2	89. 49. 58 ·5	− 6 ·5	− 9 ·7	89. 49. 48 ·8	D
			89. 58. 30	3	10	89. 58. 14 ·3	18. 19. 36	18. 17. 26			− 8. 17. 2	89. 49. 57 ·1					
			89. 55. 55	25	30	89. 55. 36 ·7	18. 21. 15	18. 19. 5			− 5. 43. 9	89. 49. 52 ·8					
			89. 52. 60	32	37	89. 52. 43 ·0	18. 23. 10	18. 21. 0			− 2. 45. 8	89. 49. 57 ·2					
			89. 48. 35	7	12	89. 48. 18 ·0	18. 26. 8	18. 23. 58			+ 1. 49. 9	89. 50. 7 ·9					
June 16	δ Ursæ Minoris	100 ·312	90. 18. 85	50	55	90. 19. 3 ·3	18. 6. 34	18. 4. 4	18. 22. 47	3. 24. 20	−28. 57. 1	89. 50. 6 ·2					
			90. 13. 87	55	63	90. 14. 8 ·3	18. 9. 32	18. 7. 2			−24. 22. 3	89. 49. 46 ·0					
			90. 9. 83	50	58	90. 10. 3 ·7	18. 11. 46	18. 9. 16			−20. 55. 3	89. 49. 8 ·4	89. 49. 37 ·5	− 7 ·3	−11 ·0	89. 49. 26 ·5	JH

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, 1844.	Object.	Reading of Micrometer Wire.	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 16	δ Ursæ Minoris	100 ·312	90. 7.43	15	20	90. 7.26 ·0	18.13.33	18.11. 3	18.22.47	3.24.20	−18. 9 ·9	89.49.16 ·1					JH
			90. 3.45	17	20	90. 3.27 ·3	18.16.26	18.13.56			−13.42 ·3	89.49.45 ·0					
			89.59.62	35	40	89.59.45 ·7	18.18.48	18.16.18			−10. 2 ·5	89.49.43 ·2					
Aug. 14	Polaris.......	100 ·312	89.53.70	15	20	89.53.35 ·0	0.59.19	0.58.10	1. 4. 9	1.31.18	− 3.57 ·6	89.49.37 ·4	89.49.39 ·9	− 8 ·4	−11 ·7	89.49.28 ·2	G
			89.51.75	40	50	89.51.55 ·0	1. 1.58	1. 0.49			− 2.12 ·4	89.49.42 ·6					
			89.50.50	10	25	89.50.28 ·3	1. 3.50	1. 2.41			− 0.58 ·2	89.49.30 ·1					
			89.49.55	15	25	89.49.31 ·7	1. 5.34	1. 4.25			+ 0.10 ·6	89.49.42 ·3					
			89.48.45	10	20	89.48.25 ·0	1. 7.23	1. 6.14			+ 1.22 ·7	89.49.47 ·7					
			89.46.85	55	65	89.47. 8 ·3	1. 9. 6	1. 7.57			+ 2.30 ·9	89.49.39 ·2					
Aug. 17	δ Ursæ Minoris	100 ·312	89.16.80	40	50	89.16.56 ·7	18.43.47	18.43.51	18.22.35	3.24. 3	+32.49 ·9	89.49.46 ·6	89.49.51 ·0	− 4 ·2	− 6 ·3	89.49.44 ·7	D
			89.14.45	10	15	89.14.23 ·3	18.45.35	18.45.39			+35.36 ·0	89.49.59 ·3					
			89.11.60	23	30	89.11.37 ·7	18.47.14	18.47.18			+38. 8 ·0	89.49.45 ·7					
			89. 9.35	0	7	89. 9.14 ·0	18.48.54	18.48.58			+40.41 ·5	89.49.55 ·5					
			89. 6.42	10	15	89. 6.22 ·3	18.50.42	18.50.46			+43.27 ·1	89.49.49 ·4					
			89. 3.62	30	37	89. 3.43 ·0	18.52.26	18.52.30			+46. 6 ·2	89.49.49 ·2					
Sep. 1	Polaris.......	100 ·312	90.12.25	0	13	90.12.12 ·7	0.30.31	0.30.10	1. 4.20	1.31.13	−22.30 ·2	89.49.42 ·5	89.49.38 ·7	− 5 ·8	− 8 ·0	89.49.30 ·7	HB
			90. 7.30	8	15	90. 7.17 ·7	0.38.10	0 37.49			−17.29 ·4	89.49.48 ·3					
			90. 3.35	0	15	90. 3.16 ·7	0.44. 7	0.43.46			−13.34 ·8	89.49.41 ·9					
			89.58.43	13	25	89.58.27 ·0	0.51.33	0.51.12			− 8.40 ·8	89.49.46 ·3					
			89.54.50	20	33	89.54.34 ·3	0.56.56	0.56.35			− 5. 7 ·4	89.49.26 ·9					
			89.48.50	30	40	89.48.40 ·0	1. 6.13	1. 5.52			+ 1. 0 ·8	89.49.40 ·8					
			89.44.45	23	35	89.44.34 ·3	1.12.11	1.11.50			+ 4.57 ·5	89.49.31 ·8					
			89.40.40	20	30	89.40.30 ·0	1.18.20	1.17.59			+ 9. 1 ·2	89.49.31 ·2					
Sep. 25	Polaris.......	100 ·312	90. 9.70	45	55	90. 9.56 ·7	0.34.48	0.34.33	1. 4.29	1.31.4	−19.41 ·8	89.50.14 ·9	89.49.61 ·0	−14 ·4	−20 ·1	89.49.40 ·9	G
			90. 8.60	25	30	90. 8.38 ·3	0.36.24	0.36. 9			−18.39 ·0	89.49.59 ·3					
			90. 7.67	25	30	90. 7.40 ·7	0.37.57	0.37.42			−17.38 ·1	89.50. 2 ·6					
			90. 6.65	30	30	90. 6.41 ·7	0.39.23	0.39. 8			−16.41 ·7	89.49.59 ·9					
			90. 4.90	55	60	90. 5. 8 ·3	0.41.34	0.41.19			−15.15 ·8	89.49.52 ·5					
			90. 3.103	50	60	90. 4.11 ·0	0.43. 8	0.42.53			−14.14 ·1	89.49.56 ·9					
Oct. 17	Polaris.......	100 ·312	89.39.75	40	45	89.39.53 ·3	1.19.56	1.19.33	1. 4.31	1 30.56	+ 9.54 ·1	89.49.47 ·4	89.49.42 ·1	− 6 ·0	− 8 ·4	89.49.33 ·7	D
			89.38.40	5	10	89.38.18 ·3	1.22.16	1.21.53			+11 ·26 ·1	89.49.44 ·4					
			89.36.90	55	62	89.37. 9 ·0	1.24.12	1.23.49			+12.42 ·3	89.49.51 ·3					
			89.35.70	30	35	89.35.45 ·0	1.26. 9	1.25.46			+13.59 ·0	89.49.44 ·0					
			89.33.90	57	65	89.34.10 ·7	1.28. 4	1.27.41			+15.14 ·4	89.49.25 ·1					
			89.33.35	5	10	89.33.16 ·7	1.29.50	1.29.27			+16.23 ·9	89.49.40 ·6					

September 1ᵈ. In the series of observations taken by Mr. Breen, immediately preceding these observations, a correction of +2″·3 was applied to the mean of the vernier readings, and one of +23″·3 to the series immediately following them, to reduce them to the readings of the other observers; the mean of these two numbers has been taken, viz. 12″·8, and applied additively to the above result: the corrected reading for north meridian was thus found to be 89°. 49′. 43″·5.

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, 1844.	Object.	Reading of Micrometer Wire.	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.
d		r	° ′ ″	″	″	° ′ ″	h m s	h m s	h m s	° ′ ″	′ ″	° ′ ″	° ′ ″	div.	″	° ′ ″	
Nov. 9	Polaris.......	100 ·312	89.52.60	23	28	89.52.37 ·0	1. 0. 8	0.59.43	1. 4.27	1.30.48	− 3. 6 ·9	89.49.30 ·1					
			89.50.48	10	13	89.50.23 ·7	1. 3.32	1. 3. 7			− 0.52 ·7	89.49.31 ·0					
			89.48.60	28	23	89.48.37 ·0	1. 6. 8	1. 5.43			+ 0.50 ·0	89.49.27 ·0					
			89.46.75	38	43	89.46.52 ·0	1. 8.45	1. 8.20			+ 2.33 ·3	89.49.25 ·3	89.49.25 ·7	− 2 ·2	− 3 ·0	89.49.22 ·7	HB
			89.44.88	58	63	89.45. 9 ·7	1.11.15	1.10.50			+ 4.12 ·0	89.49.21 ·7					
			89.42.93	48	58	89.43. 6 ·3	1.14.18	1.13.53			+ 6.12 ·4	89.49.18 ·7					
Nov. 20	δ Ursæ Minoris S.P.	100 ·312	89.56.63	33	33	89.56.43 ·0	6.27.17	6.27.21	6.21.59	3.24. 4	− 7. 8 ·8	89.49.34 ·2					
			89.59.65	28	33	89.59.42 ·0	6.29.44	6.29.48			−10.24 ·5	89.49.17 ·5					
			90. 3.60	33	33	90. 3.42 ·0	6.32.35	6.32.39			−14.12 ·1	89.49.29 ·9					
			90. 6.83	55	58	90. 7. 5 ·3	6.35.20	6.35.24			−17.51 ·6	89.49.13 ·7	89.49.14 ·9	− 1 ·5	− 1 ·8	89.49.13 ·2	HB
			90.10.48	15	10	90.10.24 ·3	6.38. 4	6.38. 8			−21.29 ·7	89.48.54 ·6					
			90.15.55	28	28	90.15.37 ·0	6.41.50	6.41.54			−26.30 ·0	89.49. 7 ·0					
			90.20.63	28	33	90.20.41.3	6.45.39	6.45.43			−31.33 8	89.49. 7 ·5					
Dec. 5	Polaris.......	100 ·312	90.12.75	50	45	90.12.56 ·7	0.28.20	0.28.49	1. 4.15	1.30.40	−23.11 ·0	89.49.45 ·6					G
			90.10.45	20	20	90.10.28 ·3	0.31.42	0.32.11			−20.59 ·7	89.49.28 ·7					G
			90. 8.85	40	45	90. 8.56 ·7	0.34.37	0.35. 6			−19. 5.8	89.49.50 ·8					G
			90. 6.60	40	45	90. 6.48 ·3	0.38.12	0.38.41			−16.45 ·7	(89.50. 2 ·7)					L
			90. 0.55	20	15	90. 0.30 ·0	0.47.25	0.47.54			−10.44 ·0	(88.49.46 ·0)					L
			89.55.60	35	25	89.55.40 ·0	0.54.24	0.54.53			− 6. 9 ·2	89.49.30 ·8	89.49.37 ·8	− 8 ·1	−11 ·3	89.49.26 ·5	G
			89.54.55	35	20	89.54.36 ·7	0.56. 4	0.56.33			− 5. 3 ·5	89.49.33 ·2					G
			89.47.45	15	10	89.47.23 ·3	1. 8. 0	1. 8.29			+ 2.46 ·9	(89.50.10 ·2)					L
			89.42.45	10	20	89.42.25 ·0	1.15.31	1.16. 0			+ 7.43 ·0	(89.50. 8 ·0)					L
			89.37.60	25	40	89.37.41 ·7	1.23. 7	1.23.36			+12.41 ·9	(89.50.23 ·6)					L
			89.33.40	0	20	89.33.20 ·0	1.29.51	1.30.20			+17. 5 ·9	(89.50.25 ·9)					L
Dec. 5	δ Ursæ Minoris S. P.	100 ·312	90. 5.63	33	33	90. 5.43 ·0	6.33.38	6.34. 7	6.21.55	3.24. 8	−16.14 ·9	89.49.28 ·1					
			90.10.73	35	40	90.10 49 ·3	6.37.15	6.37.44			−21. 3 ·5	89.49.45 ·8					
			90.15.58	28	33	90.15.39 ·7	6.40.54	6.41.23			−25.54 ·6	89.49.45 ·1					
			90.19.93	55	58	90.20. 8 7	6.44.30	6.44.59			−30.41 ·4	89.49.27 ·3	89.49.28 ·0	− 7 ·8	− 9 ·2	89.49.18 ·8	HB
			90.26.45	13	18	90.26.25 ·3	6.49 26	6.49.55			−37.13 ·8	89.49.11 ·6					
			90.29.93	63	58	90.30.11 ·3	6.52. 6	6.52.35			−40.45 ·6	89.49.25 ·8					
			90.37.48	18	15	90.37.27 ·0	6.57.46	6.58.15			−48.14 ·9	89.49.12 ·1					

November 9d. The vernier readings by Mr. Breen preceding these observations were 3″ greater than they were by the other observers, and they were found to be 14″ ·6 smaller in the observations following them : a correction of 5″ ·8 has therefore been added to the above result. The corrected reading for North Meridian was, therefore, 89°. 49′. 28″ ·4.

November 20d. The vernier readings by Mr. Breen were found to be 12″ ·4 smaller than by the other observers, both before and after the above observations, and therefore 12″ ·4 has been added to the above result. The corrected reading for North Meridian was, therefore, 89°. 49′. 25″ ·6.

December 5d. The observations by Mr. Lovelace were the first he had made, he being at the time under instruction; and therefore they have not been used in deducing the mean reading.

December 5d. The correction to Mr. Breen's vernier readings before these observations was found to be 5″ additive and it was 5″ subtractive afterwards: no correction was applied to the above result.

No observations were made in the month of January; the adopted reading in the month of December, 1843, was 269°.49′.44″, and this was found to be the reading in the month of February, and therefore the same reading was adopted for January. No observations were made in July, and the reading adopted for July was the mean of the adopted readings in the preceding and following months. The readings for all the other months 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.

	° ′ ″
1844, January	269. 49. 44
February	269. 49. 44
March	269. 49. 38
April	269. 49. 41
May	269. 49. 30
June	269. 49. 40
July	269. 49. 38
August	269. 49. 36
September	269. 49. 42
October	269. 49. 34
November	269. 49. 27
December	269. 49. 22

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 frame-work, 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 also read at every observation 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 45ˢ, and again at 15ˢ before that time, also at 15ˢ and 45ˢ 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 then at 30^s afterwards, the observer notes whether the cross 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 1844 is very small.

The adopted result is converted into arc, supposing $1^r = 1'.34''\cdot 07$, 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 the magnetic declination is deduced, 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, and at times it amounted to $20''$ or $30''$; its general amount, however, is about $10''$. A correction has been, therefore, deduced to apply to all his observations; in the Daily Observations it was found by comparing his reading of the verniers 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; in Extra Observations the correction has been that which under the circumstances, and by consulting the comparisons made both before and after them, appeared to be the best. In all cases, wherever Mr. Breen's readings have been used, a correction has been applied.

In the Extraordinary Observations, the observations have always 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 that the magnet was at rest, by inspection.

§ 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 (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 1844. 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 double rectangular box, 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 $1^{in}\cdot48$; at the lower part, for the first pair of rollers, the distance between them is $0^{in}\cdot92$.

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.

1843, December 26d. Observer, Mr. Glaisher.

Every part of the suspension apparatus was cleaned and examined; the state of the magnet was also examined and found to be in perfectly good order.

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

1843, December 26d. Observer, Mr. Glaisher.

	° ′
With the marked end of the magnet to the East, the torsion-circle read	40. 19
With the marked end of the magnet to the West, the torsion-circle read	317. 0

The half difference is 41°.39′ for the angle of torsion.

1843, December 27d. Observer, Mr. Glaisher.

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	div. 51	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	div. 51	Torsion-circle reading	° ′ 40. 6

The brass bar was inserted.

The division bisected by the vertical wire of the telescope was.............................	div. 51	Torsion-circle reading	° ′ 359. 20

And the angle of torsion is 41°.33′.

1843, December 27d. Observer, Mr. Glaisher.

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

The division bisected by the vertical wire of the telescope was.............................	div. 53 ·29	Torsion-circle reading	° ′ 40. 10

The brass bar was inserted.

The division bisected by the vertical wire of the telescope was.............................	div. 53 ·03	Torsion-circle reading	° ′ 359. 40

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

The division bisected by the vertical wire was ...... 52·75 div. Torsion-circle reading 317°. 6′

And the angle of torsion is 41°.32′,

Therefore, from the 1st	set of experiments the value was		41°. 39′
,,	2nd set	,,	41. 33
,,	3rd set	,,	41. 32

The mean value of the angle of torsion was, therefore, considered to be 41°.35′.

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

1841, January,	it was	41°. 3′
1842, January,	it was	42. 0
1842, April,	it was	41. 43
1843, January,	it was	41. 29
1843, May	it was	40. 51

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.

Observers, Messrs. Glaisher and Dunkin.

Day, 1843.	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. 26	312—	5·69	10·30	21·9	35	9·90	6·88	19·8
	313—	15·99	9·88	22·1	36	16·78	9·46	19·8
	314	25·87	8·86	21·6	37	26·24	8·16	19·8
	315—	34·73	9·82	21·6	38	34·40	8·89	19·5
	316	44·55	10·40	21·2	39	43·29	8·91	20·3
	317+	54·95	8·53	21·1	40	52·20	10·15	20·3
	318	63·48	8·69	20·6	41	62·35	10·09	20·1
	319	72·17	10·69	21.2	42	72·44		20·1
	320	82·86	6·72	20·1				
	321	89·58		20·2				

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 less than $54^{\text{div}}\cdot 95$; and that, when the marked end was East, with a torsion-circle reading of 40°, the scale reading was $52^{\text{div}}\cdot 2$; so that, with the respective readings of 317° of torsion-circle in one position of the magnet and of 40° + in the other, the scale readings were nearly identical. There is not so close an agreement in the times of vibration at those readings as could be desired, that at 40° + being nearly three-fourths of a second less than that at 317°. Throughout the year 1844 the marked end of the magnet has been to the West, and the torsion-circle reading has been 317°. The time of vibration throughout the year has been considered to be $20^{\text{s}}\cdot 8$.

The mean difference of the scale readings for a difference of 1° in the readings of the torsion-circle, from the experiments on January 2, was, with the marked end West, $9^{\text{div}}\cdot 32$; and with the marked end East, it was $8^{\text{div}}\cdot 93$.

The previous values of those determinations 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
2/ 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

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

°	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

On 1843, May 1^{d}, the time of vibration, with the torsion-circle reading 316°, was $20^{\text{s}}\cdot 7$; and with the reading 318° it was $20^{\text{s}}\cdot 8$: it was concluded that some error had been made in the times of vibration at the reading 317°, and throughout the year $20^{\text{s}}\cdot 8$ was considered to be the true time of vibration. In the above table the time of vibration appears to be $21^{\text{s}}\cdot 1$ at the same reading of the torsion-circle; but, considering all the previous values, it was thought best to consider the true value to be $20^{\text{s}}\cdot 8$, as in each of the preceding years, and, as above stated, it was so considered throughout the year 1844.

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:

				div.
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
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

And the mean of the values with the marked end of the magnet West, is $9^{\text{div.}}31$; and with the marked end East, it is $9^{\text{div.}}04$.

In the year 1841 experiments were made to determine the compound effect of the declination and vertical force magnets on the horizontal force magnet, the result of which was that the two magnets appeared to cause the horizontal force magnet, when its marked end was towards the West, to approach the North by a quantity corresponding to $0^{\text{div.}}487$ of the scale. The following are the experiments by which this determination was made.

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.

When the magnets were in their places, the marked end of the vertical force magnet was towards the East, that of the declination magnet towards the North. While they were in this situation, that division of the scale was registered which coincided with the vertical wire in the telescope. The magnets were then removed to some distance from the Observatory, the division of the scale again registered, and so on successively. All parts of the experiments connected with the vertical force magnet were performed by Mr. Glaisher. Messrs. Dunkin and Hind assisted in the other parts of the experiments.

Day, 1841.	Vertical Force and Declination Magnets away or in their places.	Mean Reading of the Scale of the Horizontal Force Magnet.	Mean of Readings, the one preceding and the other following that for the Vertical Force and Declination Magnets in their places.	Reading with the Vertical Force and Declination Magnets away – Reading with the Vertical Force and Declination Magnets in their places.	Mean.
		div.	div.	div.	div.
May 23	Away	58 ·315			
	In their places	58 ·590	58 ·218	– 0 ·372	
	Away	58 ·120			
	In their places	58 ·340	57 ·948	– 0 ·392	
	Away	57 ·775			
	In their places	58 ·590	57 ·870	– 0 ·720	
	Away	57 ·965			– 0 ·487
	In their places	58 ·640	58 ·065	– 0 ·575	
	Away	58 ·165			
	In their places	58 ·520	58 ·139	– 0 ·381	
	Away	58 ·113			
	In their places	58 ·713	58 ·229	– 0 ·484	
	Away	58 ·345			

The mean compound effect of the two magnets, from the number in the last column, is 0·487 division of the scale, by which the scale readings are increased, or by which the marked end is made to approach the North: the correction is therefore subtractive.

The scale was afterwards moved, so that all readings of it are less by $0^{\text{div}}\cdot 5$ than they would have been if it had remained unmoved; and thus all subsequent observations were corrected for the compound effect of the two magnets.

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 $8^{\text{ft}}.5^{\text{in}}\cdot 1$, and that the length of $30^{\text{div}}\cdot 9$ of the scale was exactly 12 inches; consequently, the angle at the mirror subtended by one division of the scale is $13'.12''\cdot 32$, or, for one division of the scale, the magnet is turned through an arc of $6'.36''\cdot 16$.

With the first pair of rollers, which was used throughout the year 1844, the adopted angle of torsion was $41°.2'.50''$, being the same as that in the years 1841, 1842, and 1843, 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 1844 is 0·002214.

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

In the month of April, 1843, an apparatus was erected for observation of deflexions in the form proposed by Dr. Lamont. A graduated circle (formerly used as the setting-circle of the transit instrument) is attached to a fixed tripod stand, with its plane horizontal; upon a pin in the center turns horizontally a plank; upon the center of the plank is fixed the box and suspension-apparatus for the magnet which is to be deflected (the magnet carrying a mirror); at one end of the plank is fixed a telescope (with a wire in its focus) and a short scale, to be viewed by reflexion in the mirror (only one adopted division, however, of the scale being used); and on the other end is placed, at arbitrary distances, a copper trough, having a proper resting-place for the deflecting magnet, which trough can be filled with water of any desired temperature. Thus (in turning the plank) the deflecting magnet, the telescope, the scale, and the suspending-skein, all turn together; and, the observation being always made by turning the plank till the adopted division of the scale is seen under the wire of the telescope, the relative position of the magnets and the torsion of the skein are always the same. It is evident that several causes of doubt, both theoretical and practical, are thus entirely removed. The deflexion of the magnet, or (which is the same thing) the angular movement of the plank, is measured by means of two micrometer-microscopes, fixed to the plank and reading the divisions of the graduated circle.

The proportion of the deflecting force of the magnet to the directive force of terrestrial horizontal magnetism, is evidently the same as that of the sine of the angle of deflexion to radius.

In the following observations, the deflecting magnet was always placed with its end towards the deflected magnet, and was on its Eastern side (sometimes North of the East and sometimes South of the East). The position of the deflected magnet for no deflecting force was determined from time to time by making similar observations when the deflecting magnet was removed. The changes of position for no deflexion do not correspond exactly with those of the declination magnet. The adopted readings for no deflecting force at each observation were found by interpolation between those observed, on the supposition that their changes were proportional to the time.

Observations of the Deflexion of a 2-Feet Magnet by the Horizontal Force Magnet, at Different Temperatures, in Lamont's Method.

Day, 1843.	Position of marked End of Horizontal Force Magnet.	Distance of Centers of Magnets.	Temperature of Horizontal Force Magnet.	Circle Reading.	Adopted Reading for no Deflecting Force.	Deflexion.	Its Natural Sine.
		ft. in.	°	° ′ ″	° ′ ″	° ′ ″	
April 20	Away	...	....	24. 16. 16·6			
	W	4. 0	67. 7	49. 17. 17·9	24. 16. 56·8	25. 0. 21·1	} 0·42258
	W	4. 0	67. 7	49. 17. 1·2	24. 17. 37·1	24. 59. 24·1	
	W	4. 0	118. 8	48. 58. 58. 5	24. 18. 17·3	24. 40. 41·2	0·41750
	W	4. 0	103. 0	49. 1. 41·0	24. 18. 57·5	24. 42. 43·5	0·41806
	W	4. 0	76. 7	49. 9. 6·9	24. 19. 37·7	24. 49. 29·2	0·41985
	Away	...	....	24. 20. 17·9			

Day, 1843.	Position of Marked End of Horizontal Force Magnet.	Distance of Centers of Magnets.	Temperature of Horizontal Force Magnet.	Circle Reading.	Adopted Reading for no Deflecting Force.	Deflexion.	Its Natural Sine.
		ft. in.	°	° ′ ″	° ′ ″	° ′ ″	
April 21	Away	...	....	24. 14. 16·7			
	W	4. 0	55·2	49. 7. 5·1	24. 14. 56·1	24. 52. 9·0	0·42055
	W	4. 0	126. 8	48. 44. 40·8	24. 15. 35·6	24. 29. 5·2	0·41447
	W	4. 0	106·3	48. 48. 2·8	24. 16. 15·0	24. 31. 47·8	0·41517
	W	4. 0	91·0	48. 50. 45·9	24. 16. 54·4	24. 33. 51·5	0·41570
	W	4. 0	73·4	48. 58. 39·1	24. 18. 13·3	24. 40. 25·8	0·41745
	Away	...	....	24. 18. 52. 7			
April 29	Away	...	....	24. 32. 2·9			
	W	4. 0	54·8	49. 24. 45·2	24. 32. 59·2	24. 51. 46·0	0·42045
	Away	...	....	24. 34. 51·7			
	W	4. 0	139·0	49. 4. 35·0	24. 35. 32·4	24. 29. 2·6	0·41444
	W	4. 0	126·0	49. 8. 54·3	24. 36. 53·9	24. 32. 0·4	0·41522
	Away	...	....	24. 38. 15·4			
	W	4. 0	54·0	49. 20. 21·9	24. 38. 45·5	24. 41. 36·4	0·41776
	Away	...	....	24. 39. 45·8			
	W	4. 0	140·0	49. 2. 56·5	24. 39. 38·9	24. 23. 17·6	0·41292
	Away	...	....	24. 39. 25·2			
April 20	Away	...	....	24. 20. 17·9			
	W	4. 6	123·0	41. 33. 16·1	24. 20. 52·5	17. 12. 23·6	0·29578
	W	4. 6	115·0	41. 38. 2·6	24. 21. 9·9	17. 16. 52·7	0·29705
	W	4. 6	79·5	41. 42. 50·9	24. 22. 1·8	17. 20. 49·1	0·29816
	W	4. 6	58·0	41. 45. 24·1	24. 22. 53·8	17. 22. 30·3	0·29863
	Away	...	....	24. 23. 11·3			
April 29	Away	...	....	24. 32. 2·9			
	E	4. 0	57. 6	1. 2. 40·3	24. 33. 55·4	23. 31. 15·1	0·39908
	Away	...	....	24. 34. 51·7			
	E	4. 0	133·0	1. 28. 35·3	24. 36. 13·2	23. 7. 37·9	0·39277
	E	4. 0	120·7	1. 24. 31·5	24. 37. 34·7	23. 13. 3·2	0·39422
	Away	...	....	24. 38. 15·4			
	E	4. 0	54·0	1. 12. 6·3	24. 39. 15·7	23. 27. 9·4	0·39799
	Away	...	....	24. 39. 45·8			
	E	4. 0	132·7	1. 31. 47·7	24. 39. 32·1	23. 7. 44·4	0·39281
	Away	...	....	24. 39. 25·2			

The difference between the deflexions with marked end East and marked end West, may arise from unsymmetrical distribution of the magnetism of the deflecting bar, or from a small error in the horizontal adjustments of the apparatus, which allowed the magnet to swing nearer to the deflecting bar in one position than in the other. It is unimportant in this investigation.

From these observations we obtain the following results (the observation at temperature 91°·0 on April 21 being omitted, and the mean of the two observations at temperatures 139°·0 and 140°·0 on April 29 being used as a single observation):

Marked end West, distance 4 feet.

The mean of 6 observations at low temperatures gives

At temperature 63°·63, the nat. sine of deflexion = 0·419773

The mean of 6 observations at high temperatures, distributed in the same manner over the same days of observation, gives

At temperature 120°·07, the nat. sine of deflexion = 0·415683

Therefore,

Change of natural sine for 56°·44.. = 0·004090
Change of natural sine for 1°...... = 0·00007246

Referring to 55° as the temperature to which the estimation of small changes of force nearly applies,

Natural sine expressing whole force = 0·42 nearly

Hence, $\dfrac{\text{change of force for } 1^\circ}{\text{whole force}} = 0{\cdot}0001725.$

Marked end West, distance 4 feet 6 inches.

The mean of 2 observations at low temperatures gives

At temperature 68°·75, the nat. sine of deflexion = 0·298395

The mean of 2 observations at high temperatures gives

At temperature 119°·0, the nat. sine of deflexion = 0·296415

Therefore,

Change for 50°·25.......................... = 0·001980
Change for 1°............................ = 0·00003940

Also,

Natural sine expressing whole force at temp. 55° = 0·2987

Hence, $\dfrac{\text{change of force for } 1^\circ}{\text{whole force}} = 0{\cdot}0001324.$

Marked end East, distance 4 feet.

The mean of 2 observations at low temperature gives

At temperature 55°·8, the nat. sine of deflexion = 0·398535

The mean of 3 observations at high temperatures gives

At temperature 128°·8, the nat. sine of deflexion = 0·393267

Therefore,

Change for 73°............................ = 0·005268
Change for 1°............................ = 0·00007217

Also,

Natural sine expressing whole force at temp. 55° = 0·3980

Hence, $\dfrac{\text{change of force for } 1^\circ}{\text{whole force}} = 0{\cdot}0001813.$

Giving to the three determinations the weights 12, 3, and 5, the mean result of $\dfrac{\text{change of force for } 1^\circ}{\text{whole force}} = 0{\cdot}0001686.$

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 1844, is very small.

From the adopted result, $40^{div.}\cdot14$ was subtracted at the end of the year 1843. At the beginning of the year 1844 it was found necessary to clean the mirror, an operation which occupied only one or two minutes, and the difference of scale readings immediately before and after was found to be such, that assuming there was no change of force during the time of cleaning the mirror, the above constant was altered from $40^{div.}\cdot14$ to $39^{div.}\cdot39$, and this latter number has been subtracted from every observation during the interval from January 1^{d} till December 28^{d} at 0^{h}. After this time the whole of the suspension apparatus was cleaned, and, the reading immediately before the cleaning being $54^{div.}\cdot59$, as it had been for some time before, and, immediately afterwards being $52^{div.}\cdot09$ (it continued for some considerable time at this reading), therefore the constant was altered from $39^{div.}\cdot39$ to $36^{div.}\cdot89$; and this number was used between December $28^{d}.1^{h}.50^{m}$ and December $29^{d}.22^{h}$, after which time the mirror, being dull and dirty, was cleaned. The scale reading, before the mirror was touched, was $50^{div.}\cdot98$, and no magnetic changes were going on; immediately after the operation, the reading was found to be $51^{div.}\cdot91$, and the magnet remained steadily at this reading for some time: so that it was supposed that the mirror was turned through an angle corresponding to $0^{div.}\cdot93$ while cleaning it. The constant was therefore increased by this quantity, and it became $37^{div.}\cdot82$; this number was used to the end of the year.

The remainder is converted into a number, expressing the proportion of the variable force to the mean horizontal force, by means of the numbers in Article 4 of this section.

Within the double box is suspended a thermometer, which is read at every even hour of observation. In section 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. This is applied, according to the reading of the inclosed thermometer, to every observation in the various sections: the observations are therefore all reduced to a uniform temperature.

§ 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 downwards 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 and of the horizontal force magnet on the vertical force magnet.

The observations which are repeated here, for determining the disturbing effects of the other magnets, were made in the year 1841.

Both disturbing magnets were first taken some distance from the Observatory, and the reading of the scale was recorded, which coincided with the horizontal wire in the telescope. The magnets were then placed in their boxes, the marked end of the declination magnet being to the North, and the marked end of the horizontal force to the West: the division of the scale was again recorded. The magnets were again taken away and so on successively.

Observers, Messrs. Glaisher, Hind, and Dunkin.

Day, 1841.	Position of Declination and Horizontal Force Magnets.	Declination and Horizontal Force Magnets away or in their places.	Mean Reading of the Scale of the Vertical Force Magnet.	Mean of Readings, the one preceding and the other following that for the Declination and Horizontal Force Magnets in their places.	Reading with Declination and Horizontal Force Magnets away – Reading with Declination and Horizontal Force Magnets in their places.	Mean.
			div.	div.	div.	div.
May 23	Marked	Away	33·750			
	end of Declination	In their places	35·763	36·563	+ 0·800	
		Away	39·375			
	Magnet	In their places	42·775	41·949	– 0·826	
	N.	Away	44·523			
	Marked	In their places	44·775	44·012	– 0·763	– 0·148
	end of	Away	43·500			
	Horizontal	In their places	41·175	41·388	+ 0·213	
	Force	Away	39·275			
	Magnet	In their places	38·900	38·738	– 0·162	
	W.	Away	38·200			

An inspection of the numbers contained in the fourth column of this table when the magnets were away, will shew that no satisfactory result can be deduced from them. It would be necessary for this that the readings preceding and following the reading when the magnets were in their places, should be very nearly the same; in the table they differ very much. In consequence, the number in the last column can only be considered as shewing that the compound effect is very small. In two sets of experiments made in 1841, and published in the volume for that year, it was clearly shewn, that neither magnet had individually much effect in disturbing the vertical force magnet.

In the volume for 1842, are exhibited experiments shewing that the effect of the iron affixed to the electrometer pole was nearly inappreciable, the result being, that the marked end of the vertical force magnet was drawn upwards by 0·190 division of the scale. The apparent compound effect of the declination and horizontal force magnets, as deduced above, is nearly the same in amount, but acting in a contrary way; and, consequently, no corrections have been applied to any of the observations on account of either of these disturbing causes.

Determination of the Time of Vibration of the Magnet in the Vertical Plane.

2. Between January 1^d and April 30^d, the magnet had been in all positions for scale readings between $38^{div.}$ and $48^{div.}$, and the times of vibration, which were observed every day, had been taken at every division between these: 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.
div.	s	
38	24·66	2
39	24·84	9
40	25·05	10
41	25·24	5
42	25·08	5
43	25·26	7
44	25·43	6
45	25·39	9
46	25·27	12
47	25·35	8
48	25·23	2

As the magnet is horizontal when the scale reading is $50^{div.}$, the number $25^s{\cdot}2$ was adopted from the above table, as the mean time of vibration between January 1^d and April 30^d.

Between May 1^d and October $12^d.12^h$ the magnet had been in all positions between $32^{div.}$ and $40^{div.}$, and the times of vibration had been taken at every division between these. The results are as follows:—

Division of Scale.	Mean of Times of Vibration in Mean Solar Time.	Number of Mean Results.
div.	s	
32	25·11	4
33	25·18	7
34	25·17	10
35	25·19	13
36	25·23	12
37	25·18	8
38	24·95	7
39	24·81	8
40	25·00	5

The apparent decrease in the time of vibration, as the readings of the scale increase, is probably accidental, as it had been found in every previous investigation to decrease with the decrease of scale readings; and it may be added that, in every subsequent investigation, up to the time of writing this, viz. 1846, the time of vibration has been found to vary with the changes of position of the magnet, independently of its temperature, and so that, for every decrease in the scale readings, a decrease in the time of vibration has taken place.

From consideration of the above table it was thought that 25^s was the best value to adopt for the time of vibration.

Between October 13^d and the end of the year the magnet had been in all positions for scale readings between $34^{div.}$ and $42^{div.}$, and the times of vibration had been taken at every division between these. The results are as follows:—

Division of Scale.	Mean of Times of Vibration in Mean Solar Time.	Number of Mean Results.
div.	s	
34	25·75	4
35	25·86	5
36	25·94	4
37	26·17	5
38	26·17	9
39	26·18	8
40	26·55	2
41	26·39	4
42	26·28	3

The mean time of vibration adopted was $26^s{\cdot}5$, and it was used from September $13^d.14^h$ to the end of the year 1844.

Determination of the Time of Vibration of the Magnet in the Horizontal Plane.

1844, April 28. Observer, Mr. Glaisher.

3. The vertical force magnet was suspended from a tripod in the library, the broad side of it being in a plane parallel to the horizon; therefore its moment of inertia was the same as when it is in observation. A telescope, with a wire in its focus, was directed to the reflector carried by the magnet: a scale of numbers was placed on the floor of the library at right angles to the long axis of the magnet, or parallel to the mirror. The following observations were then taken for the purpose of ascertaining the time of its vibration in the horizontal plane. During the whole time the magnet was swinging through a small arc, the extent of which was about five divisions of the scale. After April $28^d.2^h$ the magnet was left suspended, and on the following morning it was found to be without motion;

a small swing was communicated, and all the observations were considered to be satisfactory. No correction is required for the rate of the chronometer, which was small.

Day and Hour.	Chronometer Times of the Extremes of Vibration.	Intervals in Solar Time.	Day and Hour.	Chronometer Times of the Extremes of Vibration.	Intervals in Solar Time.	Day and Hour.	Chronometer Times of the Extremes of Vibration.	Intervals in Solar Time.
d h	s	s	d h	s	s	d h	s	s
Apr. 28. 1	57·0	25·0	Apr. 28. 22	15·0	24·3	Apr. 28. 22	59·5	24·5
	22·0	24·5		40·0	25·0		24·0	24·5
	46·5	24·5		4·5	24·5		49·0	25·0
	11·0	25·0		29·5	25·0		14·0	25·0
	36·0	24·0		54·0	24·5		38·5	24·5
	0·0	24·0		17·5	23·5		33·0	
	24·0	25·0		43·0	25·5		57·5	24·5
	49·0	25·6		8·0	25·0		21·8	24·3
	14·6	24·4		33·0	25·0		46·3	24·5
	39·0	24·4		57·8	24·8		11·5	25·2
	3·4	24·6		22·5	24·7		36·3	24·8
	28·0	26·0		47·0	24·5		0·5	24·2
	54·0	24·0		12·0	25·0		25·5	25·0
	18·0	21·5		38·0	26·0		50·3	24·8
	39·5	23·5		2·0	24·0		14·6	24·3
	3·0	24·5		27·5	25·5		39·5	24·9
	27·5	25·0		52·0	24·5		4·0	24·5
	52·5	24·5		17·4	25·4		28·7	24·7
	17·0	24·5		41·5	24·1		53·5	24·8
	41·5	25·0		6·0	24·5		18·0	24·5
	6·5	24·5		30·5	24·5		42·6	24·6
	31·0	25·0		56·0	25·5		7·5	24·9
	56·0	24·6		20·5	24·5		32·5	25·0
	20·6	25·4		45·0	24·5		57·6	25·1
	46·0	24·0		10·5	25·5		21·5	23·9
	10·0	24·5		35·0	24·5		46·0	24·5
	34·5			59·5	24·5		11·0	25·0
Apr. 28. 22	31·5	23·5		24·0	24·5		36·5	25·5
	55·0	24·8		48·8	24·8		0·5	24·0
	19·8	24·4		14·0	25·2		25·0	24·5
	44·2	25·0		39·0	25·0		50·0	25·0
	9·2	24·8		3·5	24·5		14·6	24·6
	34·0	24·0		28·0	24·5		39·0	24·4
	58·0	25·0		52·5	24·5		4·5	25·5
	23·0	24·0		18·0	25·5		28·5	24·0
	47·0	24·5		42·5	24·5		53·0	24·5
	11·5	24·5		7·5	25·0		17·0	24·0
	36·0	24·5		32·5	25·0		41·5	24·5
	0·5	25·0		57·6	25·1		5·7	24·2
	25·5	25·2		22·5	24·9		30·0	24·3
	50·7			47·0	24·5		54·6	24·6
				10·0	23·0		19·0	24·4
				35·0	25·0			

The mean of these is $24^{s}\cdot6$, and this number has been used as the mean value of one vibration in the horizontal plane throughout the year 1844.

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 $8'.49''\cdot79$; 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 $4'.24''\cdot90$.

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, $5'.27''\cdot43$.

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 $\times \frac{T'^2}{T^2}$," 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.

	s	s
1844, January 1^d to April 30^d, T′ is assumed	24·6,	T = 25·2
May 1^d to October 12^d. 12^h, T′ is assumed	24·6,	T = 25·0
October 13^h. 14^h to the end of the year 1844, T′ is assumed	24·6,	T = 26·5

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:—

1844, January 1^d to April 30^d	0·000581
May 1^d to October 12^d. 12^h	0·000590
October 13^d. 14^h to the end of the year	0·000525

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

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

The following observations for the effect of temperature on the vertical force magnet were made in the year 1843 in the same manner as those for the horizontal force magnet, page xxx:—

Day, 1843.	Position of Marked End of Vertical Force Magnet.	Distance of Centers of Magnets.	Temperature of Vertical Force Magnet.	Circle Reading.	Adopted Reading for no Deflecting Force.	Deflexion.	Its Natural Sine.
		ft. in.	°	° ′ ″	° ′ ″	° ′ ″	
April 22	Away	...	....	24. 18. 52 ·7			
	W	4. 0	54 ·0	41. 0. 38 ·8	24. 18. 55 ·0	16. 41. 43 ·8	0 ·28728
	W	4. 0	127 ·0	40. 47. 20 ·0	24. 18. 57 ·2	16. 28. 22 ·8	0 ·28356
	W	4. 0	89 ·2	40. 56. 40 ·3	24. 19. 4 ·0	16. 37. 36 ·3	0 ·28613
	W	4. 0	71 ·3	40. 59. 48 ·5	24. 19. 6 ·2	16. 40. 42 ·3	0 ·28698
	Away	...	....	24. 19. 10 ·8			
April 26	Away	...	....	24. 18. 8 ·9			
	W	4. 0	50 ·5	40. 49. 34 ·7	24. 19. 16 ·7	16. 30. 18. 0	0 ·28409
	Away	...	....	24. 21. 32 ·3			
	W	4. 0	124 ·0	40. 30. 55 ·9	24. 21. 58 ·4	16. 8. 57 ·5	0 ·27814
	Away	...	....	24. 22. 50 ·6			
	W	4. 0	50 ·2	40. 49. 50 ·5	24. 23. 10 ·6	16. 26. 39 ·9	0 ·28309
	Away	...	....	24. 23. 50 ·5			
	W	4. 0	124 ·8	40. 28. 56 ·3	24. 23. 40 ·5	16. 5. 15 ·8	0 ·27711
	Away	...	....	24. 23. 20 ·5			
	W	4. 0	50 ·3	40. 49. 31 ·7	24. 22. 46 ·2	16. 26. 45 ·5	0 ·28311
	Away	...	....	24. 21. 37 ·7			
	W	4. 0	134 ·0	40. 15. 42 ·1	24. 20. 38 ·1	15. 55. 4 ·0	0 ·27426
	W	4. 0	121 ·8	40. 17. 23 ·7	24. 19. 38 ·4	15. 57. 45 ·3	0 ·27501
	Away	...	....	24. 19. 8 ·6			
April 27	Away	...	....	24. 14. 15 ·8			
	W	4. 0	50 ·5	40. 28. 21 ·5	24. 16. 1 ·4	16. 12. 20 ·1	0 ·27908
	Away	...	....	24. 19. 32 ·5			
	W	4. 0	135 ·0	40. 8. 59 ·9	24. 19. 45 ·5	15. 49. 14 ·4	0 ·27263
	W	4. 0	119 ·0	40. 13. 8 ·0	24. 20. 11 ·6	15. 52. 56 ·4	0 ·27366
	Away	...	....	24. 20. 37 ·7			
	W	4. 0	52 ·0	40. 28. 40 ·3	24. 21. 6 ·7	16. 7. 33 ·6	0 ·27775
	Away	...	....	24. 22. 4 ·8			
April 23	Away	...	....	24. 13. 1 ·6			
	W	5. 0	55 ·5	32. 43. 12 ·9	24. 13. 53 ·4	8. 29. 19 ·5	0 ·14762
	W	5. 0	122 ·0	32. 37. 18 ·5	24. 16. 29 ·0	8. 20. 49 ·5	0 ·14517
	W	5. 0	95 ·0	32. 41. 52 ·1	24. 17. 20 ·8	8. 24. 31 ·3	0 ·14623
	W	5. 0	75 ·0	32. 46. 5 ·6	24. 19. 56 ·3	8. 26. 9 ·3	0 ·14670
	Away	...	....	24. 20. 48 ·2			
April 22	Away	...	....	24. 18. 52 ·7			
	E	4. 0	118 ·0	8. 2. 31 ·0	24. 18. 59 ·5	16. 16. 28 ·5	0 ·28022
	E	4. 0	95 ·5	7. 58. 7 ·6	24. 19. 1 ·7	16. 20. 54 ·1	0 ·28147
	E	4. 0	70 ·0	7. 54. 35 ·9	24. 19. 8 ·5	16. 24. 32 ·6	0 ·28249
	Away	...	....	24. 19. 10 ·8			
April 26	Away	...	....	24. 18. 8 ·9			
	E	4. 0	51 ·2	8. 6. 16 ·4	24. 20. 24 ·5	16. 14. 8 ·1	0 ·27958
	Away	...	....	24. 21. 32 ·3			
	E	4. 0	116 ·1	8. 24. 30 ·4	24. 22. 24 ·5	15. 57. 54 ·1	0 ·27505
	Away	...	....	24. 22. 50 ·6			
	E	4. 0	50 ·3	8. 12. 32 ·8	24. 23. 30 ·5	16. 10. 57 ·7	0 ·27871
	Away	...	....	24. 23. 50 ·5			
	E	4. 0	119 ·0	8. 27. 39 ·8	24. 23. 30 ·5	15. 55. 50 ·7	0 ·27447
	Away	...	....	24. 23. 20 ·5			

Day, 1844.	Position of marked End of Vertical Force Magnet.	Distance of Centers of Magnets.	Temperature of Vertical Force Magnet.	Circle Reading.	Adopted Reading for no Deflecting Force.	Deflexion.	Its Natural Sine.
		ft. in.	°	° ′ ″	° ′ ″	° ′ ″	
April 26 *continued.*	E	4. 0	50 ·5	8. 14. 52 ·2	24. 22. 12 ·0	16. 7. 19 ·8	0 ·27768
	Away	...	....	24. 21. 37 ·7			
	E	4. 0	138 ·2	8. 42. 5 ·3	24. 21. 7 ·9	15. 39. 2 ·6	0 ·26977
	E	4. 0	127 ·8	8. 40. 47 ·1	24. 20. 8 ·2	15. 39. 21 ·1	0 ·26985
	Away	...	....	24. 19. 8 ·6			
April 27	way	...	....	24. 14. 15 ·8			
	E	4. 0	52 ·0	8. 21. 33 ·1	24. 17. 47 ·0	15. 56. 13. 9	0 ·27458
	Away	...	....	24. 19. 32 ·5			
	E	4. 0	125 ·5	8. 44. 38 ·7	24. 19. 58 ·5	15. 35. 19 ·8	0 ·26873
	E	4. 0	114 ·2	8. 41. 8 ·6	24. 20. 24 ·6	15. 39. 16 ·0	0 ·26983
	Away	...	....	24. 20. 37 ·7			
	E	4. 0	52 ·0	8. 28. 31 ·1	24. 21. 35 ·7	15. 53. 4 ·6	0 ·27369
	Away	...	....	24. 22. 4 ·8			
April 23	Away	...	....	24. 13. 1 ·6			
	E	5. 0	55 ·5	15. 47. 56 ·2	24. 14. 45 ·3	8. 26. 49 ·1	0 ·14690
	E	5. 0	129 ·0	16. 2. 55 ·4	24. 15. 37 ·1	8. 12. 41 ·7	0 ·14283
	E	5. 0	94 ·5	15. 58. 8 ·1	24. 18. 12 ·6	8. 20. 4 ·5	0 ·14495
	E	5. 0	76 ·0	15. 58. 5 ·5	24. 19. 4 ·5	8. 20. 59 ·0	0 ·14522
	Away	...	....	24. 20. 48 ·2			

Grouping the two last observations W., 4 feet, April 26, and also the two last observations E., 4 feet, April 26; omitting the second result E., 4 feet, April 22; and dividing each day's results remaining into two equal groups for high and low temperature, we have—

Marked end West, distance 4 feet.

For temperature 54°·11, nat. sine of deflexion = 0·283054
For temperature 120°·99, nat. sine of deflexion = 0·277980
Difference for 66°·88 = 0·005074
Difference for 1° = 0·00007586

Adopting 55° as the temperature of reference, for which the nat. sine = 0·283.

$$\frac{\text{Change of force for } 1^\circ}{\text{Whole force}} = 0{\cdot}0002681.$$

Marked end West, distance 5 feet.

For temperature 65°·25, nat. sine of deflexion = 0·14716
For temperature 108°·5, nat. sine of deflexion = 0·14570
Difference for 43°·25 = 0·00146
Difference for 1° = 0·0000337
Natural sine for 55° = 0·148

$$\frac{\text{Change of force for } 1^\circ}{\text{Whole force}} = 0{\cdot}0002277.$$

Marked end East, distance 4 feet.

For temperature 54°·33, nat. sine of deflexion	=	0·277788
For temperature 120°·97, nat. sine of deflexion	=	0·273018
Difference for 66°·64	=	0·004770
Difference for 1°	=	0·00007157
Natural sine for 55°	=	0·2777

$$\frac{\text{Change of force for } 1^\circ}{\text{Whole force}} = 0{\cdot}0002577.$$

Marked end East, distance 5 feet.

For temperature 65°·75, nat. sine of deflexion	=	0·14606
For temperature 111°·75, nat. sine of deflexion	=	0·14389
Difference for 46°·00	=	0·002170
Natural sine for 55°	=	0·147

$$\frac{\text{Change of force for } 1^\circ}{\text{Whole force}} = 0{\cdot}0003217.$$

Giving to these four results the respective weights 10, 1, 10, 1, the mean value of $\frac{\text{change of force for } 1^\circ}{\text{whole force}}$ is $= 0{\cdot}00026397$.

From these experiments it appears that for an increase of temperature of 1° the decrease of the vertical force was 0·000264 parts of the whole vertical force. This number has been applied to every observation in the various sections; the observations are, therefore, reduced to an uniform temperature.

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, that 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 3 of this section. The numbers in the printed columns are those numbers reduced to an uniform temperature.

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 reading was 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 values of one division of the scale.

On Jan. 0^d at 14^h the time of one vibration in the vertical plane was considered to be $25^s\cdot2$; at the previous observation it was considered to be $24^s\cdot2$; and, in consequence, the value of one division of the scale changed from 0·000630 to 0·000581. The scale reading on Jan. 0^d at 14^h, was $47^{div}\cdot11$. Had the time of vibration not altered, the reduced observations would have been 0·042123; in the printed volume it is 0·039814; the difference between these numbers is 0·002309: therefore, to make the numbers beginning January 0^d at 14^h, comparable with the series in December, 1843, it is necessary to add 0·002309. This correction applies to all numbers between January 1^d and April 30^d, and it *has not been applied.*

The numbers in the series ending 1843, December 31^d, required to be increased by 0·003852 to reduce them to the series beginning 1843, May 6^d; and as the numbers in the series beginning 1844, January 1^d, are less than those in the preceding series by 0·002309, the series beginning 1844, January 1^d, require 0·006161 to be added to reduce the numbers to the 1843, May series; and this correction applies from the beginning of the year 1844 to April $30^d.12^h$.

On April $30^d.14^h$, or May $0^d.14^h$, the scale reading was $38^{div}\cdot32$; the time of vibration in the vertical plane was $25^s\cdot0$; at the previous observation it was considered to be $25^s\cdot2$; and, consequently, the value of one division of the scale changed from 0·000581 to 0·000590. Had the time of vibration not altered, the reduced observation would have been 0·037720; in the printed volume it is 0·038079; the difference between these numbers is 0·000359, which is to be applied subtractively to the numbers in the series beginning at this time to reduce them to the preceding series; and it applies to all numbers in the various sections of observations between May $0^d.14^h$ and Oct. $12^d.12^h$: and as the numbers in the preceding series, or that ending April $30^d.12^h$, required 0·006161 to be added to reduce them to the series beginning 1843, May, this series will be reduced to that of May, 1843, by adding 0·005802 to all its numbers.

October $13^d.14^h$. The scale reading at this time was $34^{div}\cdot83$; the time of vibration in the vertical plane was $26^s\cdot5$; at the previous observation it was $25^s\cdot0$; and, consequently, the value of one division of the scale changed from 0·000590 to 0·000525. Had the change not taken place, the reduced reading would have been 0·035994; in the printed column of observations it is 0·033729; the difference between these numbers is 0·002265, which it is necessary to apply additively to the series of numbers beginning at this time, to reduce them to that ending at the previous observation; and as that series required 0·005802 to be added to reduce it to that of 1843, May, the series beginning Oct. $13^d.14^h$ require 0·008067 to be added to reduce the numbers to the 1843, May series; and this correction applies to the end of the year.

In the formation of the hourly Abstracts, all the numbers at the even hours of Göttingen time, between October 13^d. 14^h and October 31^d. 12^h, were increased by 0·002265, to reduce them to the series of the former part of the month, and then the means of the numbers at each hour were taken.

From the preceding remarks it follows :—

That all the numbers in the various sections of observations

Between January 1^d and April 30^d require to be increased by	0·006161
Between May 1^d and October 12^d. 12^h require to be increased by	0·005802
Between October 13^d. 14^h and the end of the year require to be increased by	0·008067

That in the daily means of observations, all the numbers

Between January 1^d and April 30^d require to be increased by	0·006161
Between May 1^d and May 12^d require to be increased by	0·005802
Between May 13^d and the end of the year require to be increased by	0·008067

That in the hourly means of observations, all the numbers

From January to April require to be increased by	0·006161
From May to October require to be increased by	0·005802
From October to December require to be increased by	0·008067

to reduce all these numbers to the 1843, May series; and these corrections have been applied where necessary in the Abstracts.

The numbers in the series May 1^d to October 12^d, require the subtractive correction of 0·000359, to make them comparable with the series January 1^d to April 30^d. The numbers in the series October 14^d to the end of the year require to be increased by 0·002265, to make them comparable with those in the series May 1^d to October 12^d: or require to be increased by 0·001906, to reduce them to the series January to April. These corrections *have not* been applied.

On the Effect of altering the Adjustment Screws at either End of the Magnet.

1843, May 5^d. Mr. Glaisher adjusted the magnet to balance leaving the East screw, or that at the marked end of the magnet, vertical, and the West screw horizontal; he then made the following experiments.

The scale reading was 41^{div}·6: the West screw was withdrawn 6 half-turns, and the mean scale reading was then 22^{div}·1.

	div.
Therefore, 3 revolutions caused a change of	19·5
or, 1 revolution caused a change of	6·5

The West screw was then further withdrawn 5 half-turns, and the mean reading of the scale was found to be $7^{div.}1$.

	div.		div.
Therefore, the withdrawing of the screw $2\frac{1}{2}$ revolutions caused the scale reading to change from	22·1	to	7·1
or, 1 revolution caused a change of....................	6·0		

Then the screw was driven through 2 half-revolutions, and the mean scale reading was found to be $13^{div.}5$.

	div.		div.
Therefore, 1 revolution caused the scale reading to change from...	7·1	to	13·5
or, 1 revolution of the screw caused a change of.........	6·4		

The screw was then driven through 10 half-revolutions, and the mean scale reading was found to be $49^{div.}4$.

	div.		div.
Therefore, 5 revolutions caused the scale reading to change from..	13·5	to	49·4
or, 1 revolution caused a change of....................	7·2		

After some experiments had been made with the vertical or East screw, as detailed below, the scale reading being $82^{div.}7$, and the mean time of one vibration being $25^{s}.5$, the West or horizontal screw was withdrawn through 10 revolutions, and the scale reading was $19^{div.}0$, and the mean time of one vibration was $25^{s}.1$.

	div.
Therefore, 10 revolutions caused a change of..................	63·7
or, 1 revolution caused a change of..................	6·4

The screw was then driven through 5 revolutions, and the mean scale reading was $52^{div.}2$, and the mean time of vibration was $25^{s}.0$. The scale reading was found to be $50^{div.}$ when the magnet was horizontal and resting in its Y's.

On dropping the Y's, the magnet resting on the agate planes, the mean scale reading was $67^{div.}0$, and the mean time of one vibration was $24^{s}.7$; the horizontal screw was then withdrawn 2 revolutions, and the scale reading was $54^{div.}0$.

	div.
Therefore, 1 revolution caused a change of....................	6·5

The screw was then withdrawn 1 half-revolution, when the scale reading was $51^{div.}1$, and the mean time of one vibration was $24^{s}.9$; and, when the magnet was raised in its Y's, the scale reading was 54^{div}.

After this time the instrument was left for observation with its marked end to the East.

The following are the experiments on the vertical screw alluded to above :—

The scale reading was $49^{div.}4$; the screw was then drawn upwards 10 half-revolutions, when the mean scale reading was $38^{div.}6$, and the mean time of vibration was $25^{s}.8$;

	div.
Or, 1 revolution caused a change of.........................	2·2

The screw was then drawn upwards 5 additional revolutions, when the scale read $35^{div.}4$, and the mean time of one vibration was $25^{s}.9$.

	div.
From this, 1 revolution of the screw caused a change of............	0 ·6

The screw was then drawn five additional revolutions, and the scale reading was found to be $32^{div.}5$, and the mean time of one vibration was $26^{s}.1$.

	div.
Therefore, 5 revolutions caused a change in the reading of the scale of	2 ·9
or, 1 revolution caused a change of........................	0 ·6

The screw was then drawn upwards 30 additional revolutions, and the scale reading was found to be $31^{div.}8$, differing from the former reading by only $0^{div.}7$; so that from this,

	div.
One revolution caused a change of..............................	0 ·02

The mean time of one vibration was $30^{s}.9$.

The screw was then driven downwards through 50 revolutions, and the scale reading was found to be $36^{div.}1$, being increased by $4^{div.}3$ only.

	div.
Therefore, 1 revolution caused a change of........................	0 ·09

The mean time of one vibration was $24^{s}.6$.

The final results of the preceding sets of experiments are as follows: that, the withdrawal of the West or horizontal screw, the head of which is towards the West, through 1 revolution, causes the scale reading to be less by $6^{div.}7$, and the driving of the screw causes the scale reading to be greater by $6^{div.}7$ for every revolution; and that such changes in the position of the horizontal screw have a little, but only a little, effect on the time of vibration in the vertical plane.

That the driving of the vertical or East screw, the head of which is towards the zenith, through 50 revolutions, caused the time of vibration to be increased by about $5^{s}.5$, and to be diminished by about the same amount on the withdrawal of the screw, and that such changes in the position of this screw have a very small effect on the scale reading.

§ 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 $0^{in}{\cdot}014$ 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.

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 $0^{in}{\cdot}03$ and $0^{in}{\cdot}04$ 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 $1^{in}{\cdot}09$ apart; the whole length of each of the axles of the needles is $1^{in}{\cdot}20$, of which a length of $0^{in}{\cdot}88$ is nearly $0^{in}{\cdot}1$ in diameter; a portion, $0^{in}{\cdot}02$ 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, and the remainder $0^{in}{\cdot}14$ on each side is the length of the terminations of the axles, and its thickness is about $0^{in}{\cdot}02$: both needles are of the same dimensions in these respects, and no certain difference exists in the thickness 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 observations 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 vertical circle at the two ends of the needle is 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 as before. 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 repeated as before.

The observations were made in the meridian and in the above manner till September $15^d.21^h$. After this time they were made in planes inclined to the magnetic meridian as follows:—The plane of the instrument was placed at a certain 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 West. The needle was then reversed on its axle, so that its face was towards the East, the face of the instrument being still towards the West, and similar observations were made. The instrument was then turned in azimuth round by the South, 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 as before. 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 inclination, deduced from each azimuthal angle, is converted into 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 denotes the inclination to the magnetic meridian at a certain azimuth.

η' denotes 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. *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 $0^{in}\cdot05$.

The vernier subdivides the scale divisions to $0^{in}\cdot002$; 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 $0^{in}\cdot565$ in diameter; the correction for the effect of capillary attraction is therefore only $+0^{in}\cdot002$. 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 the 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 in 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 $0^{\circ}\cdot5$. The following are comparisons of the dry-bulb thermometer with the Royal Observatory's standard thermometer.

Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard.	Range of Temperature.	Number of Comparisons.	Mean Temperature.
	°	° °		°
Jan. 1	0·1	30 to 47	11	44·7
8	0·1	33 to 41	11	37·0
15	0·1	28 to 34	10	31·5
22	0·1	33 to 43	10	39·2
29	0·1	38 to 49	12	43·8
Feb. 5	0·1	26 to 35	11	30·8
12	0·1	30 to 33	6	31·3
19	0·2	39 to 47	10	43·2
26	0·3	33 to 47	9	41·0
Mar. 4	0·1	37 to 39	4	37·8
11	0·2	38 to 53	8	44·9
18	0·2	32 to 44	11	38·2
25	0·4	40 to 51	8	45·2
Apr. 1	0·2	37 to 63	8	49·2
8	0·5	35 to 41	3	37·6
15	0·5	44 to 60	13	50·8
22	0·4	45 to 63	7	56·8
29	0·2	44 to 52	3	48·6
May 6	0·2	45 to 66	7	54·4
13	0·7	46 to 70	6	58·6
20	0·6	44 to 61	5	51·7
27	0·7	48	1	48·3
June 3	0·9	56 to 65	5	59·7
10	0·4	52 to 72	3	59·5
17	1·1	47 to 71	5	61·9

Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard.	Range of Temperature.	Number of Comparisons.	Mean Temperature.
	°	° °		°
July 1	0·6	52 to 69	6	60·7
8	0·5	54 to 69	4	59·1
15	0·3	52 to 72	5	61·0
22	0·2	55 to 73	2	63·8
29	0·5	62 to 68	2	64·9
Aug. 5	0·5	50 to 67	5	59·4
12	0·9	61 to 66	3	63·1
26	0·7	60	1	60·2
Sep. 2	0·5	73 to 74	2	73·1
9	1·6	62 to 63	2	62·4
16	0·8	68 to 69	2	68·4
23	0·4	51 to 58	4	55·3
30	0·2	51 to 56	3	53·4
Oct. 28	0·5	40 to 48	3	44·6
Nov. 4	0·3	40 to 45	4	43·2
11	0·0	39 to 45	7	41·1
18	0·3	49 to 52	7	50·4
25	0·3	38 to 43	10	40·2
Dec. 2	0·1	34 to 38	12	36·0
9	0·3	26 to 30	11	28·3
16	0·2	36 to 38	12	37·1
23	0·2	29 to 31	7	30·6
30	0·2	36 to 43	10	38·7

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

Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard below 32°.	Mean.	Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard between 32° and 50°.	Mean.	Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard between 50° and 60°.	Mean.	Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard above 60°.	Mean.
	°	°		°	°		°	°		°	°
Jan. 15	0·1		Jan. 1	0·1		Apr. 15	0·5		June 17	1·1	
			8	0·1		22	0·4				
Feb. 5	0·1		22	0·1					July 1	0·6	
12	0·1	0·1	29	0·1		May 6	0·2		15	0·3	
						13	0·7		22	0·2	
Dec. 9	0·3		Feb. 19	0·2		20	0·6		29	0·5	
23	0·2		26	0·3							

Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard between 32° and 50°.	Mean.	Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard between 50° and 60°.	Mean.	Day, 1844.	The Dry Thermometer reads less than the Greenwich Standard above 60°.	Mean.
	°	°		°	°		°	°
Mar. 4	0·1		June 3	0·9		Aug. 12	0·9	0·7
11	0·2		10	0·4	0·5	26	0·7	
18	0·2							
25	0·4		July 8	0·5		Sep. 2	0·5	
						9	1·6	
Apr. 1	0·2	0·2	Aug. 5	0·5		16	0·8	
8	0·5							
29	0·2		Sep. 23	0·4				
			30	0·2				
May 27	0·7							
			Nov. 18	0·3				
Oct. 28	0·5							
Nov. 4	0·3							
11	0·0							
25	0·3							
Dec. 2	0·1							
16	0·2							
30	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......	0·5
Above	60			by......	0·7

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 1841.)

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

	°		°	°	
Below	32		....	0·1	subtractive
Between	32	and	50.........	0·0	
Between	50	and	60.........	0·3	additive
Above	60...............			0·5	additive

to reduce its readings to the readings which would have been given by Mr. Simms's standard thermometer. These *have not* been applied either in the various sections of observation 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 1841.)

The bulb is covered with a piece of fine muslin; immediately under it is placed a small cistern of rain-water (the water to which is supplied by a fountain-cistern). 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, that the water shall have become frozen, and the evaporation from the surface of the ice 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.	1,	from	11	comparisons	between	30	and	47,	lower by	0·1
,,	8,	,,	11	,,	,,	33	and	41,	,,	0·2
,,	15,	,,	10	,,	,,	28	and	34,	,,	0·3
,,	22,	,,	10	,,	,,	33	and	43,	,,	0·3
,,	29,	,,	12	,,	,,	38	and	49,	,,	0·1
Feb.	5,	,,	11	,,	,,	26	and	35,	,,	0·1
,,	12,	,,	6	,,	,,	30	and	33,	,,	0·1
,,	19,	,,	10	,,	,,	39	and	47,	,,	0·2

						°		°		°
On Mar.	4,	from	4	comparisons	between	37	and	39,	lower by	0·2
,,	11,	,,	8	,,	,,	38	and	53,	,,	0·2
,,	18,	,,	11	,,	,,	32	and	44,	,,	0·2
,,	25,	,,	8	,,	,,	40	and	51,	,,	0·2
Apr.	1,	,,	8	,,	,,	37	and	63,	higher by	0·1
,,	8,	,	3	,,	,,	35	and	41,	lower by	0·2
,,	15,	,,	13	,,	,,	44	and	60,	higher by	0·1
,,	22,	,,	7	,,	,,	45	and	63,	,,	0·3
,,	29,	,,	3	,,	,,	44	and	52,	,,	0·1
May	6,	,,	7	,,	,,	45	and	66,	,,	0·4
,,	13,	,,	6	,,	,,	46	and	70,	,,	0·4
,,	20,	,,	5	,,	,,	44	and	61.	lower by	0·1
,.	27,	,,	1	,,	,,	48	and	49,	,,	0·1
June	3,	,,	4	,,	,,	56	and	65,	,,	0·1
,,	10,	,,	3	,,	,,	52	and	72,	,,	0·1
,,	17,	,,	5	,,	,,	47	and	71,	higher by	0·4
July	1,	,,	6	,,	,,	52	and	69,	,,	0·3
,,	8,	,,	4	,,	,,	54	and	69,	lower by	0·2
,,	15,	,,	5	,,	,,	52	and	72,	higher by	0·7
,,	22,	,,	2	,,	,,	55	and	73,	,,	0·7
,,	29,	,,	2	,,	,,	62	and	68,	,,	0·8
Aug.	5,	,,	4	,,	,,	50	and	63,	lower by	0·1
,,	12,	,,	2	,,	,,	61	and	66,	,,	0·1
Sep.	2,	,,	2	,,	,,	73	and	74,	higher by	0·7
,,	9,	,,	2	,,	,,	62	and	63,	lower by	0·1
,,	16,	,,	2	,,	,,	68	and	69,	,,	0·1
,,	23,	,,	4	,,	,,	51	and	58,	higher by	0·2
,,	30,	,,	2	,,	,,	53	and	57,	,,	0·4
Oct.	28,	,,	3	,,	,,	40	and	48,	,,	0·3
Nov.	18,	,,	6	,,	,,	49	and	52,	,,	0·1
,,	25,	,,	7	,,	,,	38	and	43,	lower by	0·1
Dec.	2,	,,	12	,,	,,	34	and	38,	,,	0·1
,,	9,	,,	9	,,	,,	26	and	30,	,,	0·2
,,	16,	,,	12	,,	,,	36	and	38,	,,	0·2
,,	23,	,,	7	,,	,,	29	and	31,	,,	0·4
,,	30,	,,	9	,,	,,	36	and	43,	,,	0·1

From these observations it appears, that when the temperature is below 32° the thermometer reads 0°·2 less than the standard; that between 32° and 50°, it reads less by 0°·1; that between 50° and 60°, it reads 0°·2 more than the standard; and that above 60°, it reads more than the standard by 0°·3.

No correction has been applied on account of these differences, as a determination of the temperature of the dew-point is considered to be doubtful to a quarter of a degree.

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

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

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.
°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.
0·0	0·061	3·9	0·071	7·8	0·082	11·7	0·095	15·6	0·110	19·5	0·127	23·4	0·146
·1	·061	4·0	·071	7·9	·083	·8	·096	·7	·110	·6	·127	·5	·147
·2	·062	·1	·072	8·0	·083	11·9	·096	·8	·111	·7	·128	·6	·147
·3	·062	·2	·072	·1	·083	12·0	·096	15·9	·111	·8	·128	·7	·148
·4	·062	·3	·072	·2	·083	·1	·097	16·0	·112	19·9	·129	·8	·148
·5	·062	·4	·072	·3	·084	·2	·097	·1	·112	20·0	·129	23·9	·149
·6	·063	·5	·073	·4	·084	·3	·097	·2	·112	·1	·130	24·0	·150
·7	·063	·6	·073	·5	·084	·4	·098	·3	·113	·2	·130	·1	·150
·8	·063	·7	·073	·6	·085	·5	·098	·4	·113	·3	·131	·2	·151
0·9	·063	·8	·073	·7	·085	·6	·098	·5	·114	·4	·131	·3	·152
1·0	·064	4·9	·074	·8	·085	·7	·099	·6	·114	·5	·132	·4	·152
·1	·064	5·0	·074	8·9	·086	·8	·099	·7	·115	·6	·132	·5	·152
·2	·064	·1	·074	9·0	·086	12·9	·099	·8	·115	·7	·133	·6	·153
·3	·064	·2	·075	·1	·086	13·0	·100	16·9	·115	·8	·133	·7	·153
·4	·065	·3	·075	·2	·087	·1	·100	17·0	·116	20·9	·134	·8	·154
·5	·065	·4	·075	·3	·087	·2	·101	·1	·116	21·0	·134	24·9	·155
·6	·065	·5	·075	·4	·087	·3	·101	·2	·117	·1	·135	25·0	·155
·7	·065	·6	·076	·5	·088	·4	·101	·3	·117	·2	·135	·1	·156
·8	·066	·7	·076	·6	·088	·5	·102	·4	·118	·3	·136	·2	·156
1·9	·066	·8	·076	·7	·088	·6	·102	·5	·118	·4	·136	·3	·157
2·0	·066	5·9	·077	·8	·089	·7	·102	·6	·118	·5	·137	·4	·157
·1	·066	6·0	·077	9·9	·089	·8	·103	·7	·119	·6	·137	·5	·158
·2	·067	·1	·077	10·0	·089	13·9	·103	·8	·119	·7	·138	·6	·158
·3	·067	·2	·077	·1	·090	14·0	·104	17·9	·120	·8	·138	·7	·159
·4	·067	·3	·078	·2	·090	·1	·104	18·0	·120	21·9	·139	·8	·160
·5	·067	·4	·078	·3	·090	·2	·104	·1	·121	22·0	·139	25·9	·160
·6	·068	·5	·078	·4	·091	·3	·105	·2	·121	·1	·140	26·0	·161
·7	·068	·6	·079	·5	·091	·4	·105	·3	·121	·2	·140	·1	·161
·8	·068	·7	·079	·6	·091	·5	·106	·4	·122	·3	·141	·2	·162
2·9	·068	·8	·079	·7	·092	·6	·106	·5	·122	·4	·141	·3	·163
3·0	·069	6·9	·080	·8	·092	·7	·106	·6	·123	·5	·142	·4	·163
·1	·069	7·0	·080	10·9	·092	·8	·107	·7	·123	·6	·142	·5	·164
·2	·069	·1	·080	11·0	·093	14·9	·107	·8	·124	·7	·143	·6	·164
·3	·069	·2	·080	·1	·093	15·0	·108	18·9	·124	·8	·143	·7	·165
·4	·070	·3	·081	·2	·093	·1	·108	19·0	·125	22·9	·144	·8	·165
·5	·070	·4	·081	·3	·094	·2	·108	·1	·125	23·0	·144	26·9	·166
·6	·070	·5	·081	·4	·094	·3	·109	·2	·126	·1	·145	27·0	·167
·7	·071	·6	·082	·5	·094	·4	·109	·3	·126	·2	·145	·1	·167
·8	0·071	·7	0·082	·6	0·095	·5	0·110	·4	0·126	·3	0·146	·2	0·168

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.
27·3	0·168	32·5	0·203	37·7	0·244	42·9	0·292	48·1	0·350	53·3	0·418	58·5	0·498
·4	·169	·6	·204	·8	·245	43·0	·293	·2	·351	·4	·419	·6	·499
·5	·170	·7	·204	37·9	·246	·1	·295	·3	·352	·5	·421	·7	·501
·6	·170	·8	·205	38·0	·246	·2	·296	·4	·354	·6	·422	·8	·503
·7	·171	32·9	·206	·1	·247	·3	·297	·5	·355	·7	·423	58·9	·504
·8	·172	33·0	·207	·2	·248	·4	·298	·6	·356	·8	·425	59·0	·506
27·9	·172	·1	·207	·3	·249	·5	·299	·7	·357	53·9	·426	·1	·508
28·0	·173	·2	·208	·4	·250	·6	·300	·8	·358	54·0	·428	·2	·509
·1	·173	·3	·209	·5	·251	·7	·301	48·9	·360	·1	·429	·3	·511
·2	·174	·4	·210	·6	·252	·8	·302	49·0	·361	·2	·431	·4	·513
·3	·175	·5	·210	·7	·253	43·9	·303	·1	·362	·3	·432	·5	·515
·4	·175	·6	·211	·8	·253	44·0	·304	·2	·363	·4	·434	·6	·516
·5	·176	·7	·212	38·9	·254	·1	·305	·3	·365	·5	·435	·7	·518
·6	·177	·8	·213	39·0	·255	·2	·306	·4	·366	·6	·437	·8	·520
·7	·177	33·9	·213	·1	·256	·3	·307	·5	·367	·7	·438	59·9	·521
·8	·178	34·0	·214	·2	·257	·4	·308	·6	·368	·8	·440	60·0	·523
28·9	·178	·1	·215	·3	·258	·5	·309	·7	·370	54·9	·441	·1	·525
29·0	·179	·2	·216	·4	·259	·6	·310	·8	·371	55·0	·442	·2	·527
·1	·180	·3	·216	·5	·260	·7	·311	49·9	·372	·1	·444	·3	·528
·2	·180	·4	·217	·6	·261	·8	·312	50·0	·373	·2	·445	·4	·530
·3	·181	·5	·218	·7	·262	44·9	·313	·1	·375	·3	·447	·5	·532
·4	·182	·6	·219	·8	·263	45·0	·315	·2	·376	·4	·449	·6	·534
·5	·182	·7	·219	39·9	·263	·1	·316	·3	·377	·5	·450	·7	·536
·6	·183	·8	·220	40·0	·264	·2	·317	·4	·379	·6	·452	·8	·537
·7	·184	34·9	·221	·1	·265	·3	·318	·5	·380	·7	·453	60·9	·539
·8	·184	35·0	·222	·2	·266	·4	·319	·6	·381	·8	·455	61·0	·541
29·9	·185	·1	·223	·3	·267	·5	·320	·7	·382	55·9	·456	·1	·543
30·0	·186	·2	·223	·4	·268	·6	·321	·8	·383	56·0	·458	·2	·544
·1	·186	·3	·224	·5	·269	·7	·322	50·9	·385	·1	·459	·3	·546
·2	·187	·4	·225	·6	·270	·8	·323	51·0	·386	·2	·461	·4	·548
·3	·188	·5	·226	·7	·271	45·9	·324	·1	·388	·3	·462	·5	·550
·4	·188	·6	·227	·8	·272	46·0	·326	·2	·389	·4	·464	·6	·552
·5	·189	·7	·227	40·9	·273	·1	·327	·3	·390	·5	·465	·7	·554
·6	·190	·8	·228	41·0	·274	·2	·328	·4	·392	·6	·467	·8	·555
·7	·190	35·9	·229	·1	·275	·3	·329	·5	·393	·7	·469	61·9	·557
·8	·191	36·0	·230	·2	·276	·4	·330	·6	·394	·8	·470	62·0	·559
30·9	·192	·1	·231	·3	·277	·5	·331	·7	·396	56·9	·472	·1	·561
31·0	·192	·2	·231	·4	·278	·6	·332	·8	·397	57·0	·473	·2	·563
·1	·193	·3	·232	·5	·279	·7	·333	51·9	·398	·1	·475	·3	·565
·2	·194	·4	·233	·6	·280	·8	·335	52·0	·400	·2	·476	·4	·567
·3	·194	·5	·234	·7	·281	46·9	·336	·1	·401	·3	·478	·5	·568
·4	·195	·6	·235	·8	·282	47·0	·337	·2	·402	·4	·480	·6	·570
·5	·196	·7	·235	41·9	·282	·1	·338	·3	·404	·5	·481	·7	·572
·6	·197	·8	·236	42·0	·283	·2	·339	·4	·405	·6	·483	·8	·574
·7	·197	36·9	·237	·1	·284	·3	·340	·5	·407	·7	·485	62·9	·576
·8	·198	37·0	·238	·2	·285	·4	·342	·6	·408	·8	·486	63·0	·578
31·9	·198	·1	·239	·3	·286	·5	·343	·7	·409	57·9	·488	·1	·580
32·0	·199	·2	·240	·4	·287	·6	·344	·8	·411	58·0	·489	·2	·582
·1	·200	·3	·240	·5	·288	·7	·345	52·9	·412	·1	·491	·3	·584
·2	·201	·4	·241	·6	·289	·8	·346	53·0	·414	·2	·493	·4	·586
·3	·201	·5	·242	·7	·290	47·9	·348	·1	·415	·3	·494	·5	·588
·4	0·202	·6	0·243	·8	0·291	48·0	0·349	·2	0·416	·4	0·496	·6	0·590

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.
63 ·7	0 ·591	67 ·5	0 ·670	71 ·3	0 ·758	75 ·1	0 ·857	78 ·9	0 ·967	82 ·7	1 ·090	86 ·4	1 ·224
·8	·593	·6	·672	·4	·761	·2	·860	79 ·0	·970	·8	·094	·5	·228
63 ·9	·595	·7	·674	·5	·763	·3	·862	·1	·973	82 ·9	·097	·6	·232
64 ·0	·597	·8	·677	·6	·766	·4	·865	·2	·976	83 ·0	·101	·7	·235
·1	·599	67 ·9	·679	·7	·768	·5	·868	·3	·979	·1	·104	·8	·239
·2	·601	68 ·0	·681	·8	·771	·6	·871	·4	·983	·2	·108	86 ·9	·243
·3	·603	·1	·684	71 ·9	·773	·7	·873	·5	·986	·3	·111	87 ·0	·247
·4	·605	·2	·686	72 ·0	·776	·8	·876	·6	·989	·4	·114	·1	·251
·5	·607	·3	·688	·1	·778	75 ·9	·879	·7	·992	·5	·118	·2	·255
·6	·609	·4	·690	·2	·781	76 ·0	·882	·8	·995	·6	·121	·3	·258
·7	·611	·5	·692	·3	·783	·1	·885	79 ·9	0 ·998	·7	·125	·4	·262
·8	·613	·6	·695	·4	·785	·2	·887	80 ·0	1 ·001	·8	·129	·5	·266
64 ·9	·615	·7	·697	·5	·787	·3	·890	·1	·005	83 ·9	·132	·6	·270
65 ·0	·617	·8	·699	·6	·790	·4	·893	·2	·008	84 ·0	·136	·7	·274
·1	·619	68 ·9	·701	·7	·792	·5	·896	·3	·011	·1	·139	·8	·278
·2	·621	69 ·0	·704	·8	·795	·6	·899	·4	·014	·2	·143	87 ·9	·282
·3	·623	·1	·706	72 ·9	·797	·7	·902	·5	·017	·3	·146	88 ·0	·286
·4	·626	·2	·708	73 ·0	·801	·8	·905	·6	·021	·4	·150	·1	·290
·5	·628	·3	·711	·1	·803	76 ·9	·908	·7	·024	·5	·153	·2	·294
·6	·630	·4	·713	·2	·806	77 ·0	·910	·8	·027	·6	·157	·3	·298
·7	·632	·5	·715	·3	·809	·1	·913	80 ·9	·030	·7	·160	·4	·302
·8	·634	·6	·717	·4	·811	·2	·916	81 ·0	·034	·8	·164	·5	·306
65 ·9	·636	·7	·720	·5	·814	·3	·919	·1	·037	84 ·9	·167	·6	·310
66 ·0	·638	·8	·722	·6	·817	·4	·922	·2	·040	85 ·0	·171	·7	·314
·1	·640	69 ·9	·725	·7	·819	·5	·925	·3	·043	·1	·175	·8	·318
·2	·642	70 ·0	·727	·8	·822	·6	·928	·4	·047	·2	·178	88 ·9	·322
·3	·644	·1	·729	73 ·9	·824	·7	·931	·5	·050	·3	·182	89 ·0	·326
·4	·646	·2	·732	74 ·0	·827	·8	·934	·6	·053	·4	·186	·1	·330
·5	·648	·3	·734	·1	·830	77 ·9	·937	·7	·057	·5	·190	·2	·335
·6	·651	·4	·736	·2	·832	78 ·0	·940	·8	·060	·6	·193	·3	·339
·7	·653	·5	·739	·3	·835	·1	·943	81 ·9	·063	·7	·197	·4	·343
·8	·655	·6	·741	·4	·838	·2	·946	82 ·0	·067	·8	·201	·5	·347
66 ·9	·657	·7	·744	·5	·840	·3	·949	·1	·069	85 ·9	·205	·6	·351
67 ·0	·659	·8	·746	·6	·843	·4	·952	·2	·073	86 ·0	·209	·7	·355
·1	·661	70 ·9	·748	·7	·846	·5	·955	·3	·077	·1	·212	·8	·359
·2	·664	71 ·0	·751	·8	·849	·6	·958	·4	·080	·2	·216	89 ·9	·364
·3	·666	·1	·753	74 ·9	·851	·7	·961	·5	·083	·3	1 ·220	90 ·0	1 ·368
·4	0 ·668	·2	0 ·756	75 ·0	0 ·854	·8	0 ·964	·6	1 ·087				

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 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 the table 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,

$$f''=f'-\frac{d}{88}\times\frac{h}{30}\cdot$$ (**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	2·1	0·00080	4·1	0·00155	6·1	0·00231	8·1	0·00307
0·2	·00008	2·2	·00083	4·2	·00159	6·2	·00235	8·2	·00311
0·3	·00011	2·3	·00087	4·3	·00163	6·3	·00239	8·3	·00315
0·4	·00015	2·4	·00091	4·4	·00167	6·4	·00242	8·4	·00318
0·5	·00019	2·5	·00095	4·5	·00171	6·5	·00246	8·5	·00322
0·6	·00023	2·6	·00098	4·6	·00174	6·6	·00250	8·6	·00326
0·7	·00027	2·7	·00102	4·7	·00178	6·7	·00254	8·7	·00330
0·8	·00030	2·8	·00106	4·8	·00182	6·8	·00258	8·8	·00333
0·9	·00034	2·9	·00110	4·9	·00186	6·9	·00261	8·9	·00337
1·0	·00038	3·0	·00114	5·0	·00189	7·0	·00265	9·0	·00341
1·1	·00042	3·1	·00118	5·1	·00193	7·1	·00269	9·1	·00345
1·2	·00046	3·2	·00121	5·2	·00197	7·2	·00273	9·2	·00349
1·3	·00049	3·3	·00125	5·3	·00201	7·3	·00277	9·3	·00352
1·4	·00053	3·4	·00129	5·4	·00205	7·4	·00280	9·4	·00356
1·5	·00057	3·5	·00132	5·5	·00209	7·5	·00284	9·5	·00360
1·6	·00061	3·6	·00137	5·6	·00212	7·6	·00288	9·6	·00364
1·7	·00064	3·7	·00140	5·7	·00216	7·7	·00292	9·7	·00368
1·8	·00068	3·8	·00144	5·8	·00220	7·8	·00295	9·8	·00371
1·9	·00072	3·9	·00148	5·9	·00224	7·9	·00299	9·9	·00375
2·0	·00076	4·0	·00151	6·0	·00228	8·0	·00303	10·0	·00379

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

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 have been found as follows. The number in the tables ranging with the difference of the readings of the dry and wet thermometers has been multiplied into the height of the barometer at the time of the observation, and the difference between this product and the elastic force of vapour at the temperature of evaporation is the elastic force of vapour at the temperature of the dew-point, and then from the table in pages lv to lvii the dew-point is 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 of uniform expansion. (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	·00833	54	·04583	72	·08333	90	·12083
18	·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 above table; 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 lv, 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,

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

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

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

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	6	1·0026	12	1·0032	18	1·0040	24	1·0050
1	1·0022	7	1·0027	13	1·0033	19	1·0042	25	1·0052
2	1·0022	8	1·0028	14	1·0035	20	1·0043	26	1·0054
3	1·0023	9	1·0029	15	1·0036	21	1·0045	27	1·0056
4	1·0024	10	1·0030	16	1·0037	22	1·0046	28	1·0058
5	1·0025	11	1·0031	17	1·0039	23	1·0048	29	1·0060

A Table shewing the Enlargement which a Volume of Dry Air, &c.—*continued.*

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.
°		°		°		°		°	
30	1·0062	43	1·0099	55	1·0148	67	1·0221	79	1·0324
31	1·0064	44	1·0102	56	1·0154	68	1·0228	80	1·0335
32	1·0066	45	1·0106	57	1·0159	69	1·0236	81	1·0346
33	1·0070	46	1·0110	58	1·0164	70	1·0243	82	1·0357
34	1·0072	47	1·0113	59	1·0170	71	1·0251	83	1·0368
35	1·0074	48	1·0117	60	1·0175	72	1·0260	84	1·0380
36	1·0078	49	1·0121	61	1·0186	73	1·0268	85	1·0392
37	1·0080	50	1·0125	62	1·0187	74	1·0277	86	1·0405
38	1·0081	51	1·0130	63	1·0194	75	1·0286	87	1·0418
39	1·0086	52	1·0134	64	1·0200	76	1·0295	88	1·0431
40	1·0089	53	1·0139	65	1·0207	77	1·0304	89	1·0444
41	1·0092	54	1·0144	66	1·0214	78	1·0314	90	1·0458
42	1·0095								

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 $\frac{1}{480}$ part = 0·002083 for each degree of temperature),

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

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

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

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

$$W' = \frac{1{\cdot}375 \times \overset{\text{gr.}}{258{\cdot}448} \times E_t}{30\,(1 + {\cdot}002083 \times \overline{t^\circ - 32^\circ})}$$

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 lx take out the volume after expansion at both temperatures, and then say,

$$\text{As volume at temp. of air} \;:\; \text{volume at temp. of dew-point} \;::\; \left\{\begin{array}{c}\text{weight of a cubic foot}\\ \text{of vapour at temp. of}\\ \text{dew-point.}\end{array}\right\} \;:\; \left\{\begin{array}{c}\text{weight of a}\\ \text{cubic foot}\\ \text{required.}\end{array}\right.$$

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 lxiv.

Then 1·079 : 1·037 : : $\overset{gr.}{4·28}$: $\overset{gr.}{4·12}$ 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 $8^{gr.}00$, 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 the temperature of the dew-point, to deduce the weight of a 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 $4^{gr.}28$ gives 4·11 grains. In this way the respective tables in the Abstracts were formed, exhibiting the weight of a cubic foot of vapour. And as the weight of moisture in the assumed example was $4^{gr.}11$, and at 70° complete saturation takes place, when $8^{gr.}00$ of moisture are held in solution, the difference between these numbers, $3^{gr.}89$, 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 lxiv 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 lxii, 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	4·68
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 have been formed, shewing the weights of a cubic foot of air under different circumstances of temperature, humidity, and pressure.

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 $\overset{\text{inches.}}{30}$: elastic force of vapour : : $\overset{\text{grains.}}{268}$: 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 THERMOMETERS.

The maximum and minimum thermometer is one of Six's construction, the fluid being spirits of wine, and the indexes being of blue steel with knobs at each end.

The following is an investigation of the index-errors of the maximum and minimum thermometer.

It is 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 are taken, and divided into groups according to different temperatures, distinguished by the different amount of the error; the mean of each group is then taken; and in this way the following quantities have been obtained. 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 are such as would have been given by the Royal Observatory standard thermometer:—

		°			°
January.	Add	0·3	to	all maximum readings below	42
	Subtract	0·3	from	all maximum readings above	42
	Add	0·2	to	all minimum readings below	40
	Subtract	0·3	from	all minimum readings above	40
February.	Add	0·2	to	all maximum readings below	45
	Subtract	0·4	from	all maximum readings above	45
	Add	0·2	to	all minimum readings below	35
	Subtract	0·4	from	all minimum readings above	35
March.	Subtract	0·3	from	all maximum readings below	45
		0·6	from	all maximum readings above	45
	Add	0·1	to	all minimum readings below	40
	Subtract	0·5	from	all minimum readings above	40

April. Subtract 1·3 from all maximum readings below 65, except in one case, viz., to that reading taken at $8^d. 22^h$ which requires $3^\circ·3$ to be taken from it.

Subtract 2·4 from all maximum readings above 65, except in one case, viz., that read at $26^d. 22^h$ which requires $3^\circ·9$ to be taken from it.

Subtract 0·6 from all minimum readings.

May.	Subtract	0·3	from all maximum readings below	60
		1·6	from all maximum readings between	60 and 70
		2·6	from all maximum readings above	70
		0·6	from all minimum readings.	

		°		°
June.	Subtract	0·3	from all maximum readings below	69
		2·2	from all maximum readings above	69
		1·1	from all minimum readings.	
July.	Subtract	0·8	from all maximum readings below	70
		2·1	from all maximum readings above	70
		1·0	from all minimum readings.	
August.	Subtract	0·9	from all maximum readings below	65
		1·8	from all maximum readings above	65
		1·0	from all minimum readings.	
September.	Subtract	0·8	from all maximum readings below	75
		2·5	from all maximum readings above	75
		0·9	from all minimum readings.	
October.	Subtract	0·8	from all maximum readings.	
		0·9	from all minimum readings.	
November.	Subtract	0·1	from all maximum readings under	45
		0·7	from all maximum readings above	45
		0·4	from all minimum readings.	
December.	Add	0·3	to all maximum readings.	
		0·3	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 is read every day at 22^h.

The self-registering thermometer for radiation to the sky is of alcohol, with blackened 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 22^h.

During the year this thermometer, as in each of the previous years, has constantly had a tendency to read too little, in consequence of a portion of the alcohol passing to the upper part of the tube.

On January 1^d the reading was found to be 4° too small, and this error continued till February $12^d.22^h$; on February 13^d the error had increased to 7°; on February 14^d this was partially corrected, the remaining error being 2°, and this continued till February 19^d, at which time it increased to 4°: it was then reduced to 2°, and it was kept at this amount of error till the end of April. Between May 1^d and May 5^d it was 3°, and on

May 6^{d} it was found to have increased to 7°. From May $6^{d}.22^{h}$ to May $14^{d}.22^{h}$ a thermometer belonging to Mr. Glaisher was used, whose readings were free from error. From May $15^{d}.22^{h}$ to the end of the month the error was kept at 1° by means of daily examination and correction. On June 2^{d} it was found to be 2° in error; on June 15^{d} it had increased to 3°, and this correction applies to the end of June. On July 1^{d} the error was found to be 4°, and this continued till August 6^{d}. Unsuccessful attempts were frequently made to clear it of this error. On August 7^{d} it had increased to 4°·5; on August 11^{d} it had further increased to 5°·0; on August 12^{d} it amounted to 5°·5; on August 15^{d} to 6°, and on August 30^{d} to 7°. Another attempt at this time was made to lessen the error, but without success, and on September 1^{d} the error amounted to 6°; on September 15^{d} it was 7°; on the 19th day it had increased to 8°, and on the 29th day it had still increased to 9°. After this time Mr. Glaisher, in attempting to correct this error, broke the instrument, and from October 1^{d} to the end of the year a thermometer, made by Watkins and Hill, belonging to him, was used, whose readings did not require correction. Therefore, the readings, as inserted in the Tabular Observations at 22^{h} on every day, are the readings taken from the instrument, and increased

°		d h		d h	°		d h		d h
by 4·0	from Jan.	1.22	to Feb.	12.22	by 2·0	from March	1.22	to April	30.22
7·0	on Feb.	13 at 22^{h}			3·0	from May	1.22	to May	4.22
2·0	from Feb.	14.22	to Feb.	18.22	7·0	on May	5 at 22^{h}		
4·0	from Feb.	19.22	to Feb.	28.22					

[no correction was applied between May $6^{d}.22^{h}$ and May $14^{d}.22^{h}$]

°		d h		d h	°		d h		d h
by 1·0	from May	15.22	to May	31.22	by 6·0	from Aug.	14.22	to Aug.	29.22
2·0	from June	1.22	to June	14.22	7·0	from Aug.	30.22	to Aug.	31.22
3·0	from June	15.22	to June	30.22	6·0	from Sep.	1.22	to Sep.	13.22
4·0	from July	1.22	to Aug.	5.22	7·0	from Sep.	14.22	to Sep.	17.22
4·5	from Aug.	6.22	to Aug.	9.22	8.0	from Sep.	18.22	to Sep.	28.22
5·0	from Aug.	10.22	to Aug.	11.22	9.0	on Sep.	29 at 22^{h};		
5·5	from Aug.	12.22	to Aug.	13.22					

and after this time the readings are recorded as taken from the instrument without alteration.

POSITION OF THE THERMOMETERS.

A post is planted 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 is placed for carrying the thermometers. 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 thermometers, 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 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.

On May 6^d these thermometers were delivered to Lieutenant Sanders, R.N., Superintendant of the Dreadnought Hospital-ship, moored off Greenwich, who had kindly undertaken to record the observations. For some time they were suspended without any protection from the side of the ship, but it was found that boats and other bodies so frequently floated against the instruments as constantly to derange their indexes; and at times the thermometers were in danger of being lost. A strong wooden trunk was therefore prepared, five feet in length, and closed at the bottom; the bottom and the sides, to the height of three feet, were perforated with a great number of holes, so that the water could easily flow through. This trunk was firmly fixed to the side of the ship, in such manner that the perforated part of it was immersed in the water; and the thermometers were 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. After May 14^d regular observations were made by Mr. Sanders, or in his absence by Mr. Cooper, one of the officers of the ship.

Experiments to determine the Temperature of the Water of the Thames at different Depths.

1844. On May 13^d the following experiments were made by Mr. Glaisher for the purpose of trying the temperature of the water at different depths. The maximum and minimum thermometers and two detached thermometers were fixed upon a frame so that they could not strike against each other; the frame with the instruments was lowered in the water to a proposed depth, and allowed to remain there at least ten minutes; it was then quickly raised and the thermometers read, and again sunk to another depth, and so on. The following are the results. It was nearly high tide at the commencement of the experiments, but the tide ebbed very strongly towards the end.

The readings of the thermometers were—

	Maximum.	Minimum.	Detached.
	°	°	° and °
At the depth of one inch	60·5	60·5	61·0 and 61·0
At the depth of two feet	60·5	60·5	60·5 and 60·5
At the depth of four feet	60·5	60·5	60·5 and 60·5
At the depth of six feet	60·3	60·3	60·0 and 60·0
At the depth of eight feet	60·5	60·3	60·0 and 60·0
At the depth of ten feet	60·5	60·0	60·0 and 60·0
At the depth of twenty-five feet	62·0	60·0	62·0 and 62·0

The depth of twenty-five feet was not measured; the length of line run out was thirty-six feet, and a weight of 7lbs. was affixed so as to sink the thermometers, but the line cut the water at such an angle that the depth was estimated as above. This observation was repeated several times, and always with the same result; so also were the observations at eight feet and ten feet; and there appeared no doubt that, on the whole, the readings of the thermometers increased with the depth. This result was unexpected; and a probable reason may be, not that the water at that depth is actually warmer, but that the great pressure of the water compresses the bulbs, and thus drives the mercury higher up the stems, and causes the readings to be higher.

OSLER'S ANEMOMETER.

This anemometer is self-registering: it was made by Newman. 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 that is carried (by a chain connected with the barrel of a clock) in a direction transverse to the direction of the rack-motion. The paper has lines printed upon it corresponding t 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 act necessarily 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 tight 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: divisions of inches and tenths of inches are engraved upon it, 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 number of inches and tenths of 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 = $0^{in}\cdot044$.

	in.
Assuming that the effective radius of the sail is	1 · 7
Then the circumference described is $1^{in}\cdot7 \times 2\pi =$.....	10 ·68
Therefore, the motion of the wind in one revolution is	10 ·68
,, in 10,000 revolutions is	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 the 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 corresponds 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 $13\frac{1}{2}$ 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 $1\frac{1}{4}$ 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 is 6 feet West 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, 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 thirty-five feet above the mean level of the sea. Regular observations by this gauge were begun on February 1^{d}, and the quantity of water collected is read at the end of every month; its readings are inserted in the marginal notes to the Observations.

ACTINOMETER.

The actinometer consists of a hollow cylinder of glass, 7 inches in length, and 1·22 inches 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 removeable at pleasure. The action of the screw is to increase or diminish the capacity of the cylinder, and thus to 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 moveable, 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: and the screen is again placed before the instrument: at the following 30^s the scale is read for the first shade observation, and at one minute afterwards 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 it will be found that this effect is to stop one-sixth nearly of the incident 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.

The following series of careful observations were made, in order to ascertain how far the fluid is driven up the tube (in divisions of the scale) by one turn of the screw.

1844, April 18. Observer, Mr. Glaisher.

Experiment	1.	One-fourth of one turn of the screw	caused the liquid to rise	66	divisions.
,,	2.	,,	,,	68	,,
,,	3.	,,	,,	67	,,
,,	4.	,,	,,	69	,,
,,	5.	,,	,,	60	,,
,,	6.	,,	,,	62	,,
,,	7.	,,	,,	63	,,
,,	8.	,,	,,	68	,,
,,	9.	,,	,,	65	,,
,,	10.	,,	,,	63	,,
,,	11.	,,	,,	63	,,
,,	12.	,,	,,	63	,,
,,	13.	,,	,,	62	,,
,,	14.	,,	,,	65	,,
,,	15.	,,	,,	66	,,

The mean of these numbers is *65*; and, therefore, it appears that one turn of the screw drives the liquid up the stem through 260 divisions of its scale.

1845, January. Observer, Mr. Glaisher.

Previously to commencing the experiments, it was found that the reading of the scale increased 10 divisions in a minute; and after their completion the change per minute was found to be the same. The time occupied by an experiment was found to be 10^s, during which time the scale reading had, consequently, increased by $\frac{10^{\text{div.}}}{6}$ or $1^{\text{div.}}7$; and this was applied as a correction to each experiment, additive when the screw was withdrawn, or the greater scale reading preceded the less, and subtractive when the screw was driven, or when the lesser scale reading preceded the greater: the experiments were very carefully made.

The Screw was	Reading of the Scale: Before the Screw was Touched.	Reading of the Scale: After the Screw was moved ¼ Part of One Turn.	Difference of Scale Readings.	Correction.	Corrected Difference of Scale Readings, or Number of Scale Divisions corresponding to ¼ Turn of the Screw.	Number of Scale Divisions corresponding to One Turn of the Screw.
	div.	div.	div.	div.	div.	div.
Withdrawn	81·0	19·2	61·8	+ 1·7	63·5	254·0
Driven	14·0	79·6	65·6	− 1·7	63·9	255·6
Driven	7·5	75·0	67·5	− 1·7	65·8	263·2
Driven	12·0	76·5	64·5	− 1·7	62·8	251·2
Driven	1·0	67·5	66·5	− 1·7	64·8	259·2
Withdrawn	64·0	0·9	63·1	+ 1·7	64·8	259·2
Withdrawn	70·0	6·5	63·5	+ 1·7	65·2	260·8
Driven	4·2	70·0	65·8	− 1·7	64·1	256·4
Driven	0·0	67·0	67·0	− 1·7	65·3	261·2
Withdrawn	69·0	6·3	62·7	+ 1·7	64·4	257·6
Driven	8·5	75·0	66·5	− 1·7	64·8	259·2
Driven	16·0	82·7	66·7	− 1·7	65·0	260·0
Withdrawn	85·5	22·6	62·9	+ 1·7	64·6	258·4
Driven	24·8	91·3	66·5	− 1·7	64·8	259·2
Driven	− 2·0	65·5	67·5	− 1·7	65·8	263·2
Withdrawn	70·0	7·6	62·4	+ 1·7	64·1	256·4
Driven	10·7	77·0	66·3	− 1·7	64·6	258·4
Withdrawn	78·0	15·2	62·8	+ 1·7	64·5	258·0
Driven	19·5	87·0	67·5	− 1·7	65·8	263·2
Withdrawn	85·0	21·2	63·8	+ 1·7	65·5	262·2
Driven	24·2	90·3	66·1	− 1·7	64·4	257·6
Withdrawn	91·0	29·1	61·9	+ 1·7	63·6	254·4
Driven	31·0	97·0	66·0	− 1·7	64·3	257·2
Driven	− 4·0	63·0	67·0	− 1·7	65·3	261·2
Withdrawn	72·0	9·0	63·0	+ 1·7	64·7	258·8

The mean of the numbers in the last column is $258^{\text{div}}\cdot6$.

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 $0^{\text{in}}\cdot0435$. 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 $50^{\text{in}}\cdot4$. Therefore, the circumference of the screw at the bottom of the thread was $1^{\text{in}}\cdot5$ nearly, or its diameter was $0^{\text{in}}\cdot477$. 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 0·05 inch.

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 1844, 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. The scale of No. 2 is such that each division of it is presumed to correspond to five of No. 1. 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. In the observations, in all cases where Volta is mentioned without a number, Volta 1 is to be understood.

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 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.

PERSONAL ESTABLISHMENT.

Four persons were regularly employed in the Magnetical and Meteorological Observations during the year 1844. During part of the year these persons were—

Mr. James Glaisher, Superintendent.
Mr. Edwin Dunkin.
Mr. John Russell Hind.
Mr. James Paul.

Mr. Hind and Mr. Paul were succeeded in the autumn by Mr. Hugh Breen, junior, and Mr. Charles Dilkes Lovelace.

The order of observations is arranged every week, and usually proceeds on the following principle. Mr. Glaisher usually takes one complete day's observations in each week;

the remainder of the observations is equally divided between the three other assistants, excepting in cases of illness, or of absence of one person, and in that case the observations are equally divided between the three remaining assistants. Denoting 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.

ADDENDUM.

In the printed Magnetical and Meteorological Observations for 1843 and 1844, the reduced readings of the Horizontal Force Magnetometer and the Vertical Force Magnetometer have been corrected for temperature, adopting the thermometrical coefficients whose values are given in the Introductions.

But as it is possible that some doubt may yet exist as to the accuracy of the coefficients, the whole of the temperatures, as read from the thermometers placed in the magnetometer-boxes, and used in the corrections for the printed Observations, are given in the following Tables.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Jan. and Feb., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Jan.	°	°	°	°	°	°	°	°	°	°	°	°
1								38·7	37·8	37·6	37·2	38·0
2	39·5	43·5	43·6	43·0	43·0	42·2	42·0	42·0	42·0	41·0	39·0	37·0
3	36·8	38·0	39·0	39·8	40·0	40·3	41·9	41·8	41·2	41·0	41·0	40·8
4	41·6	45·6	46·5	46·3	46·0	45·0	43·7	42·8	41·7	40·7	40·0	40·0
5	41·0	42·0	43·2	44·0	44·2	45·0	45·5	44·5	43·0	42·0	40·5	39·8
6	39·7	40·0	42·5	42·5	42·5	43·0	43·5	42·0	42·5	44·5	46·0	47·6
7	48·0	49·0	49·5	51·0	49·5	49·0	48·7					
8								39·0	38·8	38·0	37·5	37·2
9	37·5	39·0	41·8	42·7	43·0	43·3	42·5	44·5	43·5	44·5	44·0	47·0
10	46·5	47·0	48·0	46·0	46·0	44·5	47·0	46·2	45·0	43·0	42·0	41·6
11	41·0	43·0	44·0	45·0	45·0	45·0	44·2	43·3	42·6	41·2	41·0	41·0
12	41·5	41·3	43·5	41·0	40·0	39·0	38·0	39·0	37·0	37·5	36·0	40·2
13	43·0	45·0	45·0	45·0	45·0	45·0	46·0	46·0	45·0	44·5	44·0	42·8
14	42·8	43·0	43·5	44·0	44·5	44·8	44·3					
15								34·2	34·0	33·8	33·8	33·5
16	37·0	40·0	41·6	43·2	44·0	44·8	44·7	45·1	45·0	45·0	44·5	44·0
17	43·0	43·0	43·8	44·3	45·5	47·0	47·0	47·0	47·0	46·5	47·0	47·2
18	47·8	48·2	50·5	51·0	52·0	53·0	54·5	55·0	54·5	55·0	55·0	54·0
19	53·0	52·8	53·5	53·0	52·8	54·2	54·2	54·0	52·8	51·5	50·0	48·7
20	48·2	47·6	48·5	49·0	49·0	48·3	47·2	46·0	44·5	44·0	43·0	43·0
21	42·0	42·0	41·4	41·0	42·6	42·8	43·0					
22								42·8	43·0	43·0	44·0	45·0
23	46·0	48·0	49·0	49·2	50·0	51·0	51·2	50·4	50·2	49·1	48·9	49·0
24	49·0	49·0	50·0	51·0	52·0	52·4	53·5	53·5	53·5	53·0	52·0	51·4
25	50·5	51·6	52·5	52·5	52·5	53·0	53·0	53·0	52·5	52·0	52·0	51·5
26	51·4	52·1	53·0	53·2	53·6	54·0	55·0	54·9	54·0	53·4	53·0	52·8
27	53·0	55·2	57·0	57·3	57·2	57·0	56.5	56·5	56·5	56·0	56·0	56·0
28	57·0	58·0	59 0	60·0	60·0	60·0	59·0					
29								51·5	51·6	51·6	51·8	52·0
30	52·7	55·0	57·1	57·2	57·6	57·2	56·2	55·2	54·2	52·0	51·5	50·5
31	50·8	52·0	53·0	54·0	54·5	55·0	55·0	55·0	54·2	54·0	53·7	52·8

On 18d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 53°·0, 55°·0, 55°·4, 55°·1, 55°·0, 54°·5, and 53°·0 respectively.
On 19d, at 1h, 3h, 5h, 7h, and 9h, the readings were 53°·2, 53°·5, 53°·3, 52°·7, and 53°·8, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Feb.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·0	54·6	56·0	56·4	56·2	55·4	54·0	54·0	54.0	53·5	53·5	52·6
2	53·0	53·8	54·0	53·0	53·0	53·0	52·5	50·8	48·2	47·2	46·0	45·5
3	45·5	46·0	47·0	47·0	46·0	44·2	44·0	43·0	41·0	39·0	37·0	35·2
4	36·0	37·0	38·5	39·4	40·0	40·0	40·0					
5								36·0	35·0	35·4	35·3	35·4
6	36·5	57·0	39·0	39·3	40·0	40·1	40·5	40·5	40·0	40·0	40·5	39·0
7	39·0	39·9	40·4	41·0	41·0	41·0	41·4	41·0	40·5	40·0	40·0	41·0
8	41·0	41·0	41·0	41·6	41·5	41·0	41·5	41·5	41·5	41·5	41·5	41·3
9	41·2	42·1	42·0	42·5	43·0	43·5	43·5	43·3	43·1	42·2	41·9	41·1
10	42·0	41·4	43·0	44·0	44·0	43·2	43·0	42·5	42·5	42·0	42·0	40·7
11	40·6	40·7	42·5	43·5	45·0	44·0	43·6					
12								39·2	39·2	38·7	38·0	38·2
13	40·0	42·0	43·9	45·4	45·7	44·9	43·5	42·0	40·3	38·7	37·0	36·3
14	36·0	36·2	37·5	38·3	38·7	39·0	39·0	37·9	37·2	36·0	34·2	32·1
15	31·8	32·0	32·5	33·0	34·0	34·4	34·0	34·0	34·0	33·5	32·8	32·0
16	32·5	32·4	34·5	36·0	37·5	38·5	39·2	38·7	36·0	34·8	34·2	33·5
17	33·7	37·5	38·2	40·2	41·0	40·7	40·5	39·5	39·1	38·6	38·0	37·5
18	37·3	37·3	37·8	38·0	38·0	38·5	39·0					
19								36·3	36·5	37·3	37·4	38·2
20	40·0	40·2	41·3	42·0	42·0	42·1	43·0	42·5	42·5	42·0	42·0	41·6
21	43·8	47·0	51·5	53·0	54·0	53·0	51·7	50·0	49·2	48·0	47·0	47·0
22	47·3	48·5	49·3	49·8	50·7	51·0	50·5	50·0	49·0	48·5	48·0	48·1
23	49 4	52·3	54·8	56·2	57·0	57·0	55·0	53·5	52·0	50·2	49·0	48·0
24	47·0	46·0	47·0	46·4	47·5	47·5	48·0	49·0	48·7	48·6	49·0	48·0
25	48·7	48·0	48·1	48·0	48·5	49·0	48·0					
26								37·8	38·0	38·0	38·0	39·0
27	40·5	41·3	41·2	42·0	42·8	43·2	43·8	44·0	44·0	43·3	43·0	43·2
28	43·8	44·0	44·0	44·6	45·3	45·8	46·0	45·2	44·7	44·0	43·0	43·0

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 48°·0, 48°·5, 48°·6, 48°·8, 48°·8, 48°·8, and 47°·5 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 48°·4, 48°·1, 48°·5, 48°·2, and 48°·7 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Jan. and Feb., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Jan.	°	°	°	°	°	°	°	°	°	°	°	°
1								39·2	38·0	37·8	38·0	39·0
2	40·0	42·0	44·0	43·2	43·0	42·0	42·0	42·0	42·0	41·0	39·0	38·0
3	37·0	38·0	39·0	40·0	40·0	40·0	42·0	42·0	41·5	41·3	41·3	41·0
4	41·4	44·1	45·5	45·5	45·3	44·2	43·7	42·8	41·8	40·7	40·0	40·0
5	41·0	42·0	43·6	44·0	44·3	45·0	45·0	44·0	43 0	41·0	40·0	39·0
6	40·8	39·5	42·0	43·0	43·0	43·0	42·5	42·0	43·0	44·0	46·0	47·6
7	48·4	49·0	50·0	50·5	49·0	49·0	48·6					
8								39·0	39·0	37·8	37·6	37·8
9	38·0	39·0	43·0	43·0	43·2	43·0	42·0	44·0	44·0	45·0	44·0	46·8
10	47·0	47·0	47·0	46·0	46·0	44·0	46·5	45·5	44·0	42·5	41·5	41·0
11	41·8	42·5	43·0	43·5	44·0	44·0	44·0	43·0	42·4	41·0	41·0	41·0
12	41·5	41·0	43·0	41·0	40·0	39·0	38·0	39·0	37·0	37·0	36·0	40·0
13	43·0	45·0	45·0	45·0	45·0	45·5	45·0	45·0	44·0	44·0	43·0	42·2
14	42·2	42·8	44·0	43·5	44·0	44·0	44·0					
15								34·2	34·0	33·8	33·8	33·5
16	38·0	41·0	42·6	43·2	44·2	44·8	44·4	45·0	45·0	45·0	44·5	44·0
17	43·0	43·0	43·5	44·0	45·5	47·0	47·5	47·5	47·0	46·5	47·0	47·0
18	47·7	49·2	50·5	51·0	52·0	53·0	54·0	55·0	54·3	54·3	54·1	53·0
19	52·3	52·4	53·0	52·3	52·8	53·5	54·0	53·4	52·2	51·3	50·0	48·7
20	48·1	47·6	48·5	49·0	49·0	48·2	47·6	46·0	44·8	44·5	42·8	43·0
21	42·0	41·8	41·2	41·0	42·4	42·6	42·7					
22								43·0	43·0	43·0	44·0	45·0
23	46.0	48·0	49·5	49·3	49·5	50·8	51·0	50·0	49·9	48·9	48·3	49·0
24	49·0	49·0	48·5	50·3	51·4	52·1	53·0	53·0	53·0	52·5	51·5	50·7
25	50·3	51·2	53·0	53·0	53·0	53·0	52·5	52·5	52·5	51·5	51·2	51·0
26	51·0	51·6	52·5	53·0	53·3	53·8	54·4	54·2	53·4	53·0	52·5	52·8
27	53·0	55·2	56·1	56·4	56·4	56·2	57·0	57·0	57·0	56·5	56·0	55·3
28	56·2	57·3	58·5	60·0	60·0	60·0	59·0					
29								51·0	51·2	51·2	51·5	52·0
30	52·5	55·0	57·0	57·1	57·0	57·0	56·0	55·0	54·0	51·6	51·0	50·0
31	50·0	52·0	53·0	53·8	54·0	54·3	54·2	54·0	53·4	53·4	53·0	52·6

On 18d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 53°·0, 55°·0, 55°·2, 54°·2, 54°·2, 53°·8, and 52°·0 respectively.
On 19d, at 1h, 3h, 5h, 7h, and 9h, the readings were 52°·8, 53°·0, 53°·0, 52° 2, and 53°·0 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Feb.	°	°	°	°	°	°	°	°	°	°	°	°
1	52·8	54·0	56·0	56·0	55·5	55·0	54·0	54·0	54·0	53·5	53·6	52·2
2	52·3	53·2	53·0	53·0	53·0	53·0	52·0	50·5	48·0	47·0	46·0	45·0
3	45·5	46·0	46·6	47·0	45·5	44·2	44·0	42·8	40·8	39·0	37·0	35·3
4	36·0	37·0	39·0	40·0	40·0	40·0	40·0					
5								36·4	36·0	36·0	36·0	35·0
6	36·5	37·2	39·2	40·0	40·2	40·3	41·0	41·0	40·5	40·0	40·5	39·0
7	39·2	39·8	40·6	41·0	41·0	41·0	41·0	41·0	40·5	40·0	40·0	41·0
8	41·0	41·1	41·0	41·8	41·6	41·0	41·5	41·5	41·5	41·5	41·5	41·5
9	41·3	42·0	42·0	42·5	43·0	43·5	44·0	43·9	43 2	42·3	42·0	41·3
10	41·3	41·6	43·0	44·0	44·0	43·3	43·0	42·5	42·5	42·0	42·0	40·3
11	40·6	41·0	42·0	43·5	44·0	43·5	43·5					
12								39·6	39·5	39·0	38·2	38·6
13	40·5	43·0	45·0	46·4	45·9	45·0	43·5	42·0	40·2	39·0	37·4	37·0
14	36·2	36·5	37·8	38·5	39·0	39·0	39·0	38·0	37·5	36·2	34·8	32·8
15	32·4	32·5	33·0	33·2	34·2	34·9	34·7	34·0	34·0	33·5	32·8	32·5
16	32·2	33·0	34·0	36·0	37·5	38·5	39·5	39·0	36·0	35·0	34·7	33·5
17	34·0	38·0	38·2	41·7	41·6	41·0	41·0	40·0	39·5	39·0	38·5	38·0
18	38·0	38·0	38·0	38·2	38·2	39·0	39·3					
19								37·0	37·2	37·4	38·0	38·0
20	40·0	40·6	42·0	42·2	42·4	42·3	43·0	42·5	42·2	42·0	42·0	41·6
21	43·2	47·0	52·0	53·0	53·5	53·0	51·7	50·0	49·2	48·0	47·0	47·0
22	47·4	48·5	49·6	50·0	50·2	50·6	50·3	50·0	49·0	48·5	48·0	48·1
23	49·4	52·5	55·0	56·2	57·0	56·7	55·0	53·5	52·0	50·3	49·0	48·0
24	47·0	46·7	47·0	47·0	47·0	47·5	48·0	48·6	49·0	48·8	49·0	48·5
25	48·5	48·0	48·1	48·0	48·4	48·8	47·8					
26								38·0	37·8	37·8	38·0	39·0
27	40·7	41·7	41·0	42·0	43·6	43·0	43·8	44·0	44·0	43·5	43·0	43·3
28	43·8	44·0	44·0	44·7	45·5	45·8	46·0	45·1	44·7	44·0	43·0	43·0

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 48°·0, 48h·5, 49°·0, 49°·0 49°·0, 48°·7, and 47°·8 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 48°·3, 48°·1, 48°·0, 48°·0, and 48°·2 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of March and April, 1843.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Mar.	°	°	°	°	°	°	°	°	°	°	°	°
1	43·5	45·0	47·0	47·1	47·0	46·5	45·0	45·0	43·0	42·5	42·0	40·3
2	40·8	42·1	45·0	45·0	47·0	46·5	46·0	44·6	43·0	41·2	40·0	39·3
3	39·5	41·0	43·8	46·0	47·0	46·3	46·0	44·2	43·0	42·0	41·0	41·1
4	42·0	43·3	45·2	46·0	46·5	45·5	45·1					
5								40·0	39·4	39·2	39·0	39·2
6	39·8	40·6	42·0	43·0	44·3	45·0	45·0	44·0	44·0	43·0	40·0	39·2
7	39·2	42·0	44·0	47·0	48·0	48·0	46·2	44·3	41·0	40·8	39·2	40·0
8	41·3	44·0	46·8	48·3	49·0	48·1	46·5	45·0	43·7	42·3	41·4	41·0
9	41·0	41·0	41·8	43·0	43·5	43·7	43·3	42·0	41·0	40·0	39·0	39·0
10	39·2	40·0	42·2	43 3	44·0	44·5	45·5	45·0	44·0	43·5	43·0	41·5
11	42·1	44·1	47·0	48·0	49·0	50·0	49·8					
12								47·0	47·6	47·0	46·0	46·7
13	48·5	51·8	52·0	54·0	54·0	54·0	53·0	52·5	51·3	50·8	50·5	51·0
14	53·0	54·0	55·0	56·0	56·5	57·0	56·7	55·5	54·6	53·5	53·0	52·5
15	52·8	53·0	53·4	54·0	53·9	54·0	54·0	53·5	53·0	52·5	52·0	52·0
16	53·0	54·0	55·3	56·4	56·2	56·0	55·2	53·5	52·0	50·6	49·0	49·0
17	51·0	54·5	58·0	61·0	62·0	61·5	60·3	59·3	57·5	55·2	53·0	51·8
18	52·1	54·8	58·3	61·0	62·1	62·1	60·9					
19								47·2	47·0	47·0	47·0	48·0
20	51·0	55·0	58·0	60·2	61·0	60·3	59·8	59·5	58·5	57·5	57·0	57·0
21	58·0	61·0	61·2	61·5	60·5	60·5	59·8	58·8	57·8	56·7	56·1	56·0
22	56·2	58·8	61·2	62·0	62·0	60·5	60·0	60·4	59·9	59·2	59·2	59·0
23	59·3	59·8	61·0	61·0	61·0	60·0	59·0	58·0	57·0	56·2	55·4	55·1
24	57·0	60·0	62·5	63·5	63·0	62·0	61·3	59·1	58·0	56·2	55·0	54·0
25	55·0	56·0	57·3	56·8	56·4	55·0	53·0					
26								45·2	44·8	43·8	43·0	44·3
27	44·5	45·0	44·8	45·0	45·0	44·0	44·5	44·4	44·4	43·8	43·8	44·3
28	46·0	48·0	51·6	52·5	52·5	51·5	51·0	49·0	47·0	45·0	43·7	43·1
29	45·0	48·0	52·1	55·0	55·4	55·2	53·6	51·0	48·6	46·5	45·6	46·0
30	48·0	50·5	52·0	54·0	54·0	54·0	54·5	54·5	54·5	54·0	53·3	53 0
31	54·4	56·0	58·0	58·3	58·5	58·8	58·1	57·2	56·2	55·0	54·2	53·0

On 22d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 60°·0, 60°·4, 60°·4, 59°·8, 59°·4, 59°·0, and 59°·2 respectively.
On 23d, at 1h, 3h, 5h, 7h, and 9h, the readings were 60°·0, 61°·0, 61°·0, 61°·2, and 60°·2 respectively.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Apr.	°	°	°	°	°	°	°	°	°	°	°	°
1	55·3	57·0	58·4	59·1	59·3	59·1	58·8					
2								55·0	54·0	53·8	52·8	54·0
3	55·4	58·0	59·1	60·8	60·0	60·0	59·2	58·0	57·3	56·0	55·0	55·3
4	56·3	58·0	59·0	58·2	57·2	57·0	56·0	55·0	53·7	52·2	51·1	50·6
5	52·0	54·2	56·3	57·4	58·1	58·0	56·0	55·0	55·0	54·8	52 5	52·0
6	52·2	54·0	54·0	55·0	55·0	57·0	57·2	57·0	56·5	56·0	55·7	56·0
7	57·1	58·0	59·0	60·0	60·6	59·8	58·7	57·5	56·3	55·0	54·5	55·0
8	56·1	58·0	59·2	59·3	59·5	58·5	57·0					
9								46·0	44·8	44·0	43·2	43·8
10	46·5	48·4	51·5	52·3	52·4	52·0	51·0	48·0	45·0	44·6	43·0	43·3
11	44·0	45·5	47·0	48·2	49·2	50·0	50·2	48·2	46·3	44·3	43·0	43·0
12	44·0	46·0	48·5	49·5	50·5	50·5	49·5	47·5	46·0	44·0	43·0	42·8
13	44·0	45·8	48·4	50·3	51·0	51·0	49·8					
14			Good	Fri	day.			48·0	48·0	48·3	48·0	50·0
15	51·0	54·5	57·0	58·2	58·6	58·3	58·0					
16								57·5	57·0	55·5	54·1	53·8
17	55·6	61·0	62·5	65·2	67·0	66·8	65·4	63·5	61·5	59·0	57·2	57·0
18	58·2	62·0	65·0	66·2	66·1	65·0	63·0	61·0	59·0	57·0	53·5	53·5
19	54·0	56·6	59·7	63·0	62·8	62·0	62·0	60·5	58·8	58·5	58·3	58·0
20	60·0	62·0	65·8	67·0	68·0	67·2	66·5	65·0	63·2	61·2	60·0	60·3
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

On 19d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 62°·0, 62°·0, 60°·0, 59°·0, 58°·2, 58°·1, and 59° 0 respectively.
On 20d, at 1h, 3h, 5h, 7h, and 9h, the readings were 60°·4, 64°·2, 66°·0, 68°·0, and 67°·4 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of March and April, 1843.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20°	22h
Mar.	°	°	°	°	°	°	°	°	°	°	°	°
1	43·5	45·0	47·0	47·3	47·0	46·8	45·5	45·0	44·0	43·5	42·0	40·0
2	40·7	41·0	45·0	45·0	46·0	46·0	46·7	44·5	43·0	41·0	40·0	39·5
3	39·8	42·0	44·2	46·0	47·2	46·2	45·7	44·2	43·0	42·0	41 0	41·2
4	42·0	43·5	45·2	46·0	46·6	45·5	45·5					
5								40·0	39·5	39·3	39·0	39·0
6	39·8	41·0	42·0	43·0	44·5	45·0	45·0	44 5	44·0	43·0	40·0	39·5
7	40·0	42·1	44·0	47·0	48·5	47·5	46·0	44·5	41·0	41·0	40·0	40·0
8	41·5	44·3	49·0	50·0	49·0	48·0	46·8	45·0	43·7	42·5	41·8	41·3
9	41·1	41·0	42·1	43·1	43·8	44·0	43·0	42·0	41·0	40·0	39·0	39·0
10	39·8	40·3	42·3	43·5	44·0	44·4	45·5	45·0	44·5	43·5	43·0	41·8
11	42·4	44·4	47·0	47·5	49·0	50·0	49·0					
12								47·0	47·5	47·0	46·0	46·3
13	49·0	52·0	52·5	53·0	54·3	53·0	52·3	52·0	51·0	50·7	50·4	51·0
14	52·0	53·0	55·0	56·0	56·3	56·7	56·0	55·0	54·0	53·0	52·6	52·0
15	53·0	53·0	53·1	53·4	53·4	53·8	53·6	53·2	53·0	52·2	51·7	52·0
16	53·0	54·0	55·0	56·0	56·0	55·8	55·0	53·5	52·0	50·5	49·0	48·5
17	50·2	54·5	61·5	62·5	62·0	61·2	60·2	58·9	57·2	55·2	53·0	51·7
18	52·1	54·7	58·6	61·3	62·2	62·0	60·5					
19								47·0	47·0	47 0	47·0	48·0
20	50·3	55·0	58·8	60·2	61·0	60·0	59·3	59·0	58·2	57·2	56·3	56·0
21	57·0	61·0	61·0	61·0	60·2	60·0	59·0	58·1	57·2	56·2	55·9	56·0
22	56·0	58·2	60·8	61·2	61·2	60·5	60·0	60·3	59·5	58·2	58. 9	58·0
23	58·6	59·0	61·0	61·0	60·2	59·0	58·2	57·3	56·5	55·8	55·2	55·0
24	56·2	59·2	62·0	63·5	63·0	62·0	60·9	59·1	57·5	56·0	54·7	53·4
25	55·0	55·7	58·5	57·0	57·0	55·3	53·0					
26								45·0	45·0	44·0	44·0	44·0
27	44·8	45·3	45·0	45·4	45·2	44·2	44·8	44·7	44 7	44·0	44·0	44·4
28	46·0	49·0	53·0	53·8	53·3	52·0	51·0	49·0	47·0	45·0	43·6	43·0
29	44·3	48·0	55·0	56·1	56·0	55·4	54·0	51·0	48·5	46·5	45·8	46·0
30	48·8	51·3	52·0	53·2	54·0	54·0	54·0	54·0	54·0	53·5	53·0	53·0
31	54·5	56·0	57·8	58·0	58·0	58·2	57·5	56·5	55·6	54·3	54·0	52·0

On 22d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 60°·5, 60°·2, 60°·3, 59°·6, 59°·0, 58°·4, and 58°·5 respectively.
On 23d at 1h, 3h, 5h, 7h, and 9h, the readings were 59°·0, 61°·0, 61°·0, 60°·3, and 59°·8 respectively.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Apr.	°	°	°	°	°	°	°	°	°	°	°	°
1	54·5	56·2	58·4	59·0	59·0	58·3	58·0					
2								54·8	54·0	54·0	52·8	53·6
3	55·0	57·7	59·0	60·0	60·0	59·3	58·2	57·4	57·0	56·2	55·2	55·1
4	56·1	57·3	58·0	57·2	56·2	56·0	55·0	54·0	53·0	51·5	50·5	50·0
5	53·0	53·8	57·3	58·0	57·0	57·2	57·0	55·0	54·5	54·0	52·0	51·8
6	51·8	54·0	54·0	55·0	55·0	56·5	56·6	57·0	56·2	56·0	55·5	55·5
7	56·2	57·5	59·0	60·0	60·0	59·0	58·0	57·0	56·0	54·5	54·0	53·8
8	54·8	57·0	59·0	59·0	59·0	58·0	56·1					
9								46·0	45·0	44·0	43·3	43·2
10	46·0	48·6	51·3	52·0	52·0	51·4	50·0	47·3	43·8	44·0	42·7	43·0
11	43·6	45·2	47·0	49·4	50·0	50·0	50·0	48·0	46·2	44·2	42·6	42·1
12	43·1	45·3	48·7	49·7	50·0	50·0	49·0	47·1	45·3	44·0	43·0	42·7
13	44·5	46·0	50·0	51·0	51·1	51·0	49·7					
14			Good	Fri	day.			48·0	48·0	48·0	48·0	50·0
15	51·0	54·5	56·6	57·6	58·0	57·6	57·2					
16								57·3	56·8	55·3	54·0	53·2
17	55·0	59·0	63·3	66·1	67·2	66·5	65·2	63·2	61·1	59·0	56·3	56·5
18	57·0	61·3	66·0	67·0	66·3	65·0	63·0	61·0	58·1	56·0	54·0	53·2
19	54·0	56·9	61·4	63·0	63·0	62·0	62·0	60·5	58·4	58·1	58·0	58·0
20	59·0	62·5	65·5	68·0	68·0	67·0	66·0	64·7	63·0	61·0	59·5	59·0
21	60·8	64·2	67·0	68·0	68·0	66·2	65·0	63·0	61·0	58·4	57·5	56·7
22												
23												
24												
25												
26												
27												
28												
29												
30												

On 19d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 62°·0, 62°·0, 60°·2, 59°·0, 58°·0, 58°·0, and 57°·6 respectively.
On 20d, at 1h, 3h, 5h, 7h, and 9h, the readings were 61°·3, 64°·3, 67°·0, 68°·0, and 67°·0 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of May and June, 1843.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
	Hours of Göttingen Mean Time, Astronomical Reckoning.											
May	°	°	°	°	°	°	°	°	°	°	°	°
1												
2												
3												
4												
5								62·2	60·0	59·8	59·0	59·0
6	58·8	58·7	58·0	56·8	56·2	56·3	55·2					
7								53 3	52·2	50·7	49·2	49·0
8	50·2	50·4	51·2	52·0	51·0	51·0	50·0	49·2	48·9	48.1	48·0	48·0
9	49·6	53·5	54·0	55·2	56·6	56·5	55·2	54·0	52·3	51·3	50·6	52·0
10	54·8	54·8	55·0	57·0	55·3	54·9	54·5	52·0	51·0	48·5	48·0	48·1
11	49·5	52·3	55·5	57·0	56·5	57·0	56·1	54·8	53·0	51·0	50·0	52·5
12	55·4	59·0	61·2	62·5	62·2	61·2	60·1	59·2	58·3	57·7	57·0	55·0
13	56·0	58·6	61·2	63·4	64·5	65·0	63·6					
14								58·0	57·6	56·8	57·2	58·5
15	60·0	61·5	62·6	62·5	63·2	63·0	62·0	60·8	60·0	59·2	59·0	59·1
16	60·2	63·0	64·3	64·7	65·0	64·0	63·5	63·0	61·4	60·2	59·2	58·8
17	60·0	61·2	61·2	61·8	62·0	61·2	60·2	58·5	57·4	55·2	55·0	55·0
18	55·2	56·8	57·2	57·2	57·0	56·0	55·4	56·1	56·5	56·2	55·8	56·2
19	57·2	59·1	61·0	61·0	62·0	61·3	60·5	60·0	59·6	59·0	58·5	59·4
20	61·0	64·3	64·3	64·1	63·1	61·5	59·5					
21								58·2	56·0	55·0	57·0	58·0
22	60.2	63·5	64·9	65·6	65·8	64·8	63·2	61·8	60·6	60·5	59·0	59·1
23	61·0	63·3	65·0	65·5	65·0	64·5	63·4	62·2	61·2	60·0	59·3	58·8
24	60·0	62·6	64.8	66·0	66·1	66·1	64·8	64·0	62·0	61·5	61·5	60·6
25	63·0	66·0	68·0	68·0	68·5	68·0	66·0	64·0	61·2	59·2	58·6	59·5
26	62·0	65·0	65·0	64·2	63·0	63·0	62·2	62·0	61·5	61·0	60·8	61·5
27	62·2	63·5	65·0	66·0	64·8	64·5	63·5					
28								57·3	56·3	55·2	55·0	55·2
29	56·0	57·2	58·0	58·0	58·8	58·3	58·0	55·8	54·8	52·8	51·8	56·0
30	58·5	63·0	64·2	65·2	65·2	64·6	63·2	62·2	62·0	61·1	61·1	61·4
31	62·1	64·4	66·0	67·5	68·0	68·3	68·0	67·5	67·0	66·5	65·0	64·8

On 26^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 62°·0, 62°·0, 62°·0, 61°·5, 60°·7, 60°·8, and 61°·8 respectively.
On 27^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 63°·0, 64°·5, 65°·0, 67°·0, and 65°·2 respectively.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
	Hours of Göttingen Mean Time, Astronomical Reckoning.											
June	°	°	°	°	°	°	°	°	°	°	°	°
1	65·1	66·5	68·2	69·0	68·0	67·0	67·5	66·8	66·0	65·0	64·4	63·4
2	64·2	66·3	67·0	67·0	66·1	65·2	63·8	62·4	60·8	59·3	59·8	59·8
3	61·8	64·4	67·0	68·0	67·5	65·0	65·0					
4								61·2	60·0	59·0	58·0	61·0
5	62·2	63·6	64·5	64·8	64·0	62·5	61·0	59·0	57·2	56·0	56·2	57·0
6	58·0	60·0	61·5	62·2	62·3	62·0	61·0	61·0	59·5	59·0	57·0	57·2
7	59·0	61·4	63·5	63·0	63·5	64·0	62·6	61·6	60·8	59·4	58·2	59·0
8	61·2	64·0	65·7	66·2	66·5	65·0	63·6	62·0	60·8	59·5	59·2	59·3
9	61·0	63·0	64·1	64·8	64·9	64·0	63·5	62·5	61·0	61·0	58·0	58·8
10	60·3	62·5	64·0	64·0	65·1	64·0	63·2					
11								58·0	57·3	58·0	58·8	59·2
12	60·0	62·0	63·0	63·8	64·3	64·2	64·0	63·4	62·1	61·0	59·8	58·2
13	58·2	58·0	59·7	60·1	61·0	61·1	62·0	62·0	62·0	63·0	63·0	64·0
14	64·0	64·8	66·0	67·5	68·0	68·0	67·0	65.8	65·0	65·0	65·0	66·5
15	67·6	69·2	70·2	71·3	72·0	71·5	70·0	67·2	65·3	64·0	63·5	64·6
16	67·0	69·2	71·1	72·5	73·0	72·2	71·0	68·6	67·0	63·0	62·0	62·0
17	66·0	65·0	68·0	71·0	72·0	71·5	69·5					
18								65·5	65·2	64·3	64·0	63·1
19	63·5	64·5	65·5	67·0	67·0	66·5	65·5	64·3	63·2	62·1	61·2	61·0
20	61·5	62·0	63·1	64·0	64·0	63·5	63·5	63·5	63·5	63·0	62·0	59·0
21	63·8	66·8	68·8	71·1	71·5	72·0	71·0	70·0	68·8	68·0	67·0	66·0
22	66·6	67·0	69·0	71·0	70·5	68·3	67·0	65·0	63·0	61·6	61·5	64·0
23	66·0	68·2	70·5	73·0	74·2	73·8	72·0	69·1	67·0	64·5	63·0	62·5
24	64·0	66·0	69·3	69·6	70·3	69·4	68·0					
25								63·0	62·0	62·0	61·5	60·7
26	61·6	64·0	69·0	71·0	72·0	70·5	69·0	67·1	64·7	62·3	61·5	63·0
27	64·3	67·5	70·0	72·0	72·8	72·0	71·0	69·1	68·0	66·0	64·0	63·1
28	63·5	63·2	65·1	65·5	65·5	65·2	65·0	65·0	63·0	62·0	61·0	59·0
29	60·0	62·0	63·4	65·0	65·5	66·0	64·8	63·0	61·0	60·3	60·5	61·1
30	62·1	63·0	63·0	63·6	63·6	63·2	63·0	62·1	62·0	62·0	62·1	64·0

On 21^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 71°·5, 71°·0, 69°·2, 68°·8, 67°·8, 66°·5, and 66°·0 respectively.
On 22^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 66°·6, 69°·0, 70°·0, 70°·5, and 69°·2 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of May and June, 1843.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
	Hours of Göttingen Mean Time, Astronomical Reckoning.											
May	°	°	°	°	°	°	°	°	°	°	°	°
1												
2												
3												
4												
5								61·8	60·0	59·8	58·5	58·3
6	58·1	58·3	57·6	56·2	56·0	56·0	55·0					
7								53·0	52·0	50·5	49·0	49·0
8	50·0	50·0	51·0	52·0	51·0	51·0	50·0	49·0	48·8	48·0	48·0	48·0
9	49·5	53·2	53·2	55·0	56·2	56·1	55·0	54·0	52·3	51·3	50·4	51·5
10	52·0	54·0	55·0	56·5	55·0	54·0	54·0	52·0	51·0	48·5	48·0	48·0
11	49·2	52·0	55·0	56·0	57·0	57·0	56·0	54·8	53·0	51·0	50·0	51·0
12	53·6	58·0	60·0	61·5	61·0	59·2	58·4	58·0	58·0	57·6	57·0	55·2
13	56·8	57·6	61·0	63. 0	64·0	65·0	63·8					
14								57·6	57·6	56·6	57·0	57·2
15	59·6	61·0	62·0	62·0	63·0	63·0	61·5	60·5	59·5	59·0	58·8	58·3
16	59·0	62·0	64·0	64·2	64·3	63·5	63·1	63·0	61·1	60·0	59·0	58·0
17	60·0	60·0	60·5	61·0	61·0	61·0	60·0	58·0	57·0	55·0	54·8	55·0
18	55·0	56·2	56·8	57·2	56·8	56·2	55·0	55·5	56·0	55·8	55·2	55·6
19	56·3	58·2	60·7	61·5	61·2	61·0	60·0	59·3	59·0	58·2	57·4	58·4
20	61·0	64·0	64·3	63·3	63·0	61·1	59·5					
21								58·0	56·0	55·0	55·0	55·6
22	58.0	62·0	65·0	65·5	65·8	64·8	62·5	61·2	60·0	59·0	58·5	58·3
23	60·0	62·4	64·0	64·2	65·0	64·5	63·0	62·0	61·0	59·8	59·0	58·2
24	59.0	61·8	64·0	65·3	66·0	65·4	65·0	64·0	62·0	61·5	61·5	60·5
25	62·0	66·0	68·0	68·0	68·0	68·0	66·0	64·0	61·8	59·6	58·6	58·7
26	61·0	64·0	64·6	64·0	62·8	63·0	61·5	60·4	60·8	61·0	60·5	61·0
27	61·2	63·0	64·0	65·0	64·0	63·6	63·0					
28								57·0	56·1	55·0	54·5	54·8
29	56·2	57·0	57·0	57·3	58·0	58·0	57·8	56·0	55·0	52·8	52·3	53·0
30	58·0	61·0	64·0	65·0	65·4	64·0	62·5	61·5	61·0	60·5	60·5	60·7
31	61·3	64·0	65·2	67·0	67·5	68·0	68·0	67·0	67·0	66·5	65·0	64·1

On 26^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 62°·0, 61°·4, 61°·0, 61°·0, 60°·5, 60°·5, and 60°·8 respectively.
On 27^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 62°·0, 64°·0, 64°·5, 66°·0, and 64°·5 respectively.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
	Hours of Göttingen Mean Time, Astronomical Reckoning.											
June	°	°	°	°	°	°	°	°	°	°	°	°
1	64·8	66·0	67·0	68·0	68·0	67·0	67·2	66·4	65·7	65·0	64·0	63·2
2	64·0	66·8	66·0	66·0	66·0	65·0	63·5	61·8	60·5	59·2	59·0	59·0
3	61·0	64·0	67·0	67·0	67·0	65·7	64·2					
4								61·0	59·5	58·8	58·0	58·2
5	61·0	63·0	63·2	63·5	63·0	61·0	60·2	58·8	57·0	55·7	54·4	54·2
6	56·0	58·2	60·1	61·0	61·2	61·0	61·0	61·0	59·5	59·0	57·5	56·5
7	58·0	60·0	63·0	63·0	63·5	64·0	62·0	61·0	60·0	59·0	57·8	58·0
8	60·0	63·0	65·0	66·0	66·0	65·0	63·1	61·4	60·3	59·3	59·0	59·0
9	61·0	62·5	63·4	64·0	64·0	63·4	63·5	62·5	61·0	61·0	57·5	58·0
10	59·5	62·0	64·0	64·0	64·8	64·0	62·7					
11								57·5	57·0	57·4	58·0	58·2
12	59·0	61·0	62·0	63·0	63·5	63·8	63·2	63·0	61·4	60·2	59·0	58·0
13	58·0	58·0	59·0	59·1	60·0	60·3	61·0	62·0	62·0	62·0	62·0	63·0
14	63·0	64·0	66·0	67·5	68·0	67·5	66·2	65·2	64·8	65·0	65·0	66·0
15	66·7	68·7	70·0	71·0	72·0	71·5	70·0	67·9	65·6	64·0	63·3	63·8
16	65·6	68 5	70·7	72·0	72·3	72·0	69·5	68·0	66·5	63·0	62·0	61·2
17	65·0	65·0	68·0	72·0	71·5	71·0	69·3					
18								65·2	64·8	64·0	64·0	62·0
19	63·0	63·8	65·0	66·2	66·2	65·9	65·0	64·0	63·0	61·7	61·0	60·5
20	60·5	62·5	62·0	63·0	63·0	63·0	63·5	63·5	63·0	63·0	60·0	62·0
21	62·0	65·0	68·0	70·4	72·0	71·5	70·0	69·2	68·2	68·0	67·0	66·0
22	66·0	67·5	69·0	70·0	69·5	68·0	67·0	64·5	62·7	61·3	60·0	61·0
23	63·2	65·7	70·0	72·5	74·0	73·2	71·4	69·2	67·0	64·8	62·0	62·0
24	63·0	65·7	68·0	69·0	69·8	69·2	68·0					
25								63·0	61·5	61·0	59·0	59·5
26	60·8	64·6	69·0	71·0	71·0	70·0	69·0	67·0	64·8	62·5	61·0	61·0
27	63·0	66·0	69·2	71·8	73·2	71·2	71·0	69·1	68·0	66·0	64·0	62·8
28	63·0	64·0	64·1	65·0	65·0	64·3	64·5	64·5	62·5	61·0	60·0	58·2
29	60·5	61·2	62·3	65·0	65·0	65·0	64·0	62·5	60·6	60·0	60·0	60·2
30	61·1	62·0	62·2	63·0	63·2	62·6	62·2	61·5	61·2	61·3	61·0	61·2

On 21^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 70°·0, 70°·0, 68°·8, 68°·2, 67°·2, 66°·5, and 66°·0 respectively.
On 22^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 66°·0, 68°·0, 69°·0, 70°·0, and 69°·0 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of July and August, 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
July.	°	°	°	°	°	°	°	°	°	°	°	°
1	65·5	67·6	69·1	70·0	70·0	69·2	67·2					
2								68·8	68·2	67·2	67·0	68·5
3	70·4	72·2	73·4	74·9	75·2	74·2	73·0	72·2	71·5	68·5	67·5	67·0
4	66·5	68·0	69·0	72·5	73·0	73·5	72·8	71·0	69·5	68·1	68·1	69·8
5	73·2	75·0	79·0	80·3	80·2	78·0	75·0	73·2	70·4	68·5	68·0	67·3
6	68·0	69·0	69·3	70·4	70·5	70·0	69·0	68·0	67·0	66·0	64·0	64·0
7	65·2	67·0	68·0	69·0	69·0	68·5	67·1	66·0	65·3	64·9	64·9	63·6
8	64·6	66·0	67·1	67·1	67·0	66·0	63·8					
9								65·0	64·1	63·0	62·6	64·3
10	66·3	68·0	67·8	68·2	68·0	67·0	67·0	67·0	66·0	65·0	63·0	62·0
11	62·0	62·0	63·0	63·0	63·5	63·0	62·7	62·0	61·4	61·1	61·0	61·0
12	64·0	67·3	71·0	73·0	73·0	73·0	71·0	69·6	68·8	67·0	65·8	66·1
13	68·0	69·0	68·2	68·8	68·5	68·0	68·0	66·0	65·5	65·0	62·5	62·8
14	63·3	66·0	68·0	69·0	70·5	71·0	70·0	69·2	67·4	66·5	66·2	66·8
15	68·6	71·0	74·0	75·0	75·5	75·0	73·6					
16								72·5	70·8	69·0	68·2	68·9
17	71·0	74·5	76·0	76·8	77·4	76·8	76·5	75·0	73·0	71·5	69·0	68·8
18	70·0	71·6	73·5	73·0	73·0	70·0	70·0	68·5	67·0	66·0	65·0	64·0
19	65·0	67·0	68·7	68·8	68·5	68·0	67·0	65·0	64·0	63·2	62·0	62·0
20	62·0	64·1	66·3	67·2	67·5	67·5	66·0	64·8	63·6	62·5	62·6	63·0
21	64·5	66·2	67·0	67·2	66·7	66·4	66·5	65·0	64·5	63·5	63·5	63·0
22	64·0	64·2	65·8	67·0	67·4	66·5	67·1					
23								59·0	57·7	56·4	56·1	57·0
24	58·2	61·0	62·1	63·2	63·4	63·0	62·0	60·2	58·9	57·7	57·7	58·0
25	59·2	60·8	63·0	64·0	65·0	65·2	64·5	63·6	62·0	61·3	60·8	63·0
26	65·5	69·0	70·0	71·8	73·1	72·2	71·2	69·6	68·0	66·4	65·7	65·0
27	65·0	65·5	67·1	68·5	69·0	69·0	68·0	67·0	66·0	65·0	65·0	65·0
28	67·5	67·0	68·7	69·3	69·0	68·3	66·8	65·5	65·1	63·8	63·2	64·2
29	65·1	66·4	67·0	68·6	68·2	67·2	66·1					
30								64·2	63·0	62·1	61·4	61·5
31	61·6	63·0	65·0	66·1	67·0	67·0	66·2	65·3	65·2	64·0	63·9	63·6

On 19^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 67°·2, 65°·5, 64°·9, 63°·0, 62°·8, 61°·5, and 62°·0, respectively.
On 20^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 63°·2, 66°·0, 67°·0, 67°·8, and 67°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
Aug.	°	°	°	°	°	°	°	°	°	°	°	°
1	64·0	67·0	69·0	70·1	70·3	69·5	67·6	65·7	63·6	61·3	60·8	62·0
2	63·2	64·8	65·0	65·2	64·8	64·3	64·0	63·0	61·4	61·0	61·0	61·8
3	63·6	65·8	66·8	66·8	66·5	65·7	65·0	64·0	63·4	62·5	62·2	61·8
4	63·0	65·0	66·0	66·5	66·3	65·6	64·0	62·2	61·6	60·4	60·0	60·8
5	61·8	64·0	65·2	67·0	67·8	66·6	66·0					
6								66·0	64·0	62·3	62·0	62·5
7	64·5	66·7	68·0	69·0	69·6	69·1	68·5	68·0	68·0	68·0	67·2	67·0
8	68·6	72·0	75·0	76·6	76·4	75·3	73·6	72·4	70·7	68·8	68·0	68·5
9	70·2	73·0	75·0	75·8	75·6	74·5	74·0	72·0	70·1	69·6	68·0	66·3
10	65·0	64·5	64·3	64·8	65·2	64·4	63·3	62·0	61·0	60·0	58·0	56·0
11	60·0	64·0	67·5	69·0	69·6	69·0	67·0	65·0	64·0	62·6	61·2	61·8
12	64·0	68·0	70·8	72·4	73·0	72·0	71·0					
13								68·3	67·2	67·0	67·0	67·0
14	68·6	71·0	73·8	75·1	75·3	74·2	73·0	72·0	71·0	70·0	69·0	68·6
15	68·8	71·0	75·0	75·5	76·0	75·3	74·0	72·8	71·6	70·5	70·4	69·0
16	69·0	69·5	69·0	70·0	70·0	70·0	69·0	67·8	66·4	65·1	64·0	64·0
17	64·8	68·0	71·2	74·3	75·8	75·0	73·8	71·5	69·5	69·0	68·2	67·8
18	70·0	73·0	77·0	79·0	79·5	78·2	76·6	75·0	73·5	71·0	69·3	70·0
19	72·2	76·0	78·0	79·0	78·0	76·0	75·2					
20								66·0	65·0	63·7	62·5	61·8
21	63·5	65·5	67·5	69·0	69·0	68·0	66·2	65·0	63·5	62·0	61·2	60·8
22	61·3	62·0	63·0	63·4	63·2	62·8	61·2	58·0	60·0	58·6	58·2	59·2
23	61·7	64·4	65·0	66·5	66·0	65·0	64·0	64·0	64·1	64·3	64·2	63·7
24	63·5	63·5	64·5	66·0	67·0	66·7	65·5	64·0	63·0	62·3	62·2	62·2
25	63·6	66·0	68·0	69·0	69·0	69·0	68·7	66·7	67·2	67·0	65·5	66·5
26	68·0	69·2	71·5	72·0	71·4	70·0	68·2					
27								65·3	63·0	62·2	61·3	62·0
28	63·8	65·0	65·8	66·2	66·4	66·7	67·0	67·0	67·0	67·5	66·5	68·0
29	68·2	69·2	69·5	70·5	70·5	70·0	70·0	69·3	68·3	67·2	67·0	66·2
30	66·8	68·0	70·0	71·0	71·2	71·0	69·7	68·7	67·8	66·8	66·0	66·0
31	67·0	69·0	71·2	73·6	73·0	71·8	70·0	68·5	68·0	67·0	66·5	66·5

On 25^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 69°·0, 67°·2, 66°·0, 67°1, 67°·0, 65°·8, and 66°·6, respectively.
On 26^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 69°·0, 70°·8, 72°·0, 72°·0, and 71°·0, respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of July and August, 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
July.	°	°	°	°	°	°	°	°	°	°	°	°
1	63·6	66·0	68·1	69·0	69·2	69·0	67·0					
2								68·7	68·2	67·0	64·6	68·0
3	68·0	70·4	72·0	74·6	75·0	73·8	73·0	72·0	71·5	68·0	67·0	66·4
4	66·1	67·0	68·0	71·0	72·0	73·5	72·2	71·0	69·5	68·1	67·0	67·5
5	71·2	76·2	78·0	79·3	79·8	77·7	74·2	72·5	70·0	68·0	67·8	67·0
6	68·0	68·0	69·0	70·0	70·0	68·2	68·0	67·5	66·5	66·0	64·0	63·0
7	64·2	66·0	68·0	68·0	68·5	68·0	67·0	66·0	65·0	64·4	64·0	63·0
8	64·0	65·2	66·2	66·2	66·0	65·6	64·0					
9								65·0	64·0	63·0	62·0	63·0
10	65·0	67·0	67·2	68·0	67·5	66·5	67·0	67·0	66·0	65·0	63·0	61·5
11	61·2	61·3	63·0	63·0	63·5	63·0	62·0	61·7	61·0	60·5	60·2	60·3
12	63·0	69·0	70·2	72·1	72·5	72·3	70·2	68·6	68·0	66·7	65·8	65·6
13	67·0	68·5	68·0	68·2	68·2	67·8	67·5	67·0	66·0	64·0	62·5	62·1
14	62·2	65·0	68·0	70·0	69·5	70·0	69·9	69·0	67·3	66·2	65·2	65·0
15	66·8	71·0	73·0	74·5	75·0	75·0	73·4					
16								73·0	70·5	68·0	67·6	68·0
17	70·0	74·0	76·0	76·5	77·3	77·0	77·0	75·0	73·0	71·5	69·0	68·0
18	69·0	71·0	73·0	73·0	73·0	71·5	70·0	68·5	67·0	66·0	64·3	63·0
19	64·0	66·0	67·8	68·1	67·9	68·0	67·0	64·7	64·2	63·0	61·0	61·0
20	61·8	63·0	65·8	66·4	67·0	67·0	65·6	64·5	63·5	62·5	61·8	62·1
21	63·8	65·2	66·0	66·6	66·5	65·7	66·0	65·0	64·5	63·0	63·0	61·6
22	62·8	63·6	65·2	66·0	67·0	66·2	67·0					
23								58·2	57·1	56·0	55·2	55·5
24	57·0	59·3	61·2	62·1	62·5	62·0	61·2	60·0	58·6	57·3	57·0	57·0
25	58·5	59·8	62·0	63·0	64·2	64·7	64·0	63·0	62·0	61·2	60·0	61·3
26	64·2	68·0	69·2	71·8	72·2	71·0	71·0	69·7	68·0	66·5	65·1	65·0
27	64·8	65·2	66·8	68·1	68·5	68·8	67·8	67·0	66·0	65·0	64·4	64·0
28	67·2	66·8	68·0	68·8	68·2	68·0	66·0	65·0	64·8	63·0	63·0	63·7
29	64·2	66·0	66·5	67·2	67·8	67·0	66·0					
30								64·1	63·0	61·9	61·0	61·0
31	61·0	62·5	64·0	65·7	66·5	66·4	66·0	65·0	65·0	64·0	63·0	63·0

On 19^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 67°·0, 65°·0, 64°·1, 62°·8, 62°·6, 60°·8, and 61°·0, respectively.
On 20^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 62°·0, 65°·0, 66°·8, 67°·0, and 67°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
Aug.	°	°	°	°	°	°	°	°	°	°	°	°
1	64·0	66·2	68·5	70·0	70·2	69·5	67·2	65·0	63·0	61·3	60·0	60·9
2	62·1	64·0	64·0	64·6	64·3	64·0	63·3	62·2	61·2	60·3	60·0	60·7
3	62·5	65·0	66·0	66·0	66·0	65·0	64·0	63·2	63·0	62·4	62·0	61·3
4	62·7	64·7	65·6	66·0	65·8	65·2	63·0	62·0	61·0	60·1	60·0	60·0
5	61·0	63·1	65·0	66·1	67·3	66·0	65·7					
6								66·0	64·0	62·2	61·0	61·0
7	63·5	65·5	67·2	68·5	69·0	69·0	68·0	67·2	67·1	68·0	67·0	66·2
8	68·0	71·5	74·6	76·5	76·2	75·1	73·8	73·0	70·8	68·7	68·0	68·0
9	69·5	72·7	75·0	75·5	75·0	74·8	74·0	72·0	70·1	69·2	68·0	66·0
10	64·5	64·0	63·3	64·0	64·4	64·0	63·0	62·0	61·0	60·0	58·0	55·7
11	59·8	64·0	67·5	68·7	69·0	68·3	66·2	65·0	64·0	62·8	61·6	61·0
12	63·0	67·1	70·0	72·1	72·8	71·2	70·5					
13								68·3	67·3	67·0	66·3	66·5
14	68·0	70·5	73·3	75·0	75·2	74·1	73·0	72·0	71·0	70·0	69·0	68·4
15	69·0	71·0	75·0	75·2	76·0	75·0	73·8	72·5	71·5	70·0	70·0	69·0
16	68·8	69·2	69·0	69·6	69·8	70·0	69·0	68·0	66·3	65·0	64·0	64·0
17	64·2	67·6	71·1	74·1	75·2	75·0	73·7	72·0	70·0	69·3	68·5	67·5
18	69·0	73·0	77·0	79·0	79·2	78·3	76·5	74·6	73·5	71·2	69·5	69·2
19	72·0	76·0	78·0	79·2	78·0	76·0	75·8					
20								66·0	65·0	63·5	62·0	61·0
21	62·0	64·5	67·0	68·0	68·2	67·5	66·0	64·8	63·5	62·0	61·0	60·0
22	61·0	61·0	62·5	63·0	62·5	62·4	61·0	58·0	59·3	58·0	58·2	58·0
23	60·2	63·5	64·6	65·4	65·2	64·2	63·7	63·1	63·7	64·0	63·5	63·0
24	62·5	62·5	64·2	66·0	66·7	66·1	65·2	64·0	63·0	62·0	62·0	61·4
25	63·2	66·0	67·8	68·0	68·0	68·0	68·0	66·0	67·1	67·0	66·0	66·0
26	67·1	69·0	72·0	72·0	71·0	70·0	68·1					
27								65·0	63·0	62·0	61·0	61·5
28	63·0	64·5	65·0	65·5	66·0	66·2	67·0	67·0	67·0	67·0	66·5	68·0
29	68·0	69·0	69·5	70·0	70·5	70·0	70·0	69·3	68·3	67·3	67·0	66·2
30	66·2	67·8	69·7	70·5	71·0	70·2	68·0	68·0	67·2	66·3	66·0	66·0
31	66·3	68·8	71·8	73·0	73·0	72·2	70·0	68·0	67·5	66·5	66·5	66·0

On 25^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 68°·0, 66°·6, 65°·5, 67°·1, 67°·0, 66°·0, and 66°·4 respectively.
On 26^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 68°·0, 70°·8 72°·0, 72°·0, and 70°·4 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Sep. and Oct., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Sep.	°	°	°	°	°	°	°	°	°	°	°	°
1	68·0	70·5	74·0	75·0	76·0	75·0	74·3	73·2	72·2	70·5	69·2	68·3
2	69·8	72·2	75·0	76·8	77·0	76·3	74·8					
3								72·0	71·6	71·0	69·0	68·5
4	68·5	70·0	71·0	71·4	71·3	69·8	68·5	67·0	64·5	63·0	60·0	59·0
5	60·6	64·0	66·3	69·0	69·8	68·8	67·3	65·8	64·2	64·0	63·0	62·0
6	62·0	64·3	67·6	69·7	70·2	70·2	69·0	67·6	65·0	63·6	63·8	63·5
7	65·5	69·4	73·4	74·8	75·4	74·6	73·0	71·0	69·2	68·6	68·3	68·2
8	69·7	72·5	75·1	76·3	75·1	74·0	73·2	71·3	70·0	69·2	68·5	67·7
9	68·4	71·8	74·5	74·5	73·8	73·0	71·3					
10								66·6	66·0	65·0	65·0	65·0
11	66·0	67·1	67·8	68·4	68·6	68·0	67·5	67·0	67·0	67·2	67·3	67·0
12	66·8	68·0	69·2	71·0	72·0	71·3	70·0	68·0	66·2	64·5	63·0	63·0
13	64·6	67·5	70·6	71·0	70·3	69·2	68·0	66·0	64·5	63·0	62·5	61·2
14	62·2	64·1	66·0	67·0	67·0	67·0	67·0	66·6	66·2	65·8	66·0	66·8
15	68·8	71·0	72·2	73·2	74·0	72·0	70·0	69·0	68·0	68·0	67·5	67·3
16	69·0	72·2	75·0	77·0	77·0	76·0	74·0					
17								72·0	70·1	69·0	67·9	66·6
18	67·8	70·6	74·0	76·0	76·2	75·5	73·0	72·8	69·8	69·0	68·4	68·5
19	70·0	72·2	74·0	74·8	75·0	73·2	71·8	69·8	68·5	67·4	66·2	66·0
20	67·8	71·0	74·0	75·0	75·0	73·5	71·5	69·0	67·2	66·1	66·0	66·0
21	65·6	67·5	70·0	71·0	71·0	70·0	69·0	68·2	67·2	65·3	64·6	63·2
22	64·6	67·0	69·6	71·0	70·0	69·0	67·5	65·6	62·6	60·6	60·0	60·8
23	61·6	63·8	65·1	67·2	68·0	67·2	66·5					
24								63·0	62·3	61·4	60·2	58·8
25	59·0	61·0	63·0	63·1	63·0	62·0	61·0	60·0	59·2	58·2	56·6	55·6
26	58·0	59·2	62·0	62·0	61·5	61·0	58·4	56·8	54·8	53·0	52·8	52·0
27	53·0	55·0	56·0	56·8	56·5	56·0	55·5	53·8	53·5	53·0	53·0	52·0
28	54·0	58·0	61·0	60·0	61·5	61·0	59·0	58·0	55·5	53·0	51·0	50·0
29	51·0	55·0	58·0	59·0	59·3	59·1	58·7	58·3	58·0	58·0	58·0	58·1
30	58·5	60·5	62·2	63·2	64·0	64·2	64·5					

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 73°·7, 70°·0, 68°·1, 66°·2, 65°·6, 65°·2, and 65°·0 respectively.
On 21d at 1h, 3h, 5h, 7h, and 9h, the readings were 67°·5, 68°·3, 70°·5, 71°·3, and 70°·3 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Oct.	°	°	°	°	°	°	°	°	°	°	°	°
1								65·0	65·5	65·5	65·5	63·8
2	64·5	65·1	66·5	67·0	67·5	66·0	65·2	64·2	62·8	61·3	60·8	60·0
3	60·2	61·8	63·3	64·7	66·0	66·3	66·5	66·3	66·0	66·0	65·5	64·1
4	64·8	66·2	67·5	68·2	68·0	67·2	65·8	64·3	63·6	62·8	61·8	63·0
5	65·0	67·8	68·8	69·2	68·6	67·2	66·0	64·7	63·6	63·0	63·0	63·0
6	63·0	63·0	65·0	65·3	65·2	65·2	65·0	64·0	64·0	63·0	62·0	62·0
7	62·1	63·6	65·0	65·8	65·7	65·0	63·8					
8								57·2	56·8	56·8	56·5	57·2
9	58·0	59·0	59·2	58·8	58·6	58·0	57·2	56·2	55·7	53·8	53·2	52·0
10	52·8	55·0	58·1	58·8	61·2	61·3	61·0	60·5	60·2	59·8	59·3	60·3
11	61·8	63·0	64·2	64·2	63·5	62·5	61·4	60·3	58·2	57·0	55·8	55·0
12	55·0	55·0	54·8	55·0	55·0	54·6	53·5	53.5	53·5	51·5	51·0	50·0
13	50·8	53·5	57·0	57·5	57·5	57·0	55·0	54·0	53·5	53·0	52·0	51·2
14	51·2	53·6	56·0	56·2	56·0	55·2	53·2					
15								44·5	43·1	43·0	42·8	42·0
16	43·5	46·7	48·0	49·0	48·6	47·8	46·5	46·0	45·5	46·0	46·6	47·0
17	49·0	51·0	53·0	52·0	52·0	51·8	50·8	49·8	48·8	48·7	48·0	46·8
18	47·8	50·0	52·0	52·5	53·0	53·0	53·0	52·2	51·4	51·4	47·3	47·2
19	48·0	48·0	50·0	52·0	53·0	54·0	51·2	50·0	47·5	45·6	43·6	44·0
20	46·0	50·0	53·0	54·0	55·0	54·2	53·0	53·5	54·0	54·0	54·0	54·0
21	54·3	55·2	56·0	56·0	57·0	55·8	54·3					
22								61·0	61·2	61·0	60·0	58·4
23	59·0	60·3	62·2	62·2	62·0	61·0	59·2	58·0	57·0	56·8	56·0	57·0
24	59·0	61·0	61·8	61·6	61·0	60·2	60·5	60·5	61·5	62·0	62·0	59·0
25	58·7	58·5	60·0	59·0	59·0	58·0	56.3	54·4	52·7	50·4	48·3	47·0
26	47·2	49·2	52·0	53·2	54·0	54·2	53·4	52·0	50·8	48·0	46·2	46·2
27	47·5	51·0	54·0	54·0	54·2	53·3	53·5	53·5	54·0	54·5	54·0	54·0
28	54·0	55·0	57·0	56·0	55·5	55·0	52·5					
29								47·8	47·8	47·8	48·2	49·7
30	51·8	55·0	57·0	58·2	59·4	61·0	61·0	60·7	61·0	60·4	59·3	60·0
31	60·0	60·0	59·8	58·2	57·0	56·0	55·5	55·5	56·0	56·0	56·0	54·5

On 18d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 53°·0, 52°·5, 52°·0, 51°·6, 48°·8, 47°·0, and 47°·0 respectively.
On 19d, at 1h, 3h, 5h, 7h, and 9h, the readings were 48°·1, 51°·0, 53°·0, 54°·2, and 54°·0 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Sep. and Oct., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Sep.	°	°	°	°	°	°	°	°	°	°	°	°
1	67·8	69·5	73·5	75·0	75·5	75·5	74·0	73·2	72·2	70·8	69·3	68·6
2	69·2	72·0	75·2	77·0	77·0	76·3	74·6					
3								72·0	71·0	70·0	69·0	67·5
4	68·0	69·3	71·2	71·4	70·0	69·2	68·0	67·0	65·0	63·0	60·0	59·0
5	60·0	63·2	66·8	69·1	69·3	68·0	67·2	65·5	64·2	64·0	62·7	61·8
6	62·0	64·0	67·8	69·6	70·2	70·0	69·0	67·5	65·0	63·8	63·0	63·0
7	65·0	69·0	72·6	75·8	75·3	74·2	73·2	71·1	69·5	68·8	68·1	68·0
8	69·3	72·0	76·2	77·0	75·2	74·1	72·5	71·2	70·0	69·2	68·5	67·8
9	68·0	71·2	75·0	75·0	74·0	73·0	71·2					
10								66·3	66·0	65·0	64·8	64·7
11	65·0	66·4	67·3	68·4	68·0	67·6	67·2	67·0	67·0	67·0	67·0	66·8
12	66·5	67·0	69·0	71·0	71·7	71·0	70·0	68·0	66·2	64·5	63·0	62·4
13	64·0	67·5	71·0	71·0	70·2	69·0	67·5	65·5	65·0	63·0	62·5	61·0
14	61·0	63·8	66·0	67·0	67·0	67·0	66·6	66·0	66·0	65·7	66·0	66·0
15	68·0	70·3	73·0	73·3	73·0	72·0	70·4	69·0	68·0	68·0	67·1	67·0
16	68·5	72·0	75·1	77·0	77·1	76·0	74·0					
17								72·0	70·2	69·2	68·0	66·5
18	67·0	70·0	74·0	75·5	76·0	75·0	73·0	72·2	70·2	69·0	68·5	68·2
19	69·5	72·0	74·1	74·8	74·8	73·2	72·0	70·0	68·5	67·2	66·1	66·0
20	67·0	70·8	74·0	75·2	75·0	73·0	71·0	69·1	67·0	66·0	65·5	65·5
21	65·0	67·0	69·0	71·0	70·8	70·0	69·2	68·2	67·2	65·3	64·5	63·2
22	63·6	66·5	70·2	71·3	70·2	69·0	67·2	65·2	62·3	60·5	60·0	60·1
23	60·0	63·0	65·1	67·0	67·3	67·0	66·2					
24								63·0	62·0	61·0	60·0	59·0
25	58·2	60·0	62·0	62·3	62·0	61·2	60·2	59·2	58·5	57·7	56·3	55·4
26	57·0	58·3	61·6	61·0	60·7	60·6	58·0	56·6	54·7	53·0	52·8	52·0
27	52·2	54·1	55·0	56·0	56·0	55·0	54·5	54·0	53·0	53·0	53·0	52·0
28	53·1	57·0	61·0	60·0	61·0	60·0	58·8	57·4	55·4	53·2	51·2	50·0
29	51·0	55·0	58·0	59·0	59·0	58·8	58·2	58·0	57·7	57·5	57·5	57·5
30	58·0	59·5	61·5	63·0	63·5	63·8	64·0					

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 72°·5, 70°·0, 68°·0, 66°·0, 65°·0, 65°·0, and 65°·0 respectively.
On 21d, at 1h, 3h, 5h, 7h, and 9h, the readings were 66°·0, 68°·0, 70°·0, 71°·0, and 70°·0 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Oct.	°	°	°	°	°	°	°	°	°	°	°	°
1								64·0	64·0	64·0	64·5	63·8
2	64·0	64·7	66·5	67·0	67·0	65·8	65·1	64·0	62·5	61·2	60·2	59·3
3	59·5	61·0	63·0	64·0	65·4	66·0	66·0	66·0	65·7	65·3	65·0	64·0
4	64·2	66·1	67·3	67·8	67·8	67·2	65·6	64·4	63·6	62·8	61·8	62·1
5	64·2	67·0	68·0	69·0	68·0	67·0	66·0	64·7	63·5	63·0	63·0	62·5
6	62·8	63·0	64·2	65·0	65·0	65·0	64·5	63·7	64·0	63·0	62·0	61·2
7	61·5	63·0	65·0	65·3	65·2	64·4	63·6					
8								57·0	56·3	56·5	56·0	56·5
9	57·1	58·2	58·3	58·2	58·0	57·5	57·0	56·0	55·1	53·8	53·0	52·0
10	52·3	54·5	57·5	58·6	60·4	60·3	60·0	59·5	60·2	59·0	58·5	59·5
11	61·0	63·0	64·0	63·8	63·0	62·0	61·1	60·2	58·2	57·2	55·8	54·4
12	54·5	54·5	54·2	54·1	54·3	54·0	53·0	53·0	53·0	51·0	51·0	49·6
13	50·0	53·0	57·0	57·0	57·0	56·5	55·0	53·7	53·1	52·5	51·5	50·7
14	51·0	53·6	55·8	55·8	55·5	54·8	53·0					
15								45·0	44·0	43·0	42·0	42·0
16	43·3	47·0	48·3	49·0	48·6	47·5	46·0	45·5	45·0	45·5	45·5	46·5
17	49·0	51·0	53·0	52·0	52·0	51·2	50·3	49·3	48·2	48·2	47·8	47·0
18	47·0	49·8	52·0	52·3	52·3	53·0	53·0	51·8	51·0	51·2	48·7	47·0
19	47·3	49·6	52·2	53·0	54·0	54·0	51·0	50·0	47·5	45·6	44·0	44·0
20	45·6	50·0	53·1	54·0	54·2	54·0	53·0	53·5	54·0	54·0	54·0	54·0
21	54·0	55·0	57·0	57·0	57·0	55·0	54·2					
22								60·3	60·5	60·4	59·2	58·0
23	58·3	60·0	61·8	62·0	61·3	61·0	59·2	58·0	56·8	56·5	56·0	56·2
24	58·4	61·0	61·3	61·6	60·2	60·0	60·5	60·5	61·0	60·5	60·5	59·0
25	58·0	58·0	59·5	58·5	58·5	57·5	56·2	54·2	52·8	50·7	48·8	46·8
26	46·8	49·2	52·0	53·0	53·3	54·0	53·2	52·0	50·6	48·0	46·0	46·0
27	47·0	51·0	53·7	54·0	54·0	53·0	53·0	53·0	53·5	54·0	53·5	53·3
28	54·0	55·0	56·0	55·0	54·5	54·0	52·3					
29								47·8	47·8	47·8	48·2	49·1
30	51·4	54·8	56·5	57·6	59·0	60·3	61·0	59·8	60·0	60·0	59·3	60·0
31	60·0	60·0	60·0	58·1	57·0	56·0	55·5	55·5	55·5	55·5	55 5	54·0

On 18d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 53°·0, 52°·0, 51°·7, 51°·0, 48°·2, 47°·7, and 47°·0 respectively.
On 19d, at 1h, 3h, 5h, 7h, and 9h, the readings were 48°·0, 51°·0, 52°·8, 54°·0, and 54°·0 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Nov. and Dec., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Nov.	°	°	°	°	°	°	°	°	°	°	°	°
1	54·0	54·0	54·5	54·5	54·0	53·5	52·7	52·2	51·0	50·5	50·5	49·0
2	50·0	51·0	52·2	53·2	54·0	54·5	54·6	54·0	53·6	52·7	53·6	53·5
3	54·6	56·7	58·0	58·0	58·0	57·0	57·0	57·5	58·0	58·0	57·0	57·5
4	58·0	60·2	62·0	62·0	61·5	60·5	58·2					
5								51·0	51·0	50·0	49·2	50·0
6	52·6	53·5	55·0	55·3	56·3	57·3	56·8	56·0	55·5	54·0	54·6	55·3
7	57·0	59·0	60·0	59·7	59·8	59·2	57·5	56·0	54·2	53·0	52·1	51·2
8	52·0	53·6	53·5	54·0	53·2	51·8	50·5	48·5	48·5	48·0	48·0	46·0
9	44·5	45·5	46·0	49·5	49·0	46·5	45·5	45·3	45·0	44·5	44·5	45·2
10	46·7	48·0	49·0	49·8	51·5	52·5	53·0	51·3	50·5	48·0	47·5	46·5
11	47·0	49·0	50·7	51·1	50·3	50·0	49·0					
12								42·0	41·0	40·5	40·1	40·0
13	41·5	44·0	46·3	48·0	48·2	47·5	46·5	46·2	45·5	45·3	45·2	45·0
14	45·8	44·2	47·0	47·3	48·5	50·1	50·0	50·0	49·0	47·0	46·0	45·3
15	45·0	46·8	48·0	47·2	47·0	46·8	46·2	47·0	48·0	49·0	50·5	50·0
16	50·2	52·0	53·1	53·0	53·0	52·5	51·2	49·2	47·0	45·5	44·0	44·0
17	44·3	46·0	47·5	49·0	50·1	51·0	52·0	52·2	52·2	51·5	51·0	50·0
18	51·6	53·8	55·0	55·0	54·0	53·0	52·0					
19								46·8	47·0	47·8	48·3	50·0
20	51·5	53·8	54·6	53·2	53·0	52·0	51·2	51·0	50·3	50·5	51·0	52·0
21	53·5	56·0	57·1	57·4	57·6	58·0	58·0	58·5	58·8	59·0	58·7	58·0
22	58·0	58·4	58·5	58·0	57·8	57·5	56·8	55·0	54·2	53·0	53·0	53·5
23	54·8	57·0	56·5	55·0	53·7	52·0	51·0	50·0	50·0	48·0	47·0	46·6
24	46·2	47·5	48·0	48·0	48·0	49·2	50·0	50·0	51·0	51·5	51·2	51·5
25	50·5	50·1	51·5	52·0	53·5	54·0	55·0					
26								54·0	54·0	54·0	55·0	56·0
27	56·5	57·5	58·0	58·2	58·0	58·0	57·2	56·8	55·6	55·2	54·7	54·6
28	54·8	55·8	57·3	57·3	57·3	57·1	56·8	56·0	55·4	55·0	54·0	54·0
29	54·3	56·0	56·5	55·7	54·7	53·0	52·5	52·0	51·0	50·0	49·5	47·3
30	47·0	46·4	47·5	48·5	52·0	52·0	52·8	53·0	53·0	53·0	53·0	53·3

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 49°·2, 49°·8, 50°·0, 51°·2, 51°·0, 51°·5, and 50°·0 respectively.

On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 50°·8, 51°·2, 51°·5, 53°·5, and 53°·3, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Dec.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·2	54·0	55·0	54·2	53·8	53·1	53·0	52·2	51·2	50·2	49·2	48·0
2	48·0	48·0	50·3	51·0	50·8	50·5	50·5					
3								48·0	48·0	48·6	48·0	50·0
4	51·0	51·9	52·5	53·0	53·4	54·0	54·5	54·1	53·6	53·0	52·2	53·0
5	53·5	54·5	55·0	55·3	55·3	55·0	55·8	55·8	55·5	55·0	53·3	51·6
6	51·0	51·8	53·0	53·5	54·0	54·2	53·0	52·0	51·5	50·0	51·5	50·0
7	50·1	51·7	54·0	55·0	56·5	57·0	56·9	56·0	56·0	55·0	54·8	55·2
8	56·0	57·0	58·0	57·2	57·0	56·0	54·5	53·2	52·0	49·0	48·0	47·0
9	47·0	46·5	47·1	47·1	48·0	48·0	48·7					
10								46·5	46·0	46·0	46·3	47·0
11	47·6	49·0	51·0	51·2	51·5	51·0	49·6	48·2	47·0	46·0	45·5	44·2
12	44·0	43·3	43·0	43·2	43·8	44·0	44·2	44·0	42·2	41·2	40·1	39·3
13	39·2	39·0	40·8	42·0	43·0	44·0	46·0	47·0	48·5	48·0	48·0	48·0
14	48·2	51·0	52·5	53·0	54·0	53·5	52·0	52·0	52·0	51·2	50·3	50·0
15	50·1	50·6	52·0	53·0	54·0	54·7	54·7	54·0	53·5	52·0	51·6	51·6
16	51·0	52·0	53·0	53·3	53·0	53·7	54·0					
17								48·0	47·0	46·2	46·2	47·0
18	47·5	49·0	51·0	51·0	51·7	52·2	52·0	52·0	51·8	51·1	50·3	50·2
19	50·0	50·0	51·0	51·3	51·7	52·2	52·1	52·0	51·3	50·6	50·0	52·0
20	51·1	50·3	50·2	49·3	49·2	50·5	51·0	51·0	51·6	52·2	52·2	53·0
21	53·0	53·0	54·4	55·0	55·2	56·0	56·0	55·1	54·0	52·2	51·7	51·0
22	51·0	52·0	51·4	51·1	52·1	53·0	54·0	54·6	55·0	54·8	55·0	55·0
23	55·2	57·0	58·2	58·5	58·8	59·2	58·6					
24												
25			Chri	stmas	Day.			49·0	49·0	49·0	49·0	50·0
26	52·0	54·0	54·0	54·0	54·3	54·8	54·3	54·0	53·0	52·0	51·4	51·2
27	51·3	52·0	52·6	52·2	52·0	51·1	52·0	52·7	52·4	51·4	50·8	50·6
28	51·8	52·0	53·0	53·1	54·0	54·0	53·7	52·5	52·0	51·5	51·0	51·0
20	53·2	53·0	53·0	52·0	51·2	51·2	52·0	51·5	51·5	51·0	51·5	49·0
30	49·2	50·0	51·0	50·0	50·0	49·0	49·0					
31								47·0	48·0	48·0	48·0	48·2

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 51°·0, 51°·0, 51°·2, 51°·6, 52°·0, 52°·8, and 53°·0 respectively.

On 21d, at 1h, 3h, 5h, 7h, and 9h, the readings were 53°·3, 54°·0, 54°·0, 55°·0, and 56°·0 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Nov. and Dec., 1843.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Nov.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·6	53·5	54·0	54·5	54·0	53·0	52·0	51·8	51·0	50·5	50·5	49·0
2	49·8	50·8	52·0	52·8	53·5	54·0	54·0	54·0	53·6	52·7	53·6	53·5
3	54·3	56·0	58·0	58·0	57·5	56·4	56·5	57·0	57·5	57·5	57·0	57·0
4	57·5	60·0	62·0	62·0	61·5	60·5	58·0					
5								51·0	51·0	49·8	49·2	49·3
6	51·6	53·0	54·2	55·0	56·0	57·0	56·4	55·7	55·0	54·0	54·5	55·0
7	56·6	58·2	60·0	59·0	59·8	58·6	57·2	56·0	54·2	53·0	52·0	51·0
8	52·0	53·1	54·0	53·0	53·0	52·0	51·0	48·5	48·5	48. 0	48·0	46·0
9	44·6	45·0	46·0	49·5	49·0	46·0	45·2	45·2	44·7	44·5	44·4	45·2
10	46·8	48·0	48·5	49·3	51·2	52·2	52·0	51·0	50·3	48·0	47·3	47·0
11	47·0	49·0	50·5	51·0	50·0	50·0	49·0					
12								43·0	41·8	41·0	40·8	40·3
13	41·5	44·0	46·5	48·0	48·0	47·2	46·2	46·0	45·2	45·0	45·0	44·8
14	45·5	44·6	46·5	47·2	48·3	49·6	50·0	49·0	48·6	47·0	46·0	45·5
15	45·0	46·3	48·0	47·2	47·2	46·7	46·5	46·5	47·5	49·0	50·0	49·5
16	50·0	52·0	53·8	52·5	53·0	52·5	51·2	49·2	47·5	46·0	44·2	44·0
17	44·2	46·0	47·4	49·0	50·0	50·6	51·3	52·0	51·8	51·2	50·8	50·0
18	51·1	53·5	55·0	55·0	54·0	53·0	52·0					
19								46·8	46·8	47·5	48·0	50·0
20	51·3	53·5	54·8	53·5	53·0	51·7	51·3	50·6	50·2	50·2	51·0	52·0
21	53·5	56·0	57·0	57·0	57·0	57·2	57·5	58·0	58·3	58·3	58·2	58·0
22	57·7	58·0	58·0	57·2	57·1	57·0	56·0	54·7	54·0	53·0	53·0	53·0
23	54·3	57·0	56·8	54·9	53·0	52·0	51·0	50·0	50·0	47·5	47·0	46·2
24	46·0	47·0	48·0	48·0	48·0	49·0	49·0	50·0	50·3	51·2	50·8	51·0
25	49·8	50·0	51·2	51·0	53·0	53·5	54·3					
26								53·0	53·7	53·7	54·2	55·6
27	56·2	57·3	58·2	58·0	58·2	58·0	57·0	56·5	55·2	54·8	54·2	54·3
28	54·1	55·2	57·0	57·1	57·2	57·0	56·0	56·0	55·0	54·7	54·0	54·0
29	54·0	55·6	56·0	55·0	54·0	53·0	52·5	52·0	51·0	50·0	49·0	47·3
30	46·5	46·1	47·5	48·5	52·0	52·0	52·2	52·5	52·3	52·3	52·2	53·0

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 49°·2, 49°·5, 50°·3, 50°·8, 51°·0, 51°·0, and 50°·0 respectively.

On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 50°·0, 51°·0, 51°·0, 53°·0, and 53°·0 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Dec.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·0	54·0	54·3	54·0	53·0	53·0	52·8	52·1	51·1	50·2	49·2	48·0
2	48·0	48·0	50·2	51·0	50·8	50·4	50·5					
3								48·0	48·0	48·2	48·4	50·0
4	51·0	51·4	52·0	52·4	53·0	53·3	54·0	53·8	53·0	52·4	52·0	52·5
5	53·0	54·0	55·0	55·2	55·0	55·0	55·0	55·2	55·0	54·5	53·0	51·5
6	50·8	51·2	53·0	53·3	54·0	54·0	53·0	52·0	51·5	50·0	51·0	49·7
7	50·0	51·7	54·0	55·0	56·0	57·0	56·0	56·0	56·0	54·8	54·6	55·0
8	55·3	56·7	58·0	57·0	57·0	55·3	54·5	53·2	52·0	49·3	48·5	47·0
9	47·0	46·5	47·0	47·0	47·3	48·0	48·4					
10								46·5	46·0	46·0	46·3	46·7
11	47·2	49·0	51·0	51·2	51·2	50·2	49·4	48·0	47·0	46·0	45·5	44·0
12	44·0	43·6	43·0	43·3	43·8	44·0	44·0	43·2	42·2	41·3	40·4	40·0
13	39·6	39·6	40·8	42·0	43·0	44·0	46·0	47·0	48·0	48·0	48·0	48·0
14	48·2	51·0	52·5	53·0	54·0	53·0	52·0	52·0	52·0	51·2	50·2	49·6
15	50·0	50·6	52·0	52·7	53·5	54·3	54·3	54·0	53·5	52·0	51·6	51·1
16	51·0	52·0	52·6	53·1	53·0	53·0	53·8					
17								48·0	47·0	46·3	46·2	47·0
18	47·5	49·0	50·2	50·3	51·0	52·0	52·0	52·0	51·6	51·0	50·2	50·0
19	50·0	50·0	50·8	51·2	51·3	51·8	52·0	52·0	51·3	50·5	50·0	51·5
20	51·0	50·1	50·0	49·3	49·2	50·0	51·0	50·6	51·3	51·9	52·0	53·0
21	52·2	52·8	53·3	54·8	55·0	55·5	55·3	55·0	54·0	52·1	51·6	51·0
22	51·0	52·0	51·2	51·0	52·0	52·2	53·3	54·1	54·4	54·3	54·5	55·0
23	55·0	56·8	58·0	58·0	58·6	59·0	58·0					
24												
25			Chri	stmas	Day.			49·0	49·0	49·0	49·0	49·6
26	50·3	52·0	53·0	53·0	54·0	54·0	54·0	53·5	52·7	52·0	51·6	51·0
27	52·2	52·0	52·0	52·0	51·6	51·0	51·2	52·0	51·8	51·2	50·2	50·5
28	51·3	52·0	52·5	52·6	54·0	53·5	53·2	52·0	51·8	51·2	51·0	51·0
29	51·4	52·1	52·4	51·8	51·0	51·0	51·5	51·0	51·0	50·5	50·5	49·0
30	49·0	49·5	50·5	50·0	49·5	48·8	48·5					
31								47·2	48·0	48·0	48·0	48·0

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 51°·0, 50°·2, 51°·0, 51°·3, 52°·0, 52°·8, and 52°·0 respectively.

On 21d, at 1h, 3h, 5h, 7h, and 9h, the readings were 52°·8, 53°·2, 53°·0, 54°·8, and 55°·5 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Jan. and Feb., 1844.

Hours of Göttingen Mean Time, Astronomical Reckoning.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Jan.	°	°	°	°	°	°	°	°	°	°	°	°
1	47·0	47·0	46·8	46·0	45·0	44·0	42·2	41·2	40·8	40·1	40·0	40·0
2	41·2	42·0	42·2	42·5	42·2	41·2	40·4	38·3	36·8	35·0	33·7	33·0
3	33·0	34·3	36·3	38·0	40·0	41·0	42·2	43·0	43·3	43.0	43·5	45·0
4	46·5	48·0	50·0	51·0	52·0	52·0	52·8	53·0	52·2	52·2	52·2	53·2
5	54·0	55·0	56·0	56·2	56·2	56·4	56·7	56·0	55·5	55·3	54·0	53·3
6	53·2	54·0	55·0	54·7	54·0	52·4	52·0					
7								42·0	42·0	41·0	41·0	41·0
8	41·0	43·0	44·4	46·0	47·1	47·0	47·0	47·2	47·2	47·0	46·0	44·7
9	44·6	44·0	44·0	44·0	43·3	43·0	42·5	42·3	41·5	41·3	41·0	42·2
10	44·0	47·0	48·3	49·0	49·0	50·0	50·0	51·0	51·0	49·0	48·0	47·3
11	47·5	47·3	47·5	48·5	48·5	48·5	48·2	48·0	47·0	46·0	45·3	45·2
12	45·0	45·2	46·1	47·0	48·0	48·0	49·3	49·2	48·7	47·8	48·2	46·8
13	46·8	46·3	47·0	47·7	48·2	48·2	47·8					
14								41·0	39·2	39·2	39·0	38·2
15	38·5	39·5	40·0	41·3	42·2	43·0	42·2	41·0	39·3	38·0	36·6	36·0
16	36·0	37·0	38·2	40·0	41·0	41·6	42·5	43·0	42·2	41·8	41·7	41·7
17	41·8	41·8	43·2	45·2	46·2	47·0	47·5	48·0	47·0	47·0	46·0	46·2
18	47·0	47·6	48·0	48·0	48·0	48·0	48·3	48·0	47·4	47·0	46·2	46·0
19	46·0	46·5	47·8	48·3	48·0	48·0	48·2	48·0	47·0	46·3	45·8	45·3
20	45·0	45·0	46·0	46·6	46·6	46·0	44·8					
21								43·4	43·5	43·5	43·5	44·0
22	44·8	45·0	46·6	47·8	48·2	49·0	48·0	46·8	45·3	44·0	43·0	43·0
23	43·0	44·0	45·4	47·0	47·6	47·3	47·4	47·0	46·0	45·1	44·3	43·8
24	43·7	44·3	46·0	45·8	46·0	47·0	46·5	46·0	43·3	44·2	43·4	43·0
25	43·0	44·5	45·8	47·0	47·6	48·0	48·5	48·3	48·0	48·0	47·0	46·8
26	46·8	46·4	48·0	49·2	49·7	49·8	49·0	48·2	47·0	45·0	44·0	44·2
27	45·0	45·1	46·3	48·0	49·2	50·0	50·3					
28								45·8	45·0	44·6	44·1	44·0
29	44·5	46·0	48·0	49·2	50·1	51·0	52·0	52 6	53·4	54·1	54·0	53·6
30	52·6	53·0	54·0	54·8	54·7	53·3	52·0	50·7	49·0	47·0	46·0	45·0
31	44·0	43·8	43·7	43·0	42·3	42·0	43·0	42·0	41·5	39·5	38·0	38·0

On 24^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 47°·0, 46°·0, 45°·3, 44°·0, 44°·0, 43°·2, and 43°·0 respectively.
On 25^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 43°·0, 45°·0, 46°·1, 47°·0, and 48°·1 respectively.

Hours of Göttingen Mean Time, Astronomical Reckoning.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Feb.	°	°	°	°	°	°	°	°	°	°	°	°
1	38·0	39·2	41·5	42·0	41·0	42·0	40·0	38·5	37·1	36·9	36·6	37·0
2	37·0	38·2	38·8	39·0	39·0	38·9	38·5	37·9	37·8	37·7	38·3	38·7
3	39·4	40·3	43·0	43·8	45·0	45·0	44·6					
4								36·3	36·0	36·0	36·0	37·0
5	36·9	38·2	41·2	43·0	43·3	43·1	42·8	42·0	40·2	38·2	37·6	37·7
6	38·9	43·1	45·1	46·2	47·0	46·2	46·0	46·0	43·5	44·0	43·0	42·7
7	43·0	43·7	45·0	46·0	48·0	48·0	48·1	46·7	45·8	44·4	43·0	42·1
8	42·0	44·0	46·4	46·8	47·2	46·0	45·0	44·0	44·0	43·0	42·0	41·0
9	41·8	43·7	46·0	47·0	47·0	47·0	46·0	45·0	45·0	45·0	45·0	42·7
10	42·8	43·1	46·0	44·3	44·0	44·0	43·0					
11								37·6	38·0	37·2	37·2	38·5
12	39·0	41·5	44·0	45·2	45·3	44·2	44·0	43·0	41·4	40·0	38·2	37·5
13	37·8	37·8	38·0	39·0	39·1	38·7	38·8	37·8	36·3	34·3	32·8	32·8
14	33·0	33·2	37·0	40·8	43·1	45·0	45·2	45·0	44·0	43·6	43·0	43·0
15	44·0	45·2	48·0	48·6	48·0	48·2	49·0	50·5	50·5	50·0	49·0	46·0
16	46·0	47·2	50·0	52·0	52·0	51·0	50·1	48·0	46·3	44·2	43·0	43·0
17	44·0	46·3	48·0	49·5	51·2	51·4	51·2					
18								44·5	45·0	46·0	46·7	47·0
19	48·6	50·2	51·0	51·3	51·3	51·3	50·0	48·2	45·8	44·0	42·0	41·0
20	41·5	42·0	43·2	44·0	44·6	44·0	43·3	42·0	40·0	38·0	37·0	36·2
21	37·8	39·3	40·8	42·0	42·1	43 0	43·5	43·0	42·0	42·0	41·5	41·0
22	41·8	41·8	42·5	42·5	43·0	43·0	40·7	39·8	38·8	37·2	34·8	33·8
23	35·0	38·0	40·5	42·0	42·7	43·0	43·0	46·0	48·0	48·6	49·8	49·0
24	51·0	52·2	53·0	53·0	52·6	52·0	50·5					
25								46·2	46·8	46·4	46·2	46·5
26	48·3	51·3	53·3	52·4	52·2	51·0	51·0	49·0	47·0	45·0	43·0	42·0
27	42·5	43·6	45·0	45·1	45·0	44·0	44·0	43·2	42·1	41·3	40·1	40·8
28	42·2	45·0	48·5	50·3	50·4	50·2	50·0	50·0	50·0	47·5	46·0	45·5
29	46·8	50·0	53·0	54·0	54·0	52·5	52·5	51·4	50·4	50·0	50·0	50·5

On 23^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 43°·0, 45°·0, 47°·0, 48°·2, 49°·4, 50°·0, and 50°·0 respectively.
On 24^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 52°·0, 52°·0, 53°·0, 53°·0, and 52°·3 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Jan. and Feb., 1844.

Hours of Göttingen Mean Time, Astronomical Reckoning.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Jan.	°	°	°	°	°	°	°	°	°	°	°	°
1	47·0	47·0	47·0	46·0	45·0	44·0	42·2	41·2	40·7	40·0	40·0	40·0
2	40·8	42·0	42·0	42·5	42·2	41·2	40·0	38·0	37·0	35·6	34·0	33·3
3	33·0	34·7	37·0	38·8	40·0	41·0	42·0	43·0	43·0	43·0	43·4	45·0
4	46·5	48·0	50·0	51·0	52·0	52·0	52·2	52·2	52·0	52·0	52·0	53·0
5	54·0	54·3	56·0	56·0	56·0	56·0	56·2	55·8	55·2	55·0	54·0	53·3
6	53·0	53·3	54·2	54·0	53·4	52·2	52·0					
7								42·3	42·0	41·0	41·0	41·0
8	41·0	43·0	44·8	46·0	47·0	47·0	46·8	47·2	47·2	47·0	46·0	45·0
9	44·0	44 0	44·0	44·2	43·5	43·3	43·0	42·0	41·2	41·0	41·0	42·5
10	44·0	47·0	48·3	48·8	48·8	49·4	49·5	50·5	50·0	48·0	47·0	47·2
11	47·4	47·2	47·0	48·0	48·0	48·0	48·0	48·0	47 0	46·0	45·7	45·2
12	45·0	45·2	46·0	47·1	48·0	48·0	49·0	49·0	48·5	47·7	48·0	46·8
13	46·2	46·2	47·2	47·5	48·0	48·0	47·6					
14								41·0	39·0	39·0	38·0	39·0
15	39·0	40·0	41·0	42·0	42·5	43·0	43·0	41·4	40·0	39·0	37·1	36·5
16	36·5	37·0	39·0	39·2	41·5	42·0	43·5	43·0	42·2	42·0	42·0	42·0
17	42·0	42 0	43·5	45·2	46·0	47·0	47·0	47·0	46·0	46·0	45·5	46·0
18	46·5	47·2	48·0	47·5	47·5	47·5	48·3	48·0	47·4	47·0	46·0	46·0
19	46·0	46·3	47·8	48·0	47·4	47·6	48·0	48·0	47·0	46·4	46·0	45·5
20	45·0	45·0	46·0	47·0	47·0	46·0	45·0					
21								43·8	44·0	44·0	44·0	44·0
22	44·7	45·2	46·8	47·8	48·2	49·0	48·0	46·6	45·0	44·0	43·0	43·0
23	43·0	44·0	46·0	47·0	47·7	47·1	47·4	47·0	46·0	45·2	45·0	44·0
24	44·0	44·0	46·0	46·0	46·0	46·5	46·0	46·0	43·0	44·0	43·4	43·0
25	43·0	44·2	46·0	47·0	47·4	47·8	48·5	48·3	48·0	48·0	47·0	46·8
26	46·4	46·0	47·5	49·2	49·8	49·6	49·0	48·0	46·8	45·2	44·3	45·0
27	45·0	45·0	46·4	48·0	49·2	49·8	50·3					
28								46·0	45·3	45·0	44·2	44·0
29	44·5	46·0	48·0	49·3	50·1	51·0	51·5	52·5	53·2	53·8	54·0	53·0
30	52·7	53·3	53·8	54·3	54·3	53·2	52·0	50·8	49·0	47·0	46·0	45·0
31	44·4	44·0	43·6	43·0	42·4	42·0	43·0	42·0	41·5	39·5	38·0	38·3

On 24^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 46°·5, 46°·0, 45°·3, 43°·8, 44°·0, 43°·2, and 43°·0 respectively.
On 25^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 43°·2, 45°·2, 46°·6, 47°·0, and 48°·1 respectively.

Hours of Göttingen Mean Time, Astronomical Reckoning.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Feb.	°	°	°	°	°	°	°	°	°	°	°	°
1	38·1	39·1	41·0	42·0	41·0	42·0	40·2	39·1	38·0	37·0	37·0	37·0
2	37·2	38·0	39·0	39·3	39·4	39·2	39·0	38·2	38·0	38·0	38·5	38·8
3	39·3	41·0	43·2	44·2	45·2	45·2	44·8					
4								37·0	36·8	36·6	36·8	37·0
5	37·0	39·0	42·0	43·7	44·0	43·2	42·9	42·2	41·0	39·0	38·0	38·0
6	39·0	42·0	45·3	46·8	47·0	46·3	45·5	45·5	43·5	44·0	43·0	42·7
7	43·0	43·7	45·0	46·0	48·0	48·0	48·0	46·7	45·7	44·3	43·0	42·2
8	42·0	44·0	46·1	47·2	47·6	46·0	45·2	45·0	44·0	43·0	42·4	41·0
9	41·7	44·0	46·0	47·0	47·0	47·0	46·5	45·0	45·0	45·0	45·0	42·8
10	42·8	43·0	46·0	44·2	44·2	44·0	43·0					
11								37·2	38·0	37·8	37·7	38·0
12	39·3	42·0	44·0	44·8	45·2	44·3	44·0	43·0	42·0	40·4	39·0	38·2
13	38·2	38·0	38·0	39·0	39·2	39·0	39·0	38·0	36·7	35·0	33·5	33·0
14	33·2	34·0	37·7	41·2	43·3	45·0	45·0	45·0	44·0	43·5	43·2	43·0
15	44·0	46·2	48·0	48·2	48·0	48·0	48·5	50·0	50·0	50·0	49·0	46·2
16	46·0	47·0	50·0	51·5	51·5	51·0	50·0	48·3	47·0	45·0	43·5	43·0
17	43·8	46·2	48·0	49·3	51·0	51·1	50·8					
18								44·5	45·0	46·0	46·8	46·8
19	48·5	50·0	51·0	51·3	51·3	51·3	50·0	48·2	45·7	44·0	42·2	41·1
20	41·4	42·0	43·2	44·2	44·7	44·0	43·6	42·1	40·3	39·0	37·4	36·8
21	38·0	39·1	41·0	42·0	42·6	43·0	43·0	43·0	42·0	42·0	41·0	41·3
22	42·0	42·0	42·0	42·0	43·0	42·0	41·0	40·0	39·0	37·5	34·8	34·0
23	35·2	38·0	40·5	42·3	42 5	43·0	43·0	46·0	48·0	48·4	49·7	49·0
24	50·5	51·7	52·5	52·7	52·5	51·3	50·0					
25								47·0	46·7	46·0	46·2	46·2
26	48·2	51·4	52·8	52·1	51·6	52·0	51·0	49·1	47·1	45·1	43·6	42·0
27	42·0	43·3	45·1	45·1	45·0	44·1	44·0	43·3	42·2	41·5	40·3	40·6
28	42·0	44·3	48·5	50·0	50·0	50·0	50·0	50·0	50·0	47·5	46·0	46·0
29	46·3	49·0	53·0	53·5	53·0	52·0	52·2	51·3	50·3	50·0	50·0	50·2

On 23^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 43°·0, 45°·0, 47°·0, 48°·0, 49°·4, 49°·8, and 50°·0 respectively.
On 24^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 51°·2, 52°·0, 52°·5, 52°·4, and 52°·3 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of March and April, 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning. 0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Mar.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·3	55·0	58·0	57·0	55·5	54·0	53·3	52·0	51·0	50·0	48·0	47·5
2	49·0	52·0	51·6	52·1	52·0	51·0	49·0					
3								44·0	43·5	43·5	44·0	45·0
4	45·8	46·0	46·5	46·5	45·5	46·0	46·4	46·1	45·1	44·2	43·2	42·3
5	42·6	42·8	44·1	45·3	45·1	45.0	44·3	43·3	41·3	39·2	37·5	37·0
6	39·0	43·6	46·0	48·0	48·8	49·0	48·0	46·0	44·0	42·8	41·7	41·5
7	42·0	45·2	46·5	46·7	47·4	47·2	47·0	47·0	46·5	46·0	44·5	44·0
8	45·0	47·3	52·0	52·3	52·0	51·0	50·0	50·0	49·5	48·0	48·0	47·0
9	48·0	50·0	53·0	53·0	55·6	56·0	55·0					
10								42·8	42·3	42·8	44·7	46·2
11	48·0	50·0	52·0	53·0	53·2	53·0	51·6	50·0	48·5	47·0	46·0	46·0
12	48·0	50·0	49·8	49·2	47·8	47·0	46·5	46·0	45·0	43·5	43·0	42·6
13	43·0	44·0	47·0	46·5	47·0	46·5	46·1	45·3	44·0	43·0	42·6	42·8
14	43·3	44·3	46·3	47·1	48·0	48·4	48·8	48·1	47·4	47·1	46·7	46·8
15	48·4	51·0	53·0	53·5	54·2	54·0	53·2	51·0	48·8	46·8	46·8	47·7
16	50·1	52·1	53·6	54·7	53·7	53·0	52·0					
17								40·3	40·0	39·8	39·2	40·2
18	42·4	46·3	51·0	52·0	52·4	52·2	52·0	51·0	49·0	47·0	46·7	45·8
19	47·2	48·6	50·5	51·0	51·7	51·6	51·4	50·3	49·2	48·3	47·5	47·6
20	48·2	50·0	50·8	51·4	50·2	50·0	48·0	46·2	45·3	44·5	43·1	43·5
21	44·4	47·0	48·0	50·5	51·0	50·7	50·0	47·0	46·0	44·4	43·0	43·5
22	45·0	46·3	48·0	50·0	50·2	50·5	50·3	50·5	50·0	48·0	48·0	47·6
23	48·7	50·5	52·7	53·8	54·2	54·0	53·6					
24								46·0	45·0	45·0	45·0	46·0
25	47·0	49·0	51·7	53·5	53·7	53·2	54·0	53·8	52·7	51·8	51·0	51·2
26	52·0	54·0	56·1	58·0	59·0	59·1	59·0	58·2	57·0	57·0	56·1	55·7
27	57·2	58·6	60·5	61·1	61·0	60·5	60·0	59·2	58·8	56·0	55·0	54·3
28	56·0	59·0	61·5	62·7	62·6	61·3	59·8	57·9	56·0	53·1	51·3	50·8
29	52·8	57·6	60·0	62·8	62·0	60·0	58·5	57·5	56·0	55·0	54·0	53·4
30	55·3	58·6	61·2	61·0	58·7	57·0	55·0					
31								52·0	51·0	49·3	48·8	50·5

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 48°·5, 47°·0, 45°·8, 45°·0, 43°·6, 42°·8, and 43°·5, respectively.
On 21d, at 1h, 3h, 5h, 7h, and 9h, the readings were 45°·8, 48°·0, 51°·0, 50°·8, and 51°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning. 0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Apr.	°	°	°	°	°	°	°	°	°	°	°	°
1	51·3	56·3	60·0	62·7	64·2	63·6	63·0	62·0	60·5	57·0	55·0	55·0
2	58·0	61·3	64·5	66·0	66·0	65·0	62·8	60·4	58·4	56·8	55·3	56·2
3	58·5	61·5	64·1	66·0	65·3	64·0	61·8	59·3	58·0	58·0	57·0	57·7
4	60·0	63·0	66·3	67·0	67·3	66·0	63·3					
5			Good	Fri	day.			51·0	50·2	48·4	48·3	51·0
6	54·1	58·3	60·3	61·3	60·7	58·8	58·0					
7								52·0	51·0	48·9	47·3	47·2
8	49·5	54·0	58·0	61·5	62·6	62·2	61·0	59·0	56·7	55·0	54·0	54·3
9	57·2	60·6	64·2	66·3	67·2	66·0	63·6	60·8	58·7	56·5	55·2	56·5
10	59·0	62·5	65·3	67·2	67·8	66·4	65·2	62·0	60·0	57·5	55·5	54·7
11	56·7	59·0	62·0	62·5	62·0	61·5	60·5	60·0	58·5	57.5	57·0	55·5
12	56·5	59·0	61·5	63·0	61·5	61·0	58·4	57·3	56·8	56·5	56·4	56·3
13	56·7	57·5	59·0	59·5	59·1	58·2	56·6					
14								55·8	54·5	53·5	53·0	53·0
15	55·5	57·5	61·0	62·8	63·0	62·0	58·5	58·0	56·5	56·0	56·0	56·0
16	56·8	58·0	60·0	61·0	60·5	60·5	59·8	58·0	56·0	56·0	56·0	56·5
17	59·5	63·0	65·0	66·8	67·2	66·2	64·0	62·5	62·5	58·5	58·0	56·5
18	57·6	60·1	63·0	63·0	63·0	63·0	60·8	58·0	56·0	54·5	52·0	51·5
19	54·0	56·8	59·6	61·3	62·0	61·8	62·0	61·5	60·5	58·8	58·5	58·8
20	59·4	61·3	63·5	64·0	64·8	64·2	64·4					
21								62·0	61·0	60·0	59·7	60·3
22	62·8	64·9	67·0	68·4	68·3	67·2	65·1	63·6	61·8	59·5	58·7	59·2
23	61·3	64·5	66·0	67·7	68·0	67·2	66·3	64·5	59·5	59·8	59·8	59·0
24	61·0	62·8	64·5	66·0	64·3	64·0	62·0	59·3	58·3	57·0	56·8	57·5
25	58·8	62·5	65·2	67·5	68·5	67·0	65·0	63·0	61·0	59·0	59·0	60·6
26	63·3	66·5	70·0	72·3	73·0	72·0	69·3	68·2	65·4	63·6	61·6	61·0
27	61·5	63·5	65·8	67·4	67·2	65·3	63·2					
28								57·5	55·5	55·3	52·8	53·4
29	56·0	59·0	61·0	61·5	61·0	58·5	57·0	55·0	53·5	52·5	54·0	56·0
30	58·5	61·8	65·0	66·8	66·5	64·5	61·3	58·8	57·4	55·6	54·3	56·3

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 63°·0, 60°·2, 58°·5, 57°·0, 57°·0, 57°·0, and 57°·8 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 60°·5, 64°·0, 66°·0, 66°·5, and 67°·3 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of March and April, 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning. 0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Mar.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·0	55·5	58·0	57·5	56·0	54·0	53·2	52·1	51·0	50·0	48·0	48·0
2	49·5	52·0	52·0	52·2	52·0	51·0	49·0					
3								43·5	42·5	43·0	44·5	45·0
4	45·8	46.0	46·5	46·0	45·5	45·5	46·3	46·0	45·1	44·4	44·0	42·7
5	42·8	42·8	44·1	45·0	45·1	45·0	44·2	43·2	41·5	39·5	38·0	37·0
6	38·6	43·0	46·0	47·8	48·5	48·5	47·5	46·2	44·2	42·6	42·0	41·8
7	42·5	44·8	46·6	46·5	47·0	47·2	47·0	46·5	46·5	45·5	44·0	44·0
8	44·8	47·0	52·5	52·5	51·5	51·0	51·0	51·0	50·5	47·5	47·5	47·0
9	48·0	50·0	53·5	56.5	55·6	55·7	55·0					
10								43·0	42·5	43·0	45·0	46·0
11	48·0	50·3	52·0	52·8	53·0	52·7	51·4	50·0	48·5	47·0	46·0	46·0
12	47·5	49·5	49·8	49·0	47·6	47·0	46·5	46·0	45·5	43·5	43·0	42·9
13	43·0	44·0	47·5	47·0	46·5	46·5	46·1	45·5	44·4	43·3	43·0	43·0
14	43·5	44·5	46·3	47·0	47·4	48·1	48·7	48·0	47·4	47·0	46·6	46·8
15	48·6	50·8	54·0	54·0	54·5	54·0	52·4	50·6	49·0	47·0	46·7	47·1
16	50·0	52·0	53·6	53·8	53·7	53·0	52·1					
17								41·0	41·0	40·5	40·0	40·2
18	42·0	46·2	54·0	54·0	53·7	53·0	52·2	51·6	49·0	47·0	46·7	45·8
19	47·0	48·0	50·0	50·8	51·2	51·3	51·0	50·2	49·0	48·3	47·5	47·4
20	48·0	49·8	50·3	50·7	50·0	50·0	48·0	46·9	45·5	44·5	43·0	43·3
21	43·8	46·3	48·0	50·0	50·5	50·0	50·0	47·3	46·0	44·4	43·3	43·3
22	44·7	46·2	48·2	50·0	50·0	50·0	50·2	50·5	50·0	48·0	48·0	47·5
23	48·7	50·4	52·8	54·0	54·0	54·0	53·2					
24								46·0	45·0	45·0	45·0	46·0
25	47·0	49·0	51·7	53·4	53·2	53·0	54·0	53·4	52·8	51·8	51·0	50·8
26	51·7	53·5	57·0	58·0	59·2	59·0	58·5	58·0	57·0	57·0	56·0	55·7
27	56·8	58·3	60·0	60·5	60·5	60·0	59·2	59·0	58·5	56·0	55·0	54·3
28	55·7	58·2	62·0	62·6	62·6	61·0	60·0	58·0	56·0	54·0	51·4	50·5
29	52·0	57·0	62·0	63·0	62·2	60·0	58·5	57·5	56·0	55·0	54·0	53·0
30	55·0	58·7	64·0	62·0	59·0	57·0	55·0					
31								52·0	51·0	50·0	49·0	50·0

On 20d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 48°·5, 47°·0, 46°·0, 45°1, 43°·4, 42°·6, and 43°·3, respectively.
On 21d, at 1h, 3h, 5h, 7h, and 9h, the readings were 45°·0, 47°·7, 51°·0, 50°·4, and 50°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning. 0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Apr.	°	°	°	°	°	°	°	°	°	°	°	°
1	51·0	56·0	60·0	62·5	64·0	63·4	63·0	62·0	60·5	57·0	55·0	54·0
2	56·2	60·4	64·0	66·0	66·0	65·0	62·8	60·5	58·4	57·0	55·0	55·0
3	57·2	61·0	67·0	67·1	66·0	64·5	62·0	59·3	58·0	58·0	56·8	56·8
4	58·8	62·0	67·5	68·0	67·2	66·0	63·2					
5			Good	Fri	day.			50·6	49·7	49·0	48·3	50·0
6	53·0	57·2	59·6	60·3	60·0	58·4	57·5					
7								52·8	51·2	49·2	48·0	47·0
8	49·0	54·0	60·2	62·3	63·0	62·0	61·0	59·0	56·7	55·0	54·0	54·0
9	55·3	59·8	66·0	67·5	67·5	66·0	64·0	60·5	58·6	56·5	55·3	56·0
10	58·5	62·0	65·0	67·0	67·3	66·2	65·0	62·0	59·0	57·5	55·5	53·6
11	55·2	57·8	61·5	62·5	61·5	60·5	61·0	59·5	58·0	57·0	56·5	55·0
12	55·3	58·2	61·5	62·5	61·0	60·5	58·0	57·0	56·4	56·3	56·2	55·8
13	56·0	57·0	58·5	58·8	58·5	57·8	56·2					
14								56·0	54·5	53·7	53·0	52·8
15	55·8	57·5	61·6	63·7	63·0	62·0	60·5	58·5	56·5	56·0	55·5	55·8
16	56·0	57·6	59·8	60·8	60·5	60·0	59·0	58·0	56·0	56·0	56·0	56·5
17	59·0	62·5	65·3	67·0	67·2	66·2	64·0	62·0	62·0	58·0	57·5	56·2
18	57·0	59·5	61·5	62·5	63·0	63·0	60·4	57·8	56·0	54·0	52·0	51·5
19	53·5	56·2	58·8	60·4	61·0	61·0	61·0	61·0	60·0	59·0	59·0	58·0
20	59·0	61·0	63·5	64·2	64·5	63·8	64·0					
21								62·0	61·0	60·0	59·3	58·7
22	60·4	63·8	66·8	68·0	68·0	67·0	65·0	63·4	61·6	59·2	58·6	58·5
23	60·8	62·5	65·0	67·0	67·8	67·2	66·5	64·2	59·0	59·5	59·5	57·4
24	58·7	61·0	64·0	65·5	63·5	63·5	61·5	59·0	58·0	57·0	56·0	55·5
25	58·3	61·0	64·8	66·0	67·0	67·5	65·0	63·0	61·0	59·0	58·3	58·0
26	62·0	66·0	70·0	72·0	73·0	71·5	69·2	68·0	65·8	63·8	61·8	60·5
27	61·2	63·5	65·5	66·8	67·0	65·4	62·8					
28								57·3	55·8	55·3	52·3	52·0
29	54·3	58·0	60·8	61·5	60·5	58·0	57·2	55·0	53·5	52·5	52·2	53·7
30	56·8	60·8	64·5	66·0	66·0	64·2	61·4	58·6	57·5	56·0	54·0	55·0

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 62°·5, 60°·0, 58°·2, 57°·0, 56°·7, 55°·5, and 55°·2 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 59°·0, 63°·0, 65°·3, 65°·0, and 67°·5 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of May and June, 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
May	°	°	°	°	°	°	°	°	°	°	°	°
1	59·5	63·8	65·6	66·3	66·6	64·6	63·5	61·5	60·0	57·5	58·0	58·5
2	61·5	64·5	69·0	68·5	69·5	68·0	65·5	62·8	59·8	57·7	57·0	58·0
3	60·5	62·2	65·8	66·8	66·5	64·2	62·4	61·0	59·4	59·0	58·3	58·2
4	58·8	61·0	62·0	62·0	63·0	62·3	61·2					
5								63·5	60·7	59·8	58·7	59·5
6	62·8	65·5	67·2	68·7	69·7	68·0	67·0	64·5	61·6	60·0	59·3	59·8
7	62·4	66·2	69·7	71·5	71·5	70·8	69·3	67·8	66·1	64·1	62·7	62·5
8	63·7	65·8	69·0	71·0	71·7	70·5	68·5	67·0	65·2	63·5	63·5	62·8
9	65·1	68·2	72·0	73 0	74·0	71·7	69·3	67·0	65·7	63·6	62·8	62·5
10	62·3	62·5	64·2	65·0	65·4	63·8	62·3	60·3	58·5	57·3	56·8	57·2
11	60·0	63·2	66·0	66·8	66·8	66·3	65·0					
12								62·4	62·0	60·5	60·1	60·8
13	63·6	66·8	70·5	72·0	73·0	71·9	68·8	67·0	65·0	60·1	60·2	61·5
14	64·8	68·7	71·6	73·7	74·0	72·8	71·5	68·5	65·8	63·5	61·7	61·5
15	62·2	65·0	66·5	66·8	66·5	65·8	64·8	63·3	62·1	60·7	60·0	59·1
16	61·5	63·7	67·0	68·2	68·1	67·2	66·3	64. 6	62·4	61·3	59·6	59·5
17	60·8	61·6	62·0	61·5	60·8	59·0	57·3	56·3	53·5	51·8	49·8	50·0
18	52·2	56·0	59·0	60·3	60·0	59·5	58·0					
19								54·8	54·0	53·5	53·9	55·3
20	57·6	62·0	63·0	64·0	64·0	62·7	61·8	59·2	58·0	58·0	56·5	55·0
21	55·2	57·3	59·0	61·0	62·0	61·5	61·5	60·2	59·3	57·5	57·3	57·3
22	59·0	62·1	65·5	66·5	65·5	64·5	63·2	62·0	61·2	60·1	60·0	58·8
23	59·5	60·3	62·4	64·1	64·1	63·1	61·7	60·2	57·7	56·8	56·2	56·5
24	58·5	62·5	64·7	67·0	68·7	67·0	66·5	64·2	63·5	62·0	61·0	61·2
25	60·2	61·5	63·3	64·5	64·5	63·5	61·2					
26								55·3	54·0	53·0	52·5	52·8
27	55·1	57·8	59·3	60·5	60·5	59·8	58·5	57·0	55·0	53·3	53·0	54·6
28	55·8	58·5	60·0	60·7	61·0	60·8	59·6	58·0	57·0	56·0	55·8	55·5
29	56·5	57·5	58·2	58·3	59·6	58·6	58·5	58·5	57·5	57·5	57·0	56·0
30	56·5	59·7	61·6	63·5	63·0	65·0	62·8	61·8	60·2	58·5	57·5	57·8
31	58·0	60·5	62·8	64·5	65·5	64·0	63·2	61·9	59·5	58·0	58·1	59·0

On 24^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 67°·0, 64°·3, 63°·8, 62°·8, 62°·0, 60°·8, and 61°·5, respectively.
On 25^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 61°·2, 62°·0, 63°·5, 64°·8, and 64°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
June	°	°	°	°	°	°	°	°	°	°	°	°
1	63·2	66·7	69·1	70·0	70·5	70·0	67·4					
2								61·0	59·5	57·6	57·0	58·8
3	61·3	63·8	65·8	67·3	68·3	67·6	65·8	63·5	62·5	60·8	59·8	62·0
4	64·5	68·0	70·5	71·8	72·0	70·5	68·5	66·1	64·0	62·0	60·2	61·0
5	63·4	67·0	70·0	72·0	72·5	71·2	69·3	68·0	67·0	66·0	65·2	64·7
6	64·8	66·7	67·5	68·0	68·0	67·6	66·5	64·4	63·3	62·7	62·3	62·3
7	63·3	64·8	66·0	66·8	67·2	66·4	65·5	63·8	62·8	61·8	61·5	63·0
8	64·2	66·7	69·3	71·3	71·8	71·0	69·5					
9								68·0	66·0	64·0	63·0	64·3
10	66·0	68·0	70·1	71·0	71·8	71·1	69·2	68·0	65·0	63·0	62·0	64·0
11	66·2	68·8	72·2	74·0	74·8	74·0	71·6	68·6	66·6	65·0	64·2	67·0
12	69·1	72·1	74·0	76·0	76·7	75·0	74·0	72·0	71·0	68·0	67·5	68·7
13	70·5	74·0	76·5	78·0	78·5	78·0	75·7	72·8	70·1	67·8	66·0	67·0
14	68·5	70·5	72·3	73·2	74·0	72·5	71·0	68·8	66·2	64·0	64·0	64·3
15	64·3	66·0	68·2	69·0	69·2	68·5	67·0					
16								63·5	61·3	58·6	58·3	61·3
17	64·0	67·3	69·0	70·2	71·0	69·7	68·5	66·5	64·3	63·5	62·7	62·0
18	62·8	65·0	67·0	68·1	68·2	66·8	66·2	65·0	63·0	62·1	61·0	60·8
19	60·0	60·8	62·0	62·3	62·3	62·5	62·0	60·0	60·2	59·9	59·3	60·0
20	61·3	63·0	64·7	67·0	68·6	68·0	67·5	66·6	65·3	64·0	63·0	64·0
21	67·0	70·0	71·7	74·0	74·0	73·0	72·2	71·0	69·0	68·0	66·5	66·8
22	68·5	71·3	74·2	76·1	77·0	76·3	74·0					
23								77·0	74·5	73·3	74·0	73·3
24	74·2	77·0	80·0	81·0	81·2	79·0	74·6	73·7	71·5	69·8	68·4	68·0
25	67·0	67·2	66·0	66·5	66·2	65·7	64·0	62·5	61·6	61·3	60·9	61·0
26	63·0	65·0	67·2	68·5	69·2	68·2	67·0	66·5	65·5	65·5	65·0	64·0
27	64·3	66·0	67·8	69 0	69·3	68·5	67·0	65·9	64·3	63·2	63·2	62·8
28	64·2	65·0	67·0	68·3	68·3	69·0	67·3	66·0	64·0	62·3	62·6	65·3
29	67·8	71·2	72·8	75·8	75·5	75·2	73·5					
30								70·0	68·0	66·0	65·0	66·0

On 19^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 62°·5, 61°·4, 60°·5, 60°·2, 59°·1, 60°·0, and 60°·3 respectively.
On 20^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 62°·0, 63°·4, 66°·0, 68°·0, and 68°·5 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of May and June, 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
May	°	°	°	°	°	°	°	°	°	°	°	°
1	57·8	62·5	65·6	66·1	66·2	64·2	63·0	61·0	59·5	57·0	57·5	56·7
2	59·3	63·3	69·0	68·5	69·5	67·5	65·0	62·5	60·0	57·5	56·5	56·0
3	58·2	62·0	65·7	66·5	66·3	64·3	63·0	61·0	59·5	59·0	58·1	57·7
4	58·0	60·8	61·0	61·6	62·0	62·0	61·0					
5								60·5	60·5	60·0	58·6	58·8
6	61·5	64·8	66·3	68·3	68·8	68·0	66·8	64·3	62·0	60·8	58·8	58·0
7	61·0	65·0	69·5	71·5	71·3	70·5	69·0	67·8	66·0	64·3	62·4	62·3
8	63·2	65·8	68·3	70·1	71·2	70·4	68·0	66·5	64·5	63·0	63·0	60·8
9	63·2	67·2	72·0	73·0	74·0	72·1	70·2	67·1	65·6	63·6	62·6	62·3
10	62·0	62·8	63·8	64·4	64·8	64·0	62·3	60·0	58·3	57·2	56·5	56·0
11	58·1	62·0	65·3	66·8	66·7	65·8	64·4					
12								62·1	61·2	60·0	59·3	58·8
13	61·8	66·0	69·2	71·3	72·2	71·3	68·8	66·9	65·0	60·0	60·0	60·8
14	63·5	68·5	71·0	73·0	73·0	72·0	70·8	68·5	66·3	63·7	61·3	60·3
15	61·0	63·7	65·8	66·0	65·8	65·6	64·1	63·0	62·0	60·0	59·0	58·3
16	60·5	63·2	66·3	68·0	67·8	67·0	65·6	64·0	62·0	61·3	59·0	58·5
17	59·3	60·8	61·0	60·0	59·7	58·0	57·2	55·8	53·5	51·6	50·0	49·2
18	51·0	54·8	58·5	59·8	59·5	58·5	57·8					
19								55·0	54·0	53·1	53·0	53·8
20	55·8	60·5	62·0	63·0	63·3	62·0	61·0	58·5	57·5	56·0	56·0	55·0
21	55·0	56·3	58·1	61·0	61·5	61·0	60·8	59·8	59·2	57·7	56·8	57·0
22	58·0	61·0	64·5	65·5	64·3	63·5	63·0	61·3	60·6	59·8	59·0	58·0
23	58·5	59·8	62·0	64·0	64·0	63·1	61·6	60·0	57·8	56·8	56·4	56·0
24	58·2	62·8	64·8	66·6	67·6	66·0	65·5	64·0	63·8	61·8	61·0	60·5
25	59·3	60·8	62·2	64·5	64·5	63·5	61·0					
26								55·2	53·8	53·0	52·2	52·2
27	54·1	57·0	58·7	59·3	59·8	59·5	58·5	57·0	55·0	53·3	52·6	54·2
28	55·3	58·2	59·0	60·0	60·1	60·0	59·0	58·0	57·0	56 0	55·0	55·2
29	56·0	56·8	57·6	57·6	58·7	58·3	58·0	58·0	57·0	57·0	56·0	56·3
30	56·3	59·0	60·3	63·0	63·0	65·0	62·5	61·3	60·2	58·0	57·3	57·0
31	57·1	59·0	61·8	63·5	64·5	63·8	63·0	61·3	59·4	58·0	57·0	57·2

On 24^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 66°·0, 64°·0, 64°·0, 63°·0, 61°·2, 60°·0, and 61°·0 respectively.
On 25^{d} at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 60°·8, 61°·2, 63°·2, 64°·8, and 64°·0 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0^{h}	2^{h}	4^{h}	6^{h}	8^{h}	10^{h}	12^{h}	14^{h}	16^{h}	18^{h}	20^{h}	22^{h}
June	°	°	°	°	°	°	°	°	°	°	°	°
1	60·8	64·6	68·0	69·4	70·0	70·0	67·3					
2								61·2	59·2	57·5	55·8	56·8
3	58·7	61·8	66·7	66·5	68·2	66·3	65·5	63·5	62·8	60·5	59·3	60·[illegible]
4	63·0	66·4	69·2	71·0	71·5	70·3	68·3	66·0	64·0	62·0	60·0	60·[illegible]
5	62·0	66·0	69·2	71·0	71·6	71·0	69·2	68·0	67·0	66·0	65·2	64·[illegible]
6	64·8	65·8	66·4	67·0	67·5	67·0	66·0	64·3	63·0	62·5	62·0	61·8
7	62·5	64·3	65·5	66·4	66·8	66·0	65·3	63·8	62·8	61·7	60·8	61·2
8	63·0	65·6	68·5	70·7	71·5	70·8	69·5					
9								68·0	66·0	64·0	62·6	62·2
10	64·0	67·0	69·0	70·2	71·0	70·8	69·2	68·0	65·2	63·2	61·3	61·[illegible]
11	63·6	67·0	71·0	73·0	74·0	73·3	71·4	69·0	67·0	64·7	63·0	63·[illegible]
12	65·8	70·0	73·3	75·0	76·0	75·0	74·0	72·0	71·0	68·0	68·0	67·3
13	69·0	72·8	77·0	79·0	78·0	77·5	76·0	73·2	70·5	68·3	66·0	65·0
14	66·1	69·0	71·0	72·1	72·8	72·0	71·0	69·0	66·5	64·0	62·5	61·8
15	62·2	64·0	67·0	68·1	68·5	68·0	66·4					
16								63·0	61·0	58·8	57·7	59·0
17	61·8	65·8	68·0	69·2	69·8	69·0	68·2	66·2	64·0	63·2	62·0	61·3
18	62·0	64. 0	66·6	67·7	67·8	66·5	66·0	65·0	63·0	62·0	61·0	60·0
19	59·5	60·2	61·0	61·3	62·0	61·5	61·0	59·0	59·8	59·4	59·0	59·0
20	60·3	62·0	64·0	66·4	67·0	68·0	67·3	66·0	65·0	63·6	62·6	63·0
21	65·8	69·0	72·0	74·0	73·6	72·7	72·0	71·0	69·0	68·0	66·6	66·0
22	67·2	70·4	74·0	75·8	76·6	76·1	74·0					
23								77·2	75·0	74·0	72·8	72·0
24	73·8	77·0	79·1	81·0	81·0	79·1	76·0	73·5	71·5	69·6	68·8	68·0
25	67·0	67·0	67·0	66·5	66·2	63·8	63·5	62·1	61·2	61·0	60·2	60·0
26	61·6	64·0	66·3	67·8	68·3	67·2	66·5	66·0	65·0	65·0	65·0	63·4
27	63·4	65·5	67·0	68·8	68·7	68·0	67·0	65·5	64·0	63·0	62·2	61·7
28	63·0	64·1	66·0	67·3	69·0	68·2	67·0	65·2	63·7	62·0	60·6	62·0
29	65·0	69·5	72·0	75·0	75·0	74·4	73·0					
30								70·0	68·0	66·0	64·2	64·0

On 19^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 61°·5, 60°·0, 59°·5, 59°·7, 59°·0, 58°·7, and 58°·8 respectively.
On 20^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 61°·0, 62°·4, 65°·6, 67°·0, and 68°·0 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of July and Aug., 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
July	°	°	°	°	°	°	°	°	°	°	°	°
1	67·5	70·0	72·1	73·2	73·0	71·6	70·0	68·0	66·3	65·0	64·0	62·6
2	62·5	62·3	65·1	66·2	67·0	67·2	66·6	65·6	63·8	62·6	62·4	62·3
3	63·8	66·1	68·0	68·3	68·0	67·0	66·0	66·0	65·0	65·0	63·0	63·4
4	64·7	65·8	68·0	68·0	68·5	68·5	67·5	66·3	65·0	63·5	63·1	63·0
5	64·4	65·0	66·7	66·8	66·5	66·0	65·6	64·2	63·0	62·8	60·6	61·2
6	65·0	65·3	66·0	66·2	66·2	66·0	65·0					
7								65·0	64·0	62·4	62·0	62·0
8	63·0	66·1	69·0	70·1	71·0	70·5	69·8	68·6	67·3	66·3	65·8	65·6
9	66·6	67·4	69·6	70·8	71·4	71·0	69·3	67·8	65·8	65·0	64·0	65·8
10	67·0	68·5	69·8	71·3	73·0	73·2	71·8	71·0	69·8	68·3	68·0	68·6
11	69·7	70·4	73·2	74·3	74·8	74·0	72·3	71·0	69·0	67·5	66·3	66·6
12	66·7	67·6	68·2	68·5	68·7	67·2	66·5	66·0	65·0	63·5	63·5	64·6
13	66·0	68·0	69·0	68·7	67·6	67·5	66·0					
14								67·0	65·3	64·0	64·0	66·0
15	67·5	69·1	71·4	72·8	73·0	72·2	70·7	68·2	65·2	63·3	61·6	61·7
16	62·8	64·8	65·3	66·3	66·6	66·7	65·6	64·2	63·0	62·0	61·8	62·8
17	63·0	65·5	67·8	69·0	68·8	67·2	66·5	66·5	66·0	66·0	66·0	64·8
18	65·5	67·0	69·0	71·0	70·0	68·8	66·6	65·0	63·0	61·0	59·8	59·7
19	60·8	62·2	63·1	64·0	64·1	64·0	63·3	61·8	60·0	58·8	57·6	58·5
20	60·5	64·0	67·8	70·5	72·0	71·6	69·8					
21								70·0	68·0	66·0	66·0	67·8
22	70·0	72·3	76·2	78·2	80·0	79·2	78·0	75·0	73·0	71·0	69·9	71·5
23	73·9	77·0	78·0	80·5	81·5	79·0	76·0	74·5	72·4	70·9	69·8	70·4
24	72·8	76·0	78·4	79·0	79·1	77·0	75·5	73·4	71·8	70·0	68·9	71·0
25	73·2	77·0	79·8	80·3	81·0	80·0	78·0	76·7	74·2	73·1	72·0	71·0
26	70·9	70·8	71·5	72·1	73·0	71·8	70·8	69·4	68·2	67·0	66·0	68·0
27	68·0	70·2	73·0	74·0	74·8	74·2	73·0					
28								74·5	72·6	71·0	69·9	68·8
29	68·5	69·5	70·8	70·9	71·1	70·1	68·5	67·0	65·0	63·0	61·3	61·0
30	62·0	63·8	65·0	66·3	66·5	66·3	65·8	65·0	64·8	64·8	65·6	66·0
31	67·0	68·0	69·0	69·5	69·1	68·0	66·0	65·0	64·0	64·0	61·5	61·1

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 75°·5, 74°·4, 72°·8, 70°·8, 69°·2, 69°·8, and 72°·0 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 75°·0, 78°·2, 79°·9, 81°·2, and 80°·0, respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Aug.	°	°	°	°	°	°	°	°	°	°	°	°
1	62·0	63·0	63·0	63·5	63·0	63·0	61·8	61·9	60·9	60·5	59·8	60·4
2	63·0	66·0	69·0	69·0	69·1	67·8	67·4	66·0	64·4	63·0	63·0	63·1
3	65·0	66·7	68·0	68·1	67·0	65·0	64·0					
4								66·0	64·0	63·0	62·7	62·9
5	65·2	68·0	69·5	69·1	68·2	67·2	67·0	67·0	67·5	68·0	68·0	68·0
6	68·0	68·4	68·5	70·0	69·9	68·7	67·0	65·0	63·5	62·0	60·2	62·0
7	63·8	65·2	66·0	67·0	67·0	66·0	65·0	63·0	61·4	60·0	60·0	61·0
8	63·5	66·0	67·7	69·0	69·2	67·8	66·0	64·0	62·2	60·4	59·8	60·0
9	62·0	65·0	67·5	69·2	69·5	69·0	67·0	64·0	63·5	61·7	60·0	59·8
10	60·0	64·0	67·0	68·2	69·0	69·0	67·0					
11								64·1	63·9	63·8	63·3	62·8
12	64·5	66·8	68·8	69·0	69·2	69·0	68·4	67·8	66·2	65·0	64·1	63·3
13	64·0	65·2	66·0	66·0	66·0	65·2	64·3	63·5	62·3	61·5	61·3	61·5
14	62·4	63·6	64·0	64·0	63·5	63·5	63·0	63·0	63·0	62·5	61·0	60·8
15	61·0	61·5	62·0	63·0	63·0	63·5	64·0	63·6	63·0	62·5	62·0	62·3
16	63·8	66·6	69·9	71·2	71·8	70·4	69·0	67·8	66·4	65·3	65·6	65·5
17	66·4	67·5	68·7	68·7	68·2	67·0	64·9					
18								60·5	58·8	57·5	56·6	58·0
19	60·2	63·0	65·8	67·3	68·3	68·3	68·0	67·5	66·5	67·5	67·0	65·3
20	65·8	67·4	69·5	73·0	72·0	71·5	69·7	68·0	66·0	64·0	63·0	61·8
21	62·3	63·3	64·8	65·0	65·0	64·4	63·5	62·5	61·5	60·8	60·5	61·0
22	62·2	63·7	64·0	64·4	64·6	63·8	63·8	62·5	62·0	62·0	61·3	61·8
23	63·3	66·6	68·9	69·9	69·8	69·0	67·2	65·5	64·0	63·0	61·8	61·3
24	62·4	65·4	67·3	68·0	68·2	67·2	65·7					
25								62·3	61·3	60·3	59·7	60·5
26	62·0	62·7	63·8	64·2	64·0	63·7	63·0	62·5	61·5	61·5	61·0	60·0
27	60·9	62·3	63·5	65·0	66·0	65·5	64·0	63·0	62·0	61·0	59·5	58·3
28	59·0	61·3	63·8	65·0	65·0	64·9	63·3	61·8	60·0	58·3	56·4	56·9
20	59·0	63·7	67·0	69·0	69·3	68·5	66·8	65·1	63·3	61·4	60·0	59·8
30	61·0	62·6	65·5	67·0	68·0	68·0	67·0	66·0	64·8	63·8	63·0	63·0
31	64·0	68·3	70·8	72·0	72·3	70·8	68·5					

On 30d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 68°·0, 66°·0, 65°·4, 64°·5, 63°·7, 62°·7, and 63°·5 respectively.
On 31d, at 1h, 3h, 5h, 7h, and 9h, the readings were 66°·5, 69°·3, 72°·0, 72°·8, and 71°·5 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of July and Aug., 1844.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
July	°	°	°	°	°	°	°	°	°	°	°	°
1	65·7	69·0	71·2	72·2	72·3	71·2	69·3	68·0	66·2	65·0	64·0	62·8
2	61·8	62·7	64·5	65·2	66·5	67·0	66·0	65·0	63·6	62·4	61·6	61·8
3	63·0	65·4	66·8	68·3	67·8	67·0	66·0	66·0	65·0	65·0	63·5	63·0
4	64·0	65·0	67·5	67·5	67·5	68·0	67·0	66·1	65·0	63·5	63·0	62·0
5	63·8	64·6	66·0	66·2	66·0	65·3	64·2	64·0	63·0	62·7	60·3	60·5
6	62·0	64·5	65·3	66·0	66·1	65·3	65·0					
7								65·0	63·8	62·0	61·8	61·3
8	62·0	65·5	68·0	70·0	70·3	70·0	69·2	68·2	67·2	66·2	65·6	64·7
9	65·3	66·8	69·1	70·2	70·8	70·5	69·0	68·0	65·8	65·0	63·3	63·8
10	65·0	67·0	69·0	71·2	72·3	72·8	71·8	71·0	69·0	68·2	67·5	67·4
11	68·7	70·3	72·8	74·0	74·2	74·0	72·2	71·0	69·0	67·3	66·0	64·0
12	65·5	66·3	67·6	68·0	68·0	66·8	66·5	65·5	64·5	63·0	63·0	63·0
13	64·6	67·0	67·8	67·3	67·0	67·0	65·6					
14								67·0	65·3	64·0	62·0	62·5
15	64·6	67·0	70·0	71·5	72·0	72·0	70·0	68·0	65·3	63·0	61·5	60·7
16	61·4	63·0	64·8	65·3	66·5	66·0	65·1	64·0	62·7	61·6	61·0	60·8
17	62·0	64·0	68·0	68·0	68·1	66·5	66·0	66·0	65·5	65·5	65·5	64·0
18	64·3	66·3	68·0	71·0	69·2	68·0	66·6	65·0	63·0	61·0	59·2	58·8
19	59·2	61·0	62·2	63·1	63·3	63·3	63·0	61·8	60·0	58·5	57·3	57·0
20	58·7	62·6	67·0	70·0	71·8	71·2	69·5					
21								70·0	68·0	66·0	65·0	64·9
22	67·8	71·1	75·3	77·5	79·1	79·0	78·0	75·0	73·0	71·0	69·0	69·1
23	71·5	75·4	77·5	81·0	81·5	78·5	76·0	74·7	72·8	71·0	70·0	70·0
24	71·8	75·8	77·7	78·8	78·9	77·0	75·5	73·9	72·0	70·0	68·8	69·0
25	71·5	76·0	79·0	81·0	80·4	80·0	78·0	77·0	74·4	73·5	72·0	71·0
26	70·8	70·3	71·0	72·0	72·5	71·4	70·6	69·2	68·1	67·0	66·0	65·2
27	67·0	69·4	71·8	73·0	74·0	73·8	72·5					
28								74·2	72·8	71·2	69·9	68·7
29	68·0	68·8	69·9	70·0	70·2	69·7	68·5	67·0	65·0	63·0	61·0	60·1
30	61·0	63·0	64·0	65·4	66·0	66·0	65·2	64·3	64·2	64·3	64·8	65·0
31	66·0	67·0	68·0	68·8	68·8	67·2	66·0	65·0	64·0	64·0	61·0	60·0

On 24d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 75°·5, 74°·7, 73°·2, 71°·0, 69°·0, 68°·0, and 70°·3 respectively.
On 25d, at 1h, 3h, 5h, 7h, and 9h, the readings were 74°·0, 77°·6, 80°·2, 80°·5, and 80°·0 respectively.

Astronomical Day.	Hours of Göttingen Mean Time, Astronomical Reckoning.											
	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Aug.	°	°	°	°	°	°	°	°	°	°	°	°
1	60·1	61·4	63·0	63·5	63·0	63·0	61·8	61·0	60·1	60·0	59·0	58·3
2	61·0	65·0	67·8	68·0	68·2	67·0	67·0	66·0	64·1	63·0	62·0	62·0
3	63·9	65·6	67·0	67·1	66·4	65·0	63·3					
4								65·8	64·0	63·0	62·0	61·2
5	63·9	66·5	68·2	68·1	67·2	66·3	66·5	66·5	67·0	68·0	68·0	67·3
6	67·3	68·0	69·0	70·0	69·7	68·3	67·0	65·0	63·5	62·0	61·0	60·3
7	62·0	64·0	65·0	66·0	66·1	65·5	64·3	62·3	61·2	59·8	59·0	59·7
8	61·8	64·8	67·0	68·2	68·8	67·0	66·0	64·0	62·0	60·2	58·9	58·5
9	60·3	68·9	67·0	68·2	68·8	68·2	67·0	64·0	63·5	61·5	60·0	58·8
10	59·0	63·0	66·0	68·0	68·8	68·1	67·0					
11								64·0	63·2	63·2	63·0	62·3
12	63·6	66·5	68·0	68·3	68·8	68·1	68·0	67·4	66·0	65·0	64·0	62·8
13	63·5	64·5	65·2	65·2	65·2	64·7	63·8	62·5	61·6	61·0	60·8	60·8
14	61·2	62·7	63·2	63·5	63·0	63·0	62·5	62·5	62·5	62·0	60·5	59·8
15	60·0	60·8	61·0	62·5	63·0	63·0	63·2	63·0	62·6	62·1	61·0	61·2
16	62·5	66·5	69·3	71·0	71·1	70·0	68·7	67·5	66·2	65·2	65·0	64·8
17	65·5	66·7	67·8	68·0	67·2	66·5	65·3					
18								60·2	58·5	57·5	56·2	57·0
19	58·7	62·0	65·7	66·8	68·0	67·8	67·5	67·0	66·0	66·0	66·0	64·7
20	65·7	67·5	69·0	72·5	72·0	71·5	69·7	68·0	66·0	64·0	62·7	61·2
21	61·8	62·0	63·7	64·0	64·2	63·6	62·8	62·0	61·3	61·0	60·3	60·0
22	61·1	62·9	63·3	63·7	63·8	63·3	63·1	62·0	61·1	61·3	60·4	60·4
23	61·8	65·3	67·0	69·0	69·0	68·0	67·0	65·5	63·7	63·0	61·5	60·6
24	61·5	64·3	66·5	67·5	67·5	67·0	65·5					
25								62·3	60·8	60·2	59·5	57·2
26	61·5	61·7	63·2	63·5	63·0	63·2	63·0	62·5	61·5	61·5	61·0	59·7
27	59·6	61·5	63·5	65·5	65·5	65·0	63·5	62·8	62·0	60·7	59·0	57·7
28	58·5	60·2	63·0	64·8	65·0	64·3	62·8	61·6	60·0	58·3	55·8	56·0
29	58·0	63·0	67·3	69·5	69·0	68·5	66·6	65·0	63·1	61·2	59·8	59·0
30	60·0	61·8	65·0	67·0	67·2	67·5	66·5	66·0	64·5	64·0	62·7	62·5
31	63·2	67·5	71·5	72·0	72·2	70·8	68·3					

On 30d, at 11h, 13h, 15h, 17h, 19h, 21h, and 23h, the readings were 67°·5, 66°·0, 65°·2, 64°·0, 63°·2, 62°·0, and 62°·3 respectively.
On 31d, at 1h, 3h, 5h, 7h, and 9h, the readings were 65°·5, 69°·5, 72°·0, 72°·9, and 71°·5 respectively.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Sep. and Oct., 1844.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Sep.	°	°	°	°	°	°	°	°	°	°	°	°
1								68·3	65·5	63·5	62·2	62·2
2	63·8	67·5	70·5	72·3	72·3	71·0	69·2	67·8	66·0	64·5	64·8	64·2
3	66·4	70·0	71·5	72·8	72·2	71.3	70·0	69·0	69·0	69·0	69·0	66·5
4	66·8	69·6	71·5	73·0	73·0	72·5	70·3	69·2	68·4	68·4	68·7	67·8
5	68·2	68·8	70·0	71·0	71·2	70·6	69·4	68·0	66·8	65·3	63·7	64·5
6	66·0	68·5	70·8	71·5	71·8	70·5	69·2	68·0	67·0	66·0	65·0	64·8
7	65·3	66·5	68·8	70·4	71·0	70·5	70·0					
8								69·3	67·7	66·5	65·6	63·8
9	63·8	64·7	66·1	67·0	66·7	66·1	65·5	64·5	63·4	63·0	62·6	63·0
10	62·7	63·3	64·0	64·7	65·2	64·7	64·0	63·2	62·0	60·0	58·5	57·5
11	59·7	62·7	66·3	68·2	68·5	68·0	66·5	65·2	63·8	62·2	61·1	60·7
12	61·5	62·7	64·7	66·0	66·2	66·1	66·0	65·5	65·5	65·5	63·5	62·3
13	63·8	66·0	67·0	68·0	68·0	67·5	66·0	64·5	63·2	62·0	61·0	61·5
14	63·0	65·5	67·0	67·8	68·4	67·8	67·0					
15								67·1	66·2	66·0	66·0	66·3
16	67·3	68·8	70·9	71·7	71·0	70·5	69·5	68·8	67·8	67·2	66·3	65·8
17	66·8	67·8	69·5	70·0	69·8	68·7	67·3	66·8	65·8	65·2	63·5	64·0
18	63·8	64·3	64·5	64·3	64·3	63·5	63·0	62·0	60·8	59·8	59·1	59·0
19	59·6	62·5	65·1	66·5	65·2	63·8	62·9	62·0	62·0	61·7	61·1	59·8
20	60·9	62·5	64·5	65·7	66·0	65·1	64. 0	62·5	61·2	61·0	..	57·6
21	59·3	62·5	63·7	64·5	64·0	63·0	61·0					
22								57·2	56·5	56·0	56·3	57·5
23	57·8	60·0	61·5	62·1	62·0	61·5	61·2	60·2	59·1	58·3	57·4	56·6
24	58·3	61·7	64·3	65·2	65·2	64·2	62·0	60·6	58·3	56·6	55·6	54·8
25	56·0	61·0	63·4	65·3	66·2	63·6	62·0	60·0	60·0	62·0	57·0	56·0
26	57·7	61·3	64·0	65·0	65·0	63·0	62·3	60·2	58·2	56·3	54·5	53·0
27	55·0	59·0	64·3	66·7	66·5	65·8	64·2	62·0	61·0	58·0	56·0	55·0
28	57·0	60·0	64·8	66·2	66·2	65·2	63·2					
29								53·0	51·3	49·8	49·0	48·5
30	51·2	54·2	57·6	59·6	60·0	58·8	57·8	56·2	53·2	52·5	51·5	52·1

On 18^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 63°·5, 62°·2, 61°·2, 60°·5, 59°·8, 58°·5, and 59°·8 respectively.
On 19^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 61°·3, 64°·0, 65°·8, 66°·0, and 64°·8 respectively.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Oct.	°	°	°	°	°	°	°	°	°	°	°	°
1	55·2	59·8	63·5	64·5	64·5	64·5	64·0	62·8	63·5	63·8	64·7	64·3
2	63·8	64·2	65·0	65·0	65·0	64·0	63·4	62·0	60·0	59·0	58·0	57·7
3	58·5	60·2	62·8	64·0	64·3	64·5	64·2	63·0	62·0	61·0	59·4	63·8
4	60·0	62·8	64·8	65·9	65·2	63·2	62·0	60·1	60·0	60·0	60·4	60·8
5	61·5	61·8	63·9	64·2	64·3	63·9	62·5					
6								55·8	55·2	54·5	53·5	53·0
7	54·0	56·1	58·7	59·6	59·2	57·5	56·2	54·2	52·3	51·5	50·0	48·6
8	50·2	54·5	58·3	60·1	60·0	59·1	57·0	56·5	56·1	56·0	56·2	55·6
9	55·8	57·5	58·9	59·6	59·8	60·0	61·0	61·3	60·8	60·5	59·8	60·0
10	61·0	62·8	63·8	64·5	63·8	62·8	62·0	61·0	59·8	58·5	57·1	56·5
11	59·0	62 0	65·2	66·2	66·0	64·6	63·1	62·0	61·3	60·0	59·5	58·8
12	60·5	62·5	62·8	63·1	63·0	62·9	62·5					
13								58·5	57·6	56·5	56·2	55·7
14	56·9	57·8	59·5	60·2	60·4	60·3	60·2	59·3	58·8	58·6	58·5	57·1
15	59·0	62·0	64·0	64·7	64·5	62·8	62·1	61·8	61·9	61·6	61·2	60·7
16	59·7	59·8	60·5	60·8	60·1	59·4	58·5	57·2	56·3	54·6	53·5	52·9
17	54·8	57·1	59·8	60·3	60·2	59·8	59·2	58·2	57·3	56·2	55·0	54·0
18	55·7	59·0	61·0	61·8	61·0	59·8	58·0	57·0	56·0	55·0	54·4	53·8
19	54·0	56·2	57·4	58·0	58·0	58·0	57·5					
20								52·5	51·5	52·0	51·8	52·2
21	53·0	54·1	54·8	55·0	55·2	54·8	54·2	54·2	54·2	54·1	54·3	54·3
22	54·3	56·0	57·0	58·2	58·0	56·2	54·9	53·9	..	52·2	51·3	50·7
23	51·5	53·8	56·0	57·0	58·0	59·0	59·0	58·0	58·5	57·8	57·5	58·0
24	56·8	57·5	58·5	59·0	58·5	59·0	59·3	58·8	58·7	58·8	58·5	57·4
25	58·0	58·6	58·4	58·5	57·8	57·0	56·0	55·2	54·2	53·7	53·2	52·9
26	53·5	54·7	55·4	56·0	55·9	55·3	54·7					
27								50·0	49·0	49·0	48·4	47·5
28	48·5	51·2	53·1	54·1	54·5	54·4	53·7	51·8	50·8	49·8	49·0	49·6
29	51·1	53·7	55·5	55·8	55·2	54·7	54·0	53·6	53·0	53·0	52·5	51·7
30	52·0	53·1	54·5	55·2	55·2	55·4	55·0	54·9	55·5	55·2	55·2	54·8
31	56·5	58·3	59·0	59·0	58·6	58·6	57·9	56·8	55·5	54·7	54·0	52·5

On 23^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 59°·0, 59°·0, 58°·5, 57°·3, 57°·5, 57°·3, and 57°·9 respectively.
On 24^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 57°·3, 57°·7, 59°·0, 58°·0, and 58°·9 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Sep. and Oct., 1844.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Sep.	°	°	°	°	°	°	°	°	°	°	°	°
1								68·5	65·8	64·5	61·8	61·8
2	63·0	67·0	71·2	72·4	71·8	70·8	69·3	67·8	66·0	64·5	64·5	63·5
3	65·7	69·3	71·8	73·3	72·2	71·2	70·0	69·0	69·0	69·0	69·0	66·5
4	66·5	69·4	72·0	73·0	73·0	72·5	70·2	69·1	68·3	68·1	68·3	67·5
5	67·5	68·6	70·0	71·0	71·0	70·2	69·4	68·3	67·3	66·0	64·0	64·2
6	65·1	67·5	70·8	71·5	71·3	70·3	69·2	68·0	67·0	66·0	65·0	64·8
7	64·8	65·8	69·0	70·5	70·5	70·5	69·0					
8								69·2	68·0	66·4	65·8	64·2
9	63·7	64·3	65·8	66·8	66·2	66·0	65·3	64·6	63·5	63·0	62·7	63·0
10	62·1	62·8	63·5	64·5	65·3	64·2	63·6	63·0	62·0	60·0	58·5	56·5
11	58·2	61·8	66·8	68·0	68·3	67·5	66·0	65·0	63·2	61·9	60·7	60·3
12	60·8	61·7	64·1	65·5	65·7	65·3	65·5	65·0	65·0	65·0	63·0	61·7
13	63·0	65·1	66·0	68·0	67·5	67·5	65·7	64·2	63·2	62·0	60·7	61·0
14	62·0	65·0	66·5	67·5	68·2	67·5	66·7					
15								66·7	66·2	65·7	65·8	65·7
16	66·5	68·4	70·3	71·0	70·7	70·1	69·3	68·3	67·5	67·0	66·2	65·6
17	66·3	67·3	68·7	70·0	69·3	68·3	67·2	66·5	65·8	65·4	63·6	64·0
18	63·4	63·7	63·7	64·2	63·8	63·0	62·5	62·0	60·7	59·5	58·3	58·0
19	58·7	61·2	64·5	66·0	65·3	63·5	62·8	61·4	61·1	61·0	60·7	59·5
20	59·8	61·5	64·4	65·6	65·7	64·5	63·5	62·0	60·5	60·5	..	56·7
21	58·5	61·5	63·4	63·8	63·5	62·5	60·7					
22								57·3	56·5	56·2	55·8	57·0
23	56·8	59·0	60·7	61·6	61·5	61·0	60·3	59·5	58·8	58·0	57·2	56·3
24	57·7	60·7	64·0	64·5	64·3	63·8	61·8	60·3	58·3	56·5	55·3	54·5
25	55·0	59·0	63·3	64·9	65·1	63·6	62·0	60·5	59·0	62·0	57·0	55·8
26	56·6	60·8	64·0	65·0	65·0	63·0	62·3	60·2	58·3	56·5	54·5	53·0
27	54·0	58·0	63·5	65·6	66·3	65·7	64·0	62·0	61·0	58·0	56·0	55·5
28	56·0	59·0	64·0	65·7	65·0	64·8	63·7					
29								52·8	51·3	49·7	48·9	48·4
30	50·0	53·2	57·3	58·7	59·0	58·5	57·7	55·8	53·3	52·8	51·5	51·5

On 18^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 63°·0, 62°·0, 61°·1, 60°·3, 59°·0, 58°·0, and 58°·7 respectively.
On 19^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 59°·8, 63°·0, 65°·2, 65°·5, and 65°·0 respectively.

Astronomical Day.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
Oct.	°	°	°	°	°	°	°	°	°	°	°	°
1	54·3	58·8	62·8	63·5	64·0	64·0	63·6	61·5	62·0	63·0	63·8	63·6
2	63·2	63·4	65·4	65·0	64·9	64·0	63·3	62·0	60·0	59·0	58·0	57·2
3	58·0	60·1	63·5	64·0	64·3	64·2	63·2	63·0	61·7	61·0	59·4	63·0
4	59·0	62·0	65·8	65·8	65·3	63·0	62·0	60·0	59·5	59·8	60·0	60·0
5	60·5	61·7	64·0	64·0	64·0	63·2	62·0					
6								55·6	55·0	54·2	53·5	52·8
7	53·0	55·2	58·6	59·5	58·5	57·3	56·2	54·2	52·3	51·5	50·0	48·4
8	49·7	53·8	58·0	59·1	59·0	58·0	56·6	56·0	55·6	55·5	55·3	55·4
9	55·6	56·7	58·8	59·0	59·0	59·0	60·4	61·2	60·7	60·3	59·5	59·0
10	60·0	62·0	63·7	63·8	63·5	62·8	61·2	60·5	59·3	58·1	57·0	56·0
11	57·9	61·0	65·3	66·0	65·5	63·8	63·0	61·8	61·0	60·0	58·9	58·7
12	59·5	61·7	62·0	62·7	62·2	62·0	62·0					
13								58·5	57·5	56·5	55·7	55·0
14	55·9	57·0	58·5	59·0	59·5	59·5	59·5	58·8	58·2	58·0	58·0	56·3
15	57·9	61·0	63·3	64·0	64·0	62·5	61·3	61·0	61·0	60·8	60·5	60·4
16	58·7	59·2	59·5	60·0	59·2	58·9	57·8	57·5	56·2	54·3	53·3	52·5
17	54·0	56·2	58·7	59·5	59·0	59·2	58·3	57·8	57·0	56·0	55·0	53·1
18	54·3	57·4	59·5	60·8	60·1	59·0	57·6	56·4	55·2	54·4	53·9	53·5
19	52·8	55·5	56·3	56·9	56·9	57·0	57·0					
20								52·3	51·0	51·5	51·5	51·8
21	52·2	53·3	54·5	54·5	54·3	54·5	54·0	54·0	54·0	53·8	53·9	53·3
22	53·2	54·9	56·0	57·2	57·1	56·0	54·2	53·4	..	52·0	51·0	50·5
23	50·7	53·5	55·1	56·1	57·0	58·1	58·3	58·5	57·8	57·0	57·0	57·0
24	56·6	56·9	58·3	58·5	58·0	58·1	58·3	58·2	58·2	58·0	57·8	56·9
25	58·0	58·1	57·8	58·2	57·2	56·5	55·8	55·0	54·2	53·5	53·0	52·5
26	52·9	54·0	54·8	55·1	55·2	54·6	54·0					
27								49·7	48·9	48·8	48·0	47·3
28	48·3	50·8	52·6	53·7	53·9	53·7	53·2	52·3	50·8	50·0	49·3	49·0
29	50·2	53·0	54·7	55·3	54·5	54·0	53·5	53·4	52·9	52·8	52·5	51·3
30	51·5	52·4	53·8	54·4	54·5	54·7	54·0	54·0	54·8	54·6	54·6	54·3
31	54·5	57·8	58·5	58·5	58·5	58·0	57·8	56·7	55·5	54·5	54·0	52·5

On 23^d, at 11^h, 13^h, 15^h, 17^h, 19^h, 21^h, and 23^h, the readings were 58°1·, 58°·0, 58°·0, 57°·0, 57°·0, 56°·9, and 57°·0 respectively.
On 24^d, at 1^h, 3^h, 5^h, 7^h, and 9^h, the readings were 56°·5, 57°·3, 58°·5, 58°·2, and 58°·1 respectively.

At Oct. 22^d. 16^h, the observation was omitted: it was taken at 17^h, and the reading was for the Horizontal Force Magnet 53°·0; for the Vertical 52°·4.

Readings of the Thermometer placed within the Box of the Horizontal Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Nov. and Dec., 1844.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Nov.	°	°	°	°	°	°	°	°	°	°	°	°
1	53·0	54·2	55·5	55·2	54·2	54·2	54·5	54·5	54·0	53·0	52·5	51·0
2	50·4	50·5	51·5	53·0	53·0	53·0	52·5					
3								43·0	43·0	44·5	46·2	47·2
4	48·7	49·8	50·2	50·6	51·5	51·3	51·0	49·7	48·5	48·0	47·5	47·0
5	48·2	49·5	51·3	51·1	50·8	50·5	49·5	49·0	49·0	49·0	49·0	48·1
6	48·2	49·0	51·0	51·2	51·2	51·0	50·5	50·0	49·0	48·5	48·0	47·4
7	47·8	49·0	52·5	53·0	53·7	55·0	54·2	54·0	54·0	54·3	54·6	54·5
8	54·7	56·0	56·8	57·1	57·3	57·3	57·2	56·3	55·8	55·2	54·5	53·6
9	53·4	54·3	55·7	55·8	55·0	53·6	52·1					
10								45·5	45·5	45·2	45·2	45·1
11	46·1	46·6	48·3	48·5	48·3	47·7	47·2	47·5	48·4	49·5	50·5	51·6
12	51·8	53·5	54·3	55·0	56·0	56·5	56·8	57·5	57·5	57·2	57·5	57·4
13	58·0	58·5	59·0	59·2	58·5	57·0	56·5	56·0	56·0	56·0	56·0	53·0
14	53·0	53·5	56·5	56·0	56·3	57·0	57·6	57·2	57·0	57·0	56·3	56·4
15	57·0	57·9	59·0	59·0	59·0	59·0	58·8	59·0	59·3	59·0	59·0	58·8
16	58·7	59·5	60·0	59·8	59·8	59·2	58·7					
17								54·7	54·7	54·5	54·5	54·6
18	55·1	56·0	57·2	57·5	56·8	56·7	56·4	56·4	56·2	56·7	55·2	54·8
19	55·1	56·4	58·0	57·8	57·3	57·1	56·5	56·5	56·6	56·5	56·5	56·3
20	55·8	56·0	55·7	56·0	56·0	56·0	55·7	55·2	54·2	52·8	52·0	49·9
21	49·5	49·8	50·8	50·7	49·7	48·8	47·0	46·0	45·0	44·2	43·7	44·2
22	45·0	46·1	48·0	49·1	50·0	49·7	49·8	51·0	51·3	50·8	50·5	50·8
23	49·8	50·8	50·0	49·7	48·9	48·4	48·2					
24								43·2	43·4	43·3	42·8	43·0
25	44·0	45·0	47·7	48·3	48·3	48·2	48·3	48·8	48·3	47·5	46·5	45·0
26	45·3	47·3	50·0	50·2	50·2	48·3	46·5	45·3	43·6	42·0	40·5	40·0
27	41·0	42·8	45·1	46·3	46·7	46·7	46·3	45·8	44·8	43·3	42·2	41·8
28	42·1	43·5	46·4	48·2	48·2	49·2	50·0	49·7	49·0	49·1	48·3	47·4
29	47·0	46·6	47·7	48·0	48·0	48·0	48·0	48·8	49·6	50·8	51·6	52·0
30	51·8	52·0	50·9	51·8	51·8	51·3	49·7					

On 29^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 48°·0, 48°·5, 49°·5, 50°·5, 51°·2, 51°·6, and 52°·0, respectively.
On 30^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 51°·3, 51°·0, 51°·0, 52°·0, and 51°·8, respectively.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Dec.	°	°	°	°	°	°	°	°	°	°	°	°
1								40·0	40·0	40·0	40·0	40·5
2	41·0	42·0	43·5	44·5	44·6	44·5	45·3	45·3	44·2	43·8	42·9	42·1
3	43·0	43·0	44·8	45·5	44·8	44·2	44·1	44·1	43·9	43·7	42·8	42·2
4	42·0	42·4	44·0	44·2	43·8	43·5	42·0	41·1	39·1	38·5	37·5	36·5
5	36·8	38·3	41·5	43·0	42·0	40·0	39·8	37·6	38·0	36·5	34·8	33·2
6	33·8	35·5	38·8	40·5	41·0	40·0	40·0	38·5	36·8	34·8	33·3	32·5
7	32·9	33·3	35·4	36·2	36·0	37·5	37·6					
8								31·0	31·0	31·0	31·2	31·7
9	32·5	33·4	34·8	36·5	37·8	38·0	38·0	37·7	37·0	36·5	36·7	36·8
10	37·6	37·6	38·5	39·0	39·4	40·0	39·5	39·2	39·2	39·0	38·7	37·1
11	37·2	36·6	38·5	39·0	39·5	39·8	38·2	37·3	36·1	35·1	34·5	35·3
12	35·7	35·8	36·0	36·3	36·2	36·3	36·8	36·3	35·5	34·5	33·3	33·5
13	33·4	33·9	33·3	33·2	33·0	33·2	33·7	33·6	33·5	33·5	32·8	33·3
14	34·0	33·8	35·2	37·0	38·0	38·0	36·7					
15								37·0	37·2	37·5	37·9	39·0
16	40·7	43·0	44·0	44·0	44·3	45·1	45·8	45·8	46·5	47·4	47·8	47·2
17	46·8	46·8	48·2	48·2	47·6	47·5	47·0	47·0	46·6	46·0	45·8	46·0
18	46·5	46·4	47·0	48·2	49·0	49·5	50·0	51·2	52·5	53·2	53·8	54·0
19	53·0	53·5	52·4	53·0	52·2	51·8	51·0	50·1	48·1	46·1	44·1	43·8
20	43·3	43·0	43·3	43·4	42·5	41·5	41·3	40·6	41·0	41·5	41·8	40·9
21	40·2	39·8	40·2	39·7	39·8	40·2	40·0					
22								34·0	34·0	34·0	34·0	34·4
23	35·2	40·6	37·2	39·0	39·4	40·4	40·2	39·8	38·7	38·7	37·8	37·9
24	39·1	41·2	42·8	43·2	43·2	42·3	42·0					
25		Chris	tmas	Day.				35·0	35·0	35·9	36·5	38·0
26	42·1	42·8	43·0	44·1	45·2	44·7	43·0	42·2	40·8	39·5	38·2	38·3
27	40·8	43·7	44·0	43·5	43·5	43·2	42·8	42·3	42·3	42·5	42·5	42·0
28	43·6	46·3	49·2	50·2	50·2	50·4	50·0					
29								47·0	46·8	47·8	48·4	49·3
30	51·8	51·0	50·0	48·9	48·0	47·0	47·8	47·4	46·1	45·0	44·0	44·3
31	44·2	44·8	46·0	47·2	47·8	48·2	48·7	48·3	47·3	46·7	45·8	45·5

On 18^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 49°·5, 50°·6, 51°·5, 52°·8, 53°·8, 53°·7, and 54°·5 respectively.
On 19^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 52°·8, 52°·5, 53°·2, 52°·3, and 52°·2 respectively.

Readings of the Thermometer placed within the Box of the Vertical Force Magnet, at every Even Hour of Göttingen Mean Time, during the Months of Nov. and Dec., 1844.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Nov.	°	°	°	°	°	°	°	°	°	°	°	°
1	52·5	53·5	54·6	54·5	54·0	53·8	54·0	54·0	53·5	52·5	52·0	50·7
2	50·3	50·1	50·9	52·5	53·0	53·0	52·0					
3								42·9	42·9	44·0	45·8	47·0
4	47·8	49·2	49·6	50·0	51·3	50·7	50·8	49·7	48·4	48·3	47·5	46·6
5	47·6	48·9	50·8	50·8	50·6	50·0	49·2	48·8	49·0	49·0	49·0	47·8
6	47·8	48·6	50·5	51·0	51·0	50·6	50·0	49·5	48·5	48·0	47·5	47·0
7	47·4	48·4	52·0	52·5	53·0	54·0	53·5	53·3	53·5	53·7	54·0	54·2
8	54·2	55·7	56·1	56·2	56·6	56·8	56·8	56·2	55·5	54·4	54·0	53·1
9	52·9	53·7	55·2	55·5	54·5	53·3	52·1					
10								45·5	45·5	45·2	45·2	44·8
11	45·6	46·1	48·2	48·3	48·0	47·2	46·9	47·0	47·8	48·9	50·0	51·0
12	51·6	52·7	53·6	54·2	55·0	55·8	56·4	56·8	56·8	56·8	56·9	56·9
13	57·2	57·9	58·5	58·5	58·0	56·5	56·0	55·5	55·5	55·5	55·5	52·5
14	52·5	53·0	56·0	55·5	55·8	56·7	57·0	56·8	57·0	57·0	56·1	56·0
15	56·3	57·0	58·0	58·2	58·2	58·2	58·0	58·0	58·4	58·4	58·2	58·7
16	58·2	58·8	59·0	59·0	59·0	58·9	58·3					
17								53·8	54·0	54·2	54·0	54·0
18	54·5	55·0	56·8	57·0	56·3	56·0	56·0	56·0	56·0	55·4	54·8	54·0
19	54·6	55·9	57·0	57·1	56·8	56·7	55·9	55·9	56·0	56·0	55·9	55·7
20	55·3	55·0	55·0	55·1	55·5	55·0	55·5	54·7	53·8	52·5	51·8	49·8
21	49·1	49·2	50·5	50·3	49·3	48·5	47·0	46·0	45·0	44·2	43·7	44·0
22	44·8	45·9	48·0	49·0	49·0	49·5	49·6	50·0	50·6	50·0	50·0	49·8
23	49·7	50·8	49·9	49·5	48·9	48·1	48·0					
24								42·8	43·0	43·0	43·0	43·0
25	43·9	45·0	47·8	48·0	48·2	48·3	48·0	48·6	48·0	47·5	46·5	44·8
26	45·0	47·0	50·0	50·5	50·2	48·2	46·5	45·0	43·9	42·4	41·0	40·2
27	41·2	42·7	45·1	46·1	46·5	46·3	46·3	45·9	44·8	43·3	42·0	41·8
28	42·0	43·1	46·3	47·8	48·2	49·0	49·5	49·3	48·8	49·0	48·2	47·2
29	47·0	46·6	47·5	48·0	48·0	47·0	47·0	48·6	49·2	50·1	51·3	51·5
30	51·2	51·0	50·4	51·5	51·6	51·0	49·5					

On 29^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 47°·0, 48°·3, 49°·3, 50°·0, 51°·0, 51°·3, and 51°·5, respectively.
On 30^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 51°·0, 50°·4, 50°·7, 51°·5, and 51°·2, respectively.

Astronomical Day.	0h	2h	4h	6h	8h	10h	12h	14h	16h	18h	20h	22h
Dec.	°	°	°	°	°	°	°	°	°	°	°	°
1								40·2	40·0	40·0	40·0	40·5
2	41·2	41·8	43·4	44·2	44·2	44·2	45·5	45·3	44·2	43·8	42·8	42·1
3	42·5	42·8	44·8	45·5	44·6	43·8	44·1	44·1	43·8	43·6	42·8	42·0
4	42·0	42·2	44·0	44·3	43·8	43·5	42·0	41·1	39·1	38·5	37·2	36·8
5	37·3	39·0	42·0	43·0	42·3	40·8	40·5	39·0	38·0	37·0	35·5	34·0
6	34·0	35·9	39·5	41·2	41·5	41·0	40·2	38·4	37·0	35·3	34·0	33·0
7	33·5	33·9	36·0	37·2	37·0	38·0	37·9					
8								32·0	31·9	31·9	32·0	32·8
9	33·0	34·0	35·4	36·9	38·3	38·4	38·6	38·0	37·5	36·8	37·0	36·9
10	37·9	37·9	39·3	39·4	39·7	40·3	39·0	39·0	39·0	39·0	38·5	37·8
11	37·5	37·0	38·0	38·5	39·0	40·0	38·5	37·8	36·6	35·8	35·0	36·2
12	36·5	36·3	37·0	37·0	36·9	37·0	37·6	36·7	36·3	35·3	34·0	34·1
13	34·2	33·9	34·2	34·0	34·3	34·0	34·1	34·1	34·0	34·0	33·7	34·2
14	34·5	34·5	36·0	37·2	38·0	38·0	36·8					
15								37·4	37·8	38·0	38·1	40·0
16	41·0	43·2	44·0	44·0	44·5	45·5	46·2	46·3	46·2	47·5	47·7	47·2
17	46·7	46·8	48·0	48·5	48·0	47·4	47·0	47·0	46·6	46·0	46·0	46·0
18	46·4	46·2	47·0	48·2	49·0	49·3	49·5	50·9	52·0	53·3	53·5	53·5
19	52·8	53·0	52·1	52·5	52·5	52·0	50·9	49·9	48·1	46·3	44·6	44·0
20	43·6	43·7	44·0	44·0	43·0	42·0	42·5	41·5	41·8	42·0	42·3	41·1
21	40·9	40·2	41·3	40·2	40·8	41·0	40·8					
22								35·3	35·0	35·0	35·0	35·0
23	35·6	41·1	38·0	39·8	40·2	40·3	40·0	40·0	39·0	39·0	38·5	38·2
24	39·5	41·6	43·2	43·3	43·0	42·4	42·1					
25			Chris	tmas	Day.			36·0	36·1	36·6	37·0	38·5
26	41·5											
27												
28												
29												
30												
31												

On 18^{d}, at 11^{h}, 13^{h}, 15^{h}, 17^{h}, 19^{h}, 21^{h}, and 23^{h}, the readings were 49°·3, 50°·2, 51°·1, 52°·5, 53°·5, 53°·5, and 54°·3 respectively.
On 19^{d}, at 1^{h}, 3^{h}, 5^{h}, 7^{h}, and 9^{h}, the readings were 52°·5, 52°·3, 53°·0, 52°·5, and 52°·4 respectively.

ROYAL OBSERVATORY, GREENWICH.

DAILY OBSERVATIONS

OF

MAGNETOMETERS.

1844.

Daily Observations from January 0 to 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Jan. 0. 14. 0	23. 19. 18	0·036772	0·039814	P
16. 0	20. 6	039023	039968	
18. 0	19. 44	039687	039829	
20. 0	20. 13	040285	039823	P
22. 0	19. 19	040806	039881	D
Jan. 1. 0. 0	23. 22. 0	0·039672	0·039739	D
1. 50	23. 53	040558	039977	
2. 0	23. 43	040734	039977	
2. 10	23. 12	040801	039990	D
4. 0	22. 26	037845	040309	P
6. 0	20. 41	038174	040085	
8. 0	18. 49	037340	040042	
10. 0	14. 44	037369	040173	P
12. 0	19. 48	036864	039825	D
14. 0	20. 4	036937	039856	
16. 0	20. 28	037467	039823	
18. 0	20. 3	037990	039860	
20. 0	19. 41	037818	039982	D
22. 0	20. 24	038482	040046	J H
Jan. 2. 0. 0	23. 23. 12	0·037180	0·040164	J H
1. 50	25. 31	036387	040335	
2. 0	25. 23	036165	040528	
2. 10	25. 12	036209	040470	J H
4. 0	24. 6	036066	040283	D
6. 0	21. 35	037557	040322	
8. 0	20. 2	035469	040393	
10. 0	14. 34	036871	040141	D
12. 0	17. 42	036491	039807	J H
14. 0	20. 42	035824	039593	
16. 0	19. 22	035835	039440	
18. 0	17. 29	036326	039226	
20. 0	18. 16	036659	039007	J H
22. 0	20. 38	036030	039044	P
Jan. 3. 0. 0	23. 22. 20	0·034990	0·039023	P
1. 50	23. 46	036185	039413	
2. 0	23. 22	036450	039413	
2. 10	23. 9	036229	039413	P
4. 0	20. 53	036923	039846	J H
6. 0	19. 11	036814	039613	
8. 0	18. 51	037220	039523	
10. 0	18. 50	035995	039451	J H
12. 0	18. 41	036199	039541	P
Jan. 3. 14. 0	23. 18. 37	0·036114	0·039514	P
16. 0	18. 58	036386	039415	
18. 0	19. 21	037000	039340	
20. 0	18. 38	037527	039329	P
22. 0	19. 40	038048	039636	D
Jan. 4. 0. 0	23. 21. 30	0·038657	0·039694	D
1. 50	23. 30	039621	039916	
2. 0	23. 11	039886	039916	
2. 10	23. 29	040064	039916	D
4. 0	20. 33	040182	039957	P
6. 0	19. 7	039909	039848	
8. 0	19. 6	039637	039858	
10. 0	18. 43	038308	039916	P
12. 0	17. 58	039285	039[illegible]69	D
14. 0	17. 58	037327	039689	
16. 0	21. 54	036881	039544	
18. 0	17. 23	038719	039288	
20. 0	18. 45	039449	039253	D
22. 0	22. 38	039198	039581	J H
Jan. 5. 0. 0	23. 23. 8	0·038648	0·039631	J H
1. 50	23. 40	038379	039710	
2. 0	23. 34	038154	039710	
2. 10	23. 49	037933	039721	J H
4. 0	22. 17	038147	040101	D
6. 0	17. 41	038093	039996	
8. 0	13. 5	037030	039886	
10. 0	11. 51	038348	039741	D
12. 0	19. 7	037934	039456	J H
14. 0	19. 59	037438	039525	
16. 0	18. 58	037287	039348	
18. 0	19. 12	037430	039430	
20. 0	21. 38	037586	039346	J H
22. 0	21. 57	037201	039272	P
Jan. 6. 0. 0	23. 24. 17	0·036298	0·039425	P
1. 50	23. 15	037541	039620	P
2. 0	23. 6	037741	039660	D
2. 10	23. 1	038427	039689	P
4. 0	18. 18	036604	039909	J H
6. 0	21. 41	037882	039677	
8. 0	20. 4	036899	039472	
10. 0	14. 55	036450	039143	J H
12. 0	19. 16	036736	039311	P

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, 168°.
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, $25^s·2$.

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

Jan. 1^d. Within the preceding week every part of the suspension apparatus of the magnets was examined; the magnets were minutely examined, and found to be in perfectly good order, and observations were made for their adjustments.

DECLINATION MAGNET.

Jan. $5^d. 10^h$. The western declination was the smallest in the month.
Jan. 5^d. Betwen 10^h and 12^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.

Jan. 0^d, between 14^h and 16^h; on 1^d, between $2^h. 10^m$ and 4^h; and on 2^d, between 6^h and 8^h, considerable changes occurred.
Jan. $0^d. 22^h$. The force at this time was the greatest in the month.
Jan. 1^d. The mean daily force was the greatest in the month.

VERTICAL FORCE MAGNET.

Jan. $2^d. 2^h$. The force at this time was the greatest in the month.
Jan. 2^d. The mean daily force was the greatest in the month.

Daily Observations from January 7 to 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 7. 14. 0	23. 18. 35	0·035723	0·038772	P	Jan. 10. 14. 0	23. 16. 36	0·037031	0·039723	G
16. 0	20. 0	036209	038960		16. 0	18. 10	037961	039457	
18. 0	20. 36	036549	038870		18. 0	19. 4	035629	039092	
20. 0	18. 31	036903	038812	P	20. 0	20. 1	034971	038944	G
22. 0	19. 11	037346	039044	D	22. 0	20. 28	035738	039171	P
Jan. 8. 0. 0	23. 22. 9	0·036593	0·038951	D	Jan. 11. 0. 0	23. 22. 9	0·034886	0·039199	P
1. 50	24. 5	037199	039444		1. 50	24. 28	034188	039234	
2. 0	23. 16	036778	039369		2. 0	23. 44	035915	039229	
2. 10	23. 6	036601	039340	D	2. 10	22. 53	036358	039229	P
4. 0	22. 47	036795	039472	P	4. 0	21. 29	036547	039264	G
6. 0	17. 10	038617	039609		6. 0	20. 5	036784	039452	
8. 0	17. 14	038139	039525		8. 0	19. 0	036407	039470	
10. 0	16. 59	036462	039525	P	10. 0	19. 1	036341	039394	G
12. 0	14. 50	037879	039234	D	12. 0	16. 6	035891	039324	P
14. 0	18. 3	037869	039304		14. 0	14. 52	035237	039452	
16. 0	20. 26	036607	039333		16. 0	17. 14	035466	039188	
18. 0	17. 44	037259	039310		18. 0	18. 0	036181	039214	
20. 0	18. 19	037332	039087	D	20. 0	18. 41	035841	039123	P
22. 0	18. 40	036182	039060	J H	22. 0	19. 46	036709	039252	D
Jan. 9. 0. 0	23. 21. 47	0·035899	0·038849	J H	Jan. 12. 0. 0	23. 22. 5	0·036255	0·039113	D
1. 50	21. 36	035420	039081		1. 50	22. 29	036488	039281	
2. 0	21. 27	037192	039198		2. 0	22. 13	036665	039286	
2. 10	21. 22	036328	039139	J H	2. 10	21. 56	036532	039356	D
4. 0	20. 48	037015	039256	D	4. 0	19. 45	036309	039435	P
6. 0	17. 59	035952	039424		6. 0	19. 3	037813	039493	P
8. 0	16. 30	038158	039309		8. 0	18. 36	037672	039557	D
10. 0	17. 58	036291	039169	D	10. 0	12. 16	038757	039487	J H
12. 0	16. 42	035055	039166	J H	12. 0	18. 13	037805	039460	D
14. 0	17. 9	035065	039012		14. 0	18. 54	036437	039443	
16. 0	17. 22	035040	038806		16. 0	17. 39	036463	039282	
18. 0	18. 14	034895	038841		18. 0	18. 15	036288	039226	
20. 0	20. 0	034844	038893	J H	20. 0	18. 36	036511	039406	D
22. 0	20. 5	035646	039312	D	22. 0	21. 1	037203	039303	J H
Jan. 10. 0. 0	23. 22. 17	0·037391	0·039372	P	Jan. 13. 0. 0	23. 22. 53	0·035919	0·039139	J H
1. 50	21. 26	039406	039768		1. 50	21. 21	036188	039255	
2. 0	21. 12	038676	039757		2. 0	21. 13	035922	039313	
2. 10	21. 32	038787	039757	P	2. 10	20. 39	036410	039324	J H
4. 0	23. 19	034823	040163	J H	4. 0	19. 52	036639	039461	D
6. 0	19. 19	034721	039605		6. 0	18. 22	037799	039483	
8. 0	20. 44	037798	039535	J H	8. 0	18. 10	037973	039510	
10. 0	17. 42	037083	039588	P	10. 0	17. 18	037352	039446	D
12. 0	14. 46	036883	039372	G	12. 0	18. 19	036731	039252	J 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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.

Jan. 12^d. The mean western declination was the smallest in the month.
Jan. 12^d. Remarkable changes occurred.

HORIZONTAL FORCE MAGNET.

Jan. 8^d, 9^d, and 10^d. Remarkable changes occurred.
Jan. $10^d. 4^h$. At this time the magnet had so large a swing that the observation could not be taken, visitors being in the Observatory at the time: at eight minutes afterwards the swing was checked, and the observation was taken; and the result has been used in subsequent calculations, as though the observation had been taken at 4^h.
Jan. 11^d. Between $1^h. 50^m$ and 2^h a considerable change occurred.
Jan. 12^d and 13^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from January 14 to 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 14. 14. 0	23. 17. 41	0 ·035641	0 ·039113	J H	Jan. 17. 14. 0	23. 17. 13	0 ·037163	0 ·039339	G
16. 0	19. 31	035335	038562		16. 0	17. 20	036750	039098	
18. 0	17. 47	035667	038725		18. 0	17. 20	036971	039191	
20. 0	18. 7	036054	038548	J H	20. 0	17. 28	037554	039071	G
22. 0	20. 25	036516	039039	P	22. 0	18. 42	038651	039261	J H
Jan. 15. 0. 0	23. 23. 28	0 ·036035	0 ·038865	P	Jan. 18. 0. 0	23. 21. 30	0 ·036794	0 ·039277	J H
1. 50	22. 46	036847	039129		1. 50	24. 13	036453	039391	
2. 0	22. 11	036847	039129		2. 0	24. 11	036631	039345	
2. 10	22. 10	036936	039129	P	2. 10	24. 17	036675	039287	J H
4. 0	20. 19	038858	039183	J H	4. 0	25. 6	036322	039499	P
6. 0	19. 33	038216	039134		6. 0	17. 48	035680	039454	G
8. 0	19. 11	038878	039184		8. 0	18. 22	037141	039280	
10. 0	18. 48	037929	039131	J H	10. 0	18. 1	037141	039104	G
12. 0	15. 36	036642	039061	P	12. 0	18. 8	035643	039287	J H
14. 0	16. 52	035331	038870		14. 0	18. 9	035503	039196	
16. 0	17. 24	035817	038722		16. 0	18. 15	035490	039112	
18. 0	18. 33	036150	038749		18. 0	18. 28	035997	039182	
20. 0	17. 40	035912	038595	P	20. 0	17. 52	035772	039029	J H
22. 0	18. 39	035765	038948	D	22. 0	18. 42	035119	039127	P
Jan. 16. 0. 0	23. 23. 30	0 ·035057	0 ·039058	D	Jan. 19. 0. 0	23. 20. 52	0 ·035074	0 ·039145	P
1. 50	24. 27	036466	039092		1. 50	23. 0	037373	039224	
2. 0	24. 19	036599	039097		2. 0	23. 3	037595	039282	
2. 10	23. 51	036622	039092	D	2. 10	22. 56	038037	039282	P
4. 0	20. 44	037512	039155	P	4. 0	20. 38	037395	039359	J H
6. 0	19. 31	036932	038975	J H	6. 0	18. 4	035997	039324	
8. 0	18. 28	039028	039368	D	8. 0	17. 16	036433	039153	
10. 0	17. 14	037182	039203	J H	10. 0	17. 7	035879	039229	J H
12. 0	17. 47	038265	039460	D	12. 0	17. 36	036068	039208	P
14. 0	18. 33	036158	039212		14. 0	16. 35	035193	039266	
16. 0	19. 3	035934	039081		16. 0	17. 12	035355	039182	
18. 0	18. 22	036353	039047		18. 0	17. 1	035701	039076	
20. 0	17. 50	037642	039081	D	20. 0	17. 16	035704	038971	P
22. 0	18. 34	037664	039192	J H	22. 0	21. 8	036682	039036	D
Jan. 17. 0. 0	23. 23. 40	0 ·035910	0 ·039081	J H	Jan. 20. 0. 0	23. 22. 13	0 ·035679	0 ·038950	J H
1. 50	26. 2	037017	039076		1. 50	21. 26	036056	038950	D
2. 0	25. 42	036796	039029		2. 0	21. 13	035945	038968	
2. 10	24. 54	036796	039180	J H	2. 10	21. 10	036011	039002	D
4. 0	21. 13	037145	039379	D	4. 0	19. 46	037067	039150	P
6. 0	18. 33	037838	039501		6. 0	18. 27	036505	039293	
8. 0	17. 37	036968	039388		8. 0	18. 14	035398	039119	P
10. 0	17. 16	037569	039484	D	10. 0	17. 42	034764	039087	J H
12. 0	17. 17	037765	039281	G	12. 0	15. 55	034383	038950	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, 168°.
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, 25ˢ·2.

DECLINATION MAGNET.
Jan. 18ᵈ. Between 4ʰ and 6ʰ a considerable change occurred.

HORIZONTAL FORCE MAGNET.
Jan. 16ᵈ. Considerable changes occurred.
Jan. 19ᵈ. Between 0ʰ and 1ʰ. 50ᵐ a considerable change occurred.

VERTICAL FORCE MAGNET.
Jan. 14ᵈ. Between 14ʰ and 16ʰ a considerable change occurred.
Jan. 19ᵈ. The daily range was the least in the month.

Daily Observations from January 21 to 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 21. 14. 0	23. 16. 53	0 ·033990	0 ·039016	D	Jan. 24. 14. 0	23. 16. 38	0 ·035030	0 ·039203	D
16. 0	17. 41	034517	039144		16. 0	14. 21	034793	038341	J H
18. 0	18. 39	034694	039144		18. 0	20. 26	036053	038431	J H
20. 0	18. 3	034827	039098	D	20. 0	24. 54	034411	038446	P
22. 0	19. 29	036549	039023	J H	22. 0	24. 43	033635	038817	G
Jan. 22. 0. 0	23. 19. 56	0 ·036885	0 ·039021	J H	Jan. 25. 0. 0	23. 26. 52	0 ·033147	0 ·039148	D
1. 50	20. 20	037407	039049		1. 50	27. 57	033014	039525	P
2. 0	20. 5	037407	038991		2. 0	27. 54	033004	039551	D
2. 10	21. 25	037539	039049	J H	2. 10	26. 30	032977	039622	D
4. 0	21. 16	038852	039414	D	4. 0	22. 14	033933	039859	P
6. 0	23. 20	038059	039591		6. 0	18. 36	034359	039652	G
8. 0	20. 46	038326	039614		8. 0	17. 1	035080	039444	J H
10. 0	19. 4	038706	039483	D	10. 0	16. 51	034971	039282	J H
12. 0	18. 53	035348	039109	J H	12. 0	17. 42	034614	039368	D
14. 0	18. 2	035803	038959		14. 0	17. 28	034823	039234	
16. 0	17. 35	035752	038979		16. 0	18. 27	034351	039155	
18. 0	17. 30	036129	038849		18. 0	18. 49	034750	039306	
20. 0	19. 32	036070	038718	J H	20. 0	18. 1	034867	039060	D
22. 0	20. 35	036402	038817	P	22. 0	20. 5	034347	039129	J H
Jan. 23. 0. 0	23. 21. 23	0 ·035406	0 ·038904	P	Jan. 26. 0. 0	23. 21. 39	0 ·034789	0 ·039029	J H
1. 50	22. 2	036549	039198		1. 50	21. 44	034611	038982	
2. 0	22. 6	036727	039198		2. 0	21. 44	034677	038988	
2. 10	21. 46	036682	039139	P	2. 10	21. 40	034655	038976	J H
4. 0	20. 54	037054	039382	J H	4. 0	19. 42	037606	039309	D
6. 0	21. 42	038344	039351		6. 0	19. 2	037146	039529	
8. 0	21. 25	036675	039372		8. 0	19. 2	036168	039520	
10. 0	18. 38	035672	039191	J H	10. 0	19. 7	035034	039287	D
12. 0	18. 14	035578	039176	P	12. 0	16. 26	034898	039164	J H
14. 0	17. 51	035244	039165		14. 0	18. 16	034430	039005	
16. 0	18. 7	035960	038918		16. 0	20. 4	035112	038983	
18. 0	18. 15	035541	038933		18. 0	17. 56	035392	038770	
20. 0	20. 19	034807	038939	P	20. 0	18. 17	035133	038707	J H
22. 0	20. 12	034789	038988	J H	22. 0	20. 23	034591	038985	P
Jan. 24. 0. 0	23. 20. 12	0 ·034683	0 ·039046	J H	Jan. 27. 0. 0	23. 22. 12	0 ·034461	0 ·039113	P
1. 50	20. 50	035162	039115		1. 50	22. 27	034744	039171	
2. 0	20. 42	035162	039086		2. 0	22. 25	034921	039113	
2. 10	20. 32	035029	039081	J H	2. 10	22. 12	034921	039055	P
4. 0	19. 43	035296	039377	P	4. 0	19. 9	034770	039226	J H
6. 0	17. 50	035373	039261		6. 0	18. 15	035126	039504	
8. 0	17. 12	035517	039261	P	8. 0	18. 6	034068	039582	
10. 0	16. 19	035732	039346	G	10. 0	18. 0	034647	039549	J H
12. 0	16. 48	035619	039185	G	12. 0	18. 39	034809	039351	P

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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
Jan. 24^d. Between 16^h and 18^h a considerable change occurred.
Jan. 24^d and 25^d. The difference between the mean western declinations on these days was greater than between any other days in the month.
Jan. 25^d. The mean western declination was the greatest in the month, and of single observations that at $1^h. 50^m$ was the greatest, except during the term, at $1^h. 15^m$ and $1^h. 20^m$.
Jan. 25^d. The daily range was the greatest in the month.
Jan. 27^d. The daily range was the least in the month.
HORIZONTAL FORCE MAGNET.
Jan. 22^d. The daily range was the greatest in the month.
Jan. 22^d, between 10^h and 12^h, and Jan. 26^d, between $2^h. 10^m$ and 4^h, considerable changes occurred.
Jan. 24^d. The daily range was the least in the month.
Jan. 27^d. Considerable changes occurred.
VERTICAL FORCE MAGNET.
Jan. 24^d and 25^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from January 28 to February 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 28. 14. 0	23. 17. 36	0·035040	0·038855	P	Jan. 31. 14. 0	23. 18. 19	0·034062	0·036648	G
16. 0	20. 4	035237	038844		16. 0	17. 52	034642	036389	
18. 0	17. 24	035324	038881		18. 0	16. 16	035098	036297	
20. 0	17. 9	035194	038796	P	20. 0	17. 10	035308	036115	G
22. 0	20. 3	034912	039040	D	22. 0	19. 32	035242	034615	P
Jan. 29. 0. 0	23. 23. 23	0·034288	0·039218	D	Feb. 1. 0. 0	23. 24. 34	0·033936	0·036582	P
1. 50	22. 58	034897	039440		1. 50	23. 31	033342	036863	J H
2. 0	22. 34	035008	039452		2. 0	25. 52	033719	036916	
2. 10	22. 47	035074	039446	D	2. 10	27. 11	034096	037014	J H
4. 0	20. 19	035636	039963	P	4. 0	26. 37	034354	037371	G
6. 0	19. 8	035707	037054		6. 0	25. 51	033509	037577	
8. 0	18. 52	035683	037207		8. 0	15. 53	033383	037232	
10. 0	18. 12	035282	037329	P	10. 0	9. 21	034948	037073	G
12. 0	18. 35	035784	037234	D	12. 0	15. 29	033169	036742	P
14. 0	18. 32	035797	037271		14. 0	16. 56	033578	036626	
16. 0	18. 39	036022	037275		16. 0	16. 50	033030	036568	
18. 0	18. 3	036518	037208		18. 0	15. 6	033527	036537	P
20. 0	18. 6	037098	037180	D	20. 0	16. 19	032812	036566	D
22. 0	19. 42	036455	036875	J H	22. 0	20. 0	032858	036861	D
Jan. 30. 0. 0	23. 21. 24	0·036440	0·036946	J H	Feb. 2. 0. 0	23. 21. 24	0·033123	0·036896	D
1. 50	20. 47	035821	037134		1. 50	22. 54	033793	036975	
2. 0	20. 54	035644	037123		2. 0	22. 52	033926	036975	
2. 10	20. 56	035976	037123	J H	2. 10	22. 31	033948	036975	D
4. 0	19. 39	036634	037289	D	4. 0	21. 46	035865	037181	P
6. 0	20. 7	036039	037282		6. 0	14. 9	033176	037202	
8. 0	18. 32	035955	037160		8. 0	20. 49	034327	037692	
10. 0	17. 34	035341	036980	D	10. 0	17. 36	034531	037476	P
12. 0	14. 20	035563	036780	J H	12. 0	17. 34	031386	036907	D
14. 0	16. 0	034788	036608		14. 0	15. 14	032480	036928	
16. 0	18. 4	033902	036394		16. 0	15. 53	032861	037033	
18. 0	17. 29	034204	036041		18. 0	19. 32	034482	037253	
20. 0	17. 30	034565	036886	J H	20. 0	17. 1	034784	037379	D
22. 0	20. 3	033797	036326	P	22. 0	19. 0	034232	037371	J H
Jan. 31. 0. 0	23. 21. 46	0·033982	0·036399	P	Feb. 3. 0. 0	23. 22. 8	0·033753	0·037190	J H
1. 50	21. 50	033815	036526		1. 50	22. 48	034039	037946	
2. 0	22. 4	034169	036585		2. 0	22. 31	034283	037883	
2. 10	22. 30	034036	036631	P	2. 10	22. 38	034083	037848	J H
4. 0	19. 43	034284	036658	J H	4. 0	20. 7	035007	038393	D
6. 0	18. 20	034343	036558		6. 0	18. 41	036826	038221	
8. 0	16. 51	033095	036568		8. 0	14. 23	037893	038270	
10. 0	17. 58	032557	036648	J H	10. 0	17. 12	036033	037957	D
12. 0	18. 2	032350	036843	G	12. 0	12. 49	036807	037725	J H

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, 168°.
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, 25s·2.

DECLINATION MAGNET.
Jan. 30d and 31d. The difference between the mean western declinations on these days was less than between any other days in the month.
Feb. 1d. 2h. 10m. The western declination was the greatest in the month.
Feb. 1d and 2d. Considerable changes occurred.

HORIZONTAL FORCE MAGNET.
Jan. 30d and 31d. The greatest difference in the mean values for consecutive days occurred.
Jan. 31d. 12h and Feb. 2d. 12h. The force at each time was the least in the month.
Feb. 3d. The daily range was the greatest in the month.
Jan. 31d and Feb. 2d. The mean daily force was the least in each month.
Feb. 1d, 2d, and 3d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.
Jan. 29d and Feb. 1d. The daily range was the greatest in the month.
Jan. 29d and 30d. The greatest difference in the mean values for consecutive days occurred.
Jan. 29d and 31d, and Feb. 1d and 3d. Remarkable changes occurred.
Jan. 30d. 18h and Feb. 0d. 22h. The force at each time was the least in the month.
Jan. 31d. The mean daily force was the least in the month.
Feb. 2d. Between 10h and 12h a considerable change occurred.

Daily Observations from February 4 to 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Feb. 4. 14. 0	23. 21. 42	0·033780	0·037413	J H
16. 0	16. 59	034105	037284	
18. 0	17. 34	034260	037173	
20. 0	18. 27	034703	037284	J H
22. 0	17. 50	034651	037495	G
Feb. 5. 0. 0	23. 26. 36	0·033306	0·037396	P
1. 50	23. 0	035077	037703	
2. 0	22. 30	035298	037761	
2. 10	21. 44	034147	037761	P
4. 0	21. 13	036140	038263	J H
6. 0	20. 41	035915	038334	
8. 0	16. 31	037515	038036	
10. 0	23. 8	035932	037771	J H
12. 0	17. 27	034973	037669	P
14. 0	15. 41	033509	037444	
16. 0	18. 9	034310	037546	
18. 0	18. 41	034900	037297	
20. 0	16. 41	034532	037091	P
22. 0	19. 43	034372	037369	J H
Feb. 6. 0. 0	23. 25. 55	0·034089	0·037749	J H
1. 50	23. 38	036087	038094	
2. 0	22. 32	036441	038077	
2. 10	23. 33	035932	038031	J H
4. 0	20. 40	035696	038437	P
6. 0	16. 15	034444	039472	
8. 0	17. 28	036307	038142	
10. 0	16. 45	037986	037946	P
12. 0	15. 18	035074	037648	G
14. 0	19. 59	035340	037805	
16. 0	15. 14	034383	037498	
18. 0	16. 43	034690	037833	
20. 0	18. 5	034808	037511	G
22. 0	18. 41	034292	037500	J H
Feb. 7. 0. 0	23. 22. 0	0·034609	0·037487	J H
1. 50	23. 37	035171	037770	
2. 0	23. 34	034949	037787	
2. 10	23. 34	034927	037787	J H
4. 0	21. 39	034749	037731	G
6. 0	20. 10	036624	038013	
8. 0	19. 19	037229	038174	
10. 0	2. 34	035370	037728	G
12. 0	10. 42	034169	037757	J H

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Feb. 7. 14. 0	23. 11. 15	0·034551	0·037366	J H
16. 0	14. 22	034177	037381	
18. 0	16. 13	034736	037418	
20. 0	17. 37	035472	037371	J H
22. 0	18. 27	035540	037328	P
Feb. 8. 0. 0	23. 25. 20	0·034859	0·037334	P
1. 50	25. 56	036063	037862	
2. 0	25. 45	036505	037862	
2. 10	25. 8	036948	037862	P
4. 0	22. 16	036116	038143	J H
6. 0	21. 14	035166	038456	
8. 0	19. 23	035367	038347	
10. 0	15. 27	034942	037640	J H
12. 0	17. 30	034904	037539	P
14. 0	16. 57	034624	037661	
16. 0	17. 59	035841	037514	
18. 0	20. 8	034564	037540	
20. 0	18. 13	034394	037439	P
22. 0	18. 27	033648	037360	J H
Feb. 9. 0. 0	23. 23. 17	0·033762	0·037526	J H
1. 50	23. 47	034927	038036	
2. 0	23. 22	035369	038024	
2. 10	23. 15	034705	038036	J H
4. 0	20. 9	035185	038042	P
6. 0	19. 31	037237	038003	
8. 0	18. 46	035687	037957	
10. 0	18. 17	035466	037968	P
12. 0	17. 50	035119	037894	G
14. 0	17. 44	034794	037632	
16. 0	17. 30	035126	037731	
18. 0	15. 37	035347	037940	
20. 0	17. 23	035392	037952	G
22. 0	19. 54	034535	037527	J H
Feb. 10. 0. 0	23. 21. 3	0·033932	0·037487	J H
1. 50	22. 29	034360	037574	
2. 0	21. 43	034116	037586	
2. 10	20. 53	033873	037540	J H
4. 0	20. 6	035562	038053	G
6. 0	19. 2	034741	037780	J H
8. 0	17. 59	035642	037745	J H
10. 0	13. 22	033627	037746	P
12. 0	20. 25	035273	037192	J 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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
Feb. 4^d. Between 22^h and 24^h a considerable change occurred.
Feb. 5^d. The mean western declination was the greatest in the month.
Feb. 5^d and 7^d. Remarkable changes occurred.
Feb. 7^d. $10^h. 3^m$. The western declination was the least in the month during extraordinary observations.
Feb. 7^d. The daily range was the greatest in the month.
Feb. 7^d. The mean western declination was the least in the month.
Feb. 10^d. Between 10^h and 12^h a considerable change occurred.
HORIZONTAL FORCE MAGNET.
Feb. 5^d, 6^d, 7^d, 9^d, and 10^d. Considerable changes occurred.
VERTICAL FORCE MAGNET.
Feb. 5^d, between $2^h. 10^m$ and 4^h, and on 9^d, between 0^h and $1^h. 50^m$, a considerable change occurred.
Feb. $6^d. 6^h$. The force at this time was the greatest in the month.
Feb. 6^d, 8^d, and 10^d. Considerable changes occurred.
Feb. 9^d and 10^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from February 11 to 17.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 11. 14. 0	23. 15. 40	0·033779	0·037087	J H	Feb. 14. 14. 0	23. 17. 48	0·036277	0·037661	J H
16. 0	15. 40	034157	037363		16. 0	17. 49	035797	037421	
18. 0	16. 9	034619	037386		18. 0	17. 53	035485	037503	
20. 0	16. 53	034907	037370	J H	20. 0	17. 34	035915	037360	J H
22. 0	19. 6	035792	037386	G	22. 0	20. 19	035937	037308	P
Feb. 12. 0. 0	23. 20. 52	0·036806	0·037492	P	Feb. 15. 0. 0	23. 22. 16	0·036063	0·037630	P
1. 50	21. 33	037187	037862		1. 50	22. 21	036658	037919	
2. 0	21. 12	035859	037862		2. 0	21. 7	036658	037861	
2. 10	21. 3	036080	037857	P	2. 10	20. 54	036879	037861	P
4. 0	19. 43	036284	037978	J H	4. 0	20. 16	037207	037942	J H
6. 0	19. 38	036156	037846		6. 0	19. 37	036092	037838	
8. 0	19. 50	036638	037818		8. 0	18. 30	035857	037768	
10. 0	18. 48	035654	037581	J H	10. 0	15. 42	035005	037820	J H
12. 0	18. 59	036063	037630	P	12. 0	17. 57	035850	037900	G
14. 0	18. 44	034786	037528		14. 0	17. 47	036061	038163	
16. 0	18. 44	034956	037450		16. 0	17. 51	036238	038057	
18. 0	19. 29	034984	037317		18. 0	17. 36	036087	037994	
20. 0	19. 47	034855	037123	P	20. 0	17. 19	035762	037788	G
22. 0	19. 34	034781	037317	D	22. 0	19. 26	035738	037339	P
Feb. 13. 0. 0	23. 20. 45	0·034477	0·037328	D	Feb. 16. 0. 0	23. 22. 15	0·035738	0·037449	P
1. 50	21. 51	034477	037375		1. 50	22. 45	037049	037783	
2. 0	21. 42	034411	037386		2. 0	22. 20	037049	037783	
2. 10	21. 24	034300	037381	D	2. 10	22. 14	037049	037783	P
4. 0	19. 42	035043	037497	P	4. 0	20. 28	036861	038261	G
6. 0	17. 47	035655	037650		6. 0	19. 30	037600	038129	
8. 0	16. 15	035451	037581		8. 0	18. 10	037002	037937	
10. 0	17. 24	034940	037587	P	10. 0	15. 34	036367	037881	G
12. 0	17. 13	037083	037575	D	12. 0	15. 19	035771	037657	P
14. 0	16. 53	035208	037375		14. 0	15. 46	035193	037458	
16. 0	16. 32	034997	037211		16. 0	16. 19	035568	037730	
18. 0	16. 3	034657	037187		18. 0	16. 16	036783	037197	
20. 0	17. 9	034645	037064	D	20. 0	16. 16	035826	037033	P
22. 0	18. 33	035664	037059	J H	22. 0	19. 52	035782	037296	D
Feb. 14. 0. 0	23. 19. 39	0·034946	0·037030	P	Feb. 17. 0. 0	23. 22. 28	0·036793	0·037344	D
1. 50	20. 51	034935	037259	J H	1. 50	22. 31	036697	037803	
2. 0	20. 43	035068	037201		2. 0	22. 18	036940	037745	
2. 10	20. 57	035068	037196	J H	2. 10	22. 22	037029	037745	D
4. 0	19. 26	037972	037870	D	4. 0	19. 59	035902	037977	P
6. 0	18. 1	038308	038294		6. 0	19. 35	035537	037867	
8. 0	17. 48	038544	038333		8. 0	18. 9	037287	038084	
10. 0	17. 52	038955	038184	D	10. 0	12. 3	037099	037878	P
12. 0	17. 40	037285	037795	J H	12. 0	15. 26	035117	037596	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, 168°.
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, 25s·2.

DECLINATION MAGNET.
Feb. 17d. Between 8h and 10h a considerable change occurred.

HORIZONTAL FORCE MAGNET.
Feb. 13d, 14d, and 17d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
Feb. 13d. The daily range was the least in the month.
Feb. 14d. Between 2h. 10m and 4h a considerable change occurred.
Feb. 16d. The mean daily force was the greatest in the month.
Feb. 17d. Considerable changes occurred.

Daily Observations from February 18 to 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 18. 14. 0	23. 16. 7	0 ·035683	0 ·037430	D	Feb. 21. 14. 0	23. 15. 51	0 ·034786	0 ·036680	G
16. 0	16. 50	037451	037492		16. 0	17. 35	034173	036492	
18. 0	16. 24	039613	037681		18. 6	16. 39	034439	036579	
20. 0	18. 39	039466	037573	D	20. 0	20. 14	034730	036257	G
22. 0	20. 2	037989	037561	J H	22. 0	19. 25	035265	036463	D
Feb. 19. 0. 0	23. 21. 56	0 ·036579	0 ·037761	J H	Feb. 22. 0. 0	23. 20. 30	0 ·036419	0 ·036538	D
1. 50	21. 24	037250	037999		1. 50	21. 45	035578	036405	
2. 0	21. 11	037139	038057		2. 0	22. 30	035822	036445	
2. 10	20. 53	037272	037994	J H	2. 10	23. 0	035822	036451	D
4. 0	19. 14	036412	037579	D	4. 0	20. 45	036007	036538	G
6. 0	18. 43	036794	037234		6. 0	19. 59	037468	036666	G
8. 0	17. 22	036595	036832		8. 0	18. 25	036512	036843	D
10. 0	17. 22	036086	036757	D	10. 0	17. 36	034963	036735	J H
12. 0	17. 15	035909	036530	J H	12. 0	17. 36	035037	036471	D
14. 0	18. 9	034585	036299		14. 0	18. 3	034308	036446	
16. 0	17. 57	034597	036050		16. 0	18. 30	034536	036460	
18. 0	17. 5	034734	035888		18. 0	18. 47	034486	036320	
20. 0	18. 2	034483	035934	J H	20. 0	17. 50	034499	035898	D
22. 0	17. 27	034224	035830	P	22. 0	21. 55	035082	035866	J H
Feb. 20. 0. 0	23. 21. 32	0 ·034509	0 ·036043	D	Feb. 23. 0. 0	23. 22. 12	0 ·034555	0 ·036119	J H
1. 50	21. 39	034749	036289	P	1. 50	23. 30	035507	036626	J H
2. 0	21. 39	034749	036289		2. 0	22. 59	035707	036521	P
2. 10	21. 26	034439	036173	P	2. 10	22. 55	035818	036521	P
4. 0	20. 25	035417	036645	J H	4. 0	19. 41	036132	036938	D
6. 0	18. 59	034070	036590		6. 0	19. 19	036564	036960	
8. 0	17. 8	034172	036478		8. 0	18. 32	036461	036815	D
10. 0	17. 33	034203	036311	J H	10. 0	16. 30	035693	036860	G
12. 0	17. 44	033835	036246	P	12. 0	16. 59	035450	036698	G
14. 0	17. 40	033752	036083		14. 0	17. 26	035517	037113	P
16. 0	17. 55	033611	036304		16. 0	17. 29	035879	037234	J H
18. 0	18. 46	034002	036194		18. 0	17. 50	036956	036979	J H
20. 0	18. 14	033987	036003	P	20. 0	19. 16	037912	037019	D
22. 0	17. 58	034205	036135	J H	22. 0	20. 43	039304	036679	G
Feb. 21. 0. 0	23. 22. 4	0 ·033725	0 ·036289	J H	Feb. 24. 0. 0	23. 22. 42	0 ·039201	0 ·036849	P
1. 50	23. 16	034245	036521		1. 50	22. 10	039277	036946	P
2. 0	23. 14	034356	036498		2. 0	21. 48	039427	036879	G
2. 10	22. 57	034223	036475	J H	2. 10	21. 41	039228	036874	G
4. 0	20. 51	034965	036896	P	4. 0	19. 55	038611	037016	D
6. 0	19. 27	034682	036869		6. 0	20. 12	038035	036987	P
8. 0	19. 24	035385	036853		8. 0	17. 52	037237	036987	J H
10. 0	18. 22	035450	036727	P	10. 0	17. 13	037135	036728	
12. 0	18. 5	035070	036722	G	12. 0	16. 22	035087	036600	J 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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
Feb. 20^d. The daily range was the least in the month.
Feb. 23^d and 24^d. The least difference in the mean daily declinations for consecutive days occurred.
HORIZONTAL FORCE MAGNET.
Feb. 18^d. Considerable changes occurred.
Feb. $18^d. 18^h$. The force at this time was the greatest in the month.
Feb. 19^d and 20^d. The greatest difference in the mean values for consecutive days occurred.
Feb. 24^d. Between 10^h and 12^h a considerable change occurred.
Feb. 24^d. The mean daily force was the greatest in the month.
VERTICAL FORCE MAGNET.
Feb. 19^d and 20^d. The greatest differenee in the mean values for consecutive days occurred.
Feb. 20^d. The mean daily force was the least in the month.
Feb. 23^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.

Daily Observations from February 25 to March 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 25. 14. 0	23. 18. 30	0·038828	0·036691	J H	Feb. 28. 14. 0	23. 15. 57	0·034094	0·037123	G
16. 0	18. 29	039417	036629		16. 0	22. 47	036242	036786	
18. 0	17. 31	039083	036479		18. 0	15. 43	034997	036300	
20. 0	17. 49	038983	036572	J H	20. 0	17. 12	033724	036253	G
22. 0	18. 30	036266	036352	P	22. 0	18. 52	032554	036880	H B
Feb. 26. 0. 0	23. 23. 34	0·037458	0·036705	P	Feb. 29. 0. 0	23. 24. 20	0·032553	0·036727	P
1. 50	26. 16	037569	037318		1. 50	23. 30	034669	037266	
2. 0	25. 53	037392	037202		2. 0	23. 43	034647	037208	
2. 10	24. 58	037082	037115	P	2. 10	23. 29	034691	037150	P
4. 0	20. 58	035894	037199	J H	4. 0	20. 27	034958	037630	G
6. 0	19. 46	036251	036991		6. 0	19. 22	035305	037419	G
8. 0	17. 34	036173	036795		8. 0	18. 45	034220	037247	H B
10. 0	17. 9	034839	037017	J H	10. 0	16. 18	034187	036809	H B
12. 0	17. 2	034552	036864	P	12. 0	17. 1	033301	036901	P
14. 0	16. 45	034034	036641		14. 0	18. 3	033557	036856	
16. 0	16. 14	034137	036415		16. 0	16. 13	033608	036796	
18. 0	16. 17	035568	036178		18. 0	16. 19	034094	036681	
20. 0	17. 40	035007	036362	P	20. 0	17. 37	035533	036658	P
22. 0	20. 5	034793	036277	D	22. 0	18. 39	035131	036867	D
Feb. 27. 0. 0	23. 23. 54	0·034213	0·036289	D	Mar. 1. 0. 0	23. 22. 29	0·036692	0·037310	D
1. 50	23. 48	034068	036672		1. 50	24. 8	037202	037704	
2. 0	23. 35	034135	036661		2. 0	23. 38	037224	037680	
2. 10	23. 33	034157	036649	D	2. 10	23. 25	036981	037675	D
4. 0	20. 6	035303	036991	P	4. 0	23. 3	036450	038132	P
6. 0	18. 45	034921	036700		6. 0	20. 9	034797	037274	H B
8. 0	17. 14	034949	036633		8. 0	19. 26	034697	036907	
10. 0	17. 6	034513	036441	P	10. 0	16. 23	034287	036699	H B
12. 0	17. 6	034424	036561	D	12. 0	16. 10	034677	036852	D
14. 0	16. 58	034399	036446		14. 0	16. 14	034522	036637	
16. 0	17. 0	034034	036300		16. 0	15. 45	034529	036753	
18. 0	16. 40	034275	036278		18. 0	16. 56	034869	036692	
20. 0	16. 37	034226	036066	D	20. 0	17. 30	035037	036264	D
22. 0	18. 35	033769	036238	G	22. 0	21. 12	034333	036508	H B
Feb. 28. 0. 0	23. 22. 47	0·033543	0·036405	P	Mar. 2. 0. 0	23. 24. 21	0·035141	0·037693	H B
1. 50	24. 19	034638	036925	H B	1. 50	27. 56	034987	039829	
2. 0	24. 7	034683	036954		2. 0	27. 54	035762	039916	
2. 10	24. 0	034794	036954	H B	2. 10	30. 56	036537	040252	H B
4. 0	20. 13	035987	037464	D	4. 0	23. 18	035207	039707	D
6. 0	19. 40	037023	037163		6. 0	21. 10	035071	039788	
8. 0	13. 31	035335	037286		8. 0	19. 49	035009	039718	
10. 0	12. 35	034416	037140	D	10. 0	16. 1	034507	039163	D
12. 0	14. 36	034160	037036	G	12. 0	11. 13	035584	038747	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, 168°.
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, $25^s{\cdot}2$.

DECLINATION MAGNET.
Feb. 28^d and 29^d. The greatest difference in the mean daily declinations for consecutive days occurred.
Feb. 28^d and March 2^d. Considerable changes occurred.
HORIZONTAL FORCE MAGNET.
Feb. 25^d. Between 20^h and 22^h a remarkable change occurred.
Feb. 27^d. The daily range was the least in the month.
Feb. 27^d and 28^d. The least difference in the mean values for consecutive days occurred.
Feb. 29^d. Considerable changes occurred.
VERTICAL FORCE MAGNET.
Feb. 26^d, between 0^h and $1^h. 50^m$, and March 1^d, between 4^h and 6^h. Considerable changes occurred.
Feb. 28^d, 29^d, and March 2^d. Considerable changes occurred.
March 1^d. The mean daily force was the least in the month.
March $1^d. 20^h$. The force at this time was the least in the month.
March 1^d and 2^d. The greatest difference in the mean values for consecutive days occurred.

Daily Observations from March 3 to 9.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 3. 14. 0	23. 12. 54	0·033517	0·038136	H B	Mar. 6. 14. 0	23. 16. 2	0·033591	0·038743	J H
16. 0	14. 15	033210	038499		16. 0	18. 6	033561	038553	
18. 0	15. 38	034649	038788		18. 0	22. 53	032671	037793	
20. 0	18. 38	034070	039039	H B	20. 0	19. 32	033104	037984	J H
22. 0	18. 37	034683	039287	P	22. 0	19. 16	032317	038558	H B
Mar. 4. 0. 0	23. 25. 48	0·035040	0·039208	P	Mar. 7. 0. 0	23. 23. 14	0·032291	0·038860	H B
1. 50	24. 30	035296	039493		1. 50	26. 53	033233	039106	D
2. 0	24. 36	035517	039504		2. 0	26. 57	033035	039210	
2. 10	25. 2	035451	039551	P	2. 10	26. 49	032636	039234	D
4. 0	21. 12	035270	039398	H B	4. 0	19. 45	032127	039884	J H
6. 0	18. 47	035159	039116		6. 0	12. 0	034042	039927	
8. 0	2. 0	037646	039018		8. 0	15. 28	032235	039583	
10. 0	19. 39	035960	038862	H B	10. 0	15. 11	034127	039129	J H
12. 0	17. 23	034478	038643	P	12. 0	9. 26	034027	038236	H B
14. 0	21. 51	034870	038680		14. 0	20. 18	032587	038435	
16. 0	21. 8	033371	038442		16. 0	20. 31	033101	038481	
18. 0	17. 21	033661	038606		18. 0	19. 8	034034	038287	
20. 0	19. 0	033934	038501	P	20. 0	23. 26	033712	038152	H B
22. 0	19. 29	033471	038592	D	22. 0	22. 27	031546	038675	J H
Mar. 5. 0. 0	23. 23. 52	0·032016	0·038979	D	Mar. 8. 0. 0	23. 23. 12	0·032247	0·038897	J H
1. 50	26. 59	034685	039002		1. 50	25. 35	032993	039293	
2. 0	27. 28	034885	038997		2. 0	25. 46	033590	039246	
2. 10	27. 31	035062	038997	D	2. 10	26. 47	033369	039223	J H
4. 0	20. 42	037408	039630	P	4. 0	23. 44	035563	040204	H B
6. 0	16. 16	037413	039229		6. 0	19. 36	035304	039949	
8. 0	7. 36	037135	039197		8. 0	12. 10	034832	039592	
10. 0	10. 25	035568	038765	P	10. 0	17. 51	035658	038984	H B
12. 0	9. 4	035317	038273	D	12. 0	14. 40	033961	039065	G
14. 0	9. 52	034039	038044		14. 0	22. 23	033939	039257	
16. 0	12. 52	033102	037841		16. 0	15. 59	033345	039160	
18. 0	13. 47	033697	037661		18. 0	17. 17	033687	038309	
20. 0	15. 50	034028	037712	D	20. 0	18. 51	033754	038844	G
22. 0	19. 44	033500	038348	J H	22. 0	18. 53	032764	039013	D
Mar. 6. 0. 0	23. 26. 11	0·031826	0·038584	J H	Mar. 9. 0. 0	23. 23. 0	0·032957	0·039138	D
1. 50	27. 43	034489	039641		1. 50	23. 53	033917	039388	
2. 0	30. 19	034888	039595		2. 0	24. 6	034072	039376	
2. 10	30. 50	034622	039554	J H	2. 10	23. 59	034005	039359	D
4. 0	26. 32	034786	040253	D	4. 0	21. 27	034714	039917	G
6. 0	21. 20	035237	040201		6. 0	15. 52	035202	040204	G
8. 0	19. 15	035993	039834		8. 0	19. 17	035467	039518	J H
10. 0	17. 46	035673	039374	D	10. 0	12. 34	036066	039329	D
12. 0	13. 6	033886	038855	J H	12. 0	14. 39	034966	039116	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, 168°.
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, $25^{s}·2$.

DECLINATION MAGNET.
March 3^{d}. Between 22^{h} and 24^{h} a considerable change occurred.
March 4^{d}, 5^{d}, 7^{d}, 8^{d}, and 9^{d}. Remarkable changes occurred.
March 8^{d}. The mean western declination was the greatest in the month.
HORIZONTAL FORCE MAGNET.
March 4^{d} and 5^{d}. The least difference in the mean values for consecutive days occurred.
March 7^{d}. The mean daily force was the least in the month.
March $7^{d}. 22^{h}$. The force at this time was less than at any other during the month in the regular observations, but the least occurred at $29^{d}. 14^{h}. 4^{m}$ during extra observations.
March 4^{d} and 5^{d}. Considerable changes occurred.
VERTICAL FORCE MAGNET.
March 5^{d}. Between $2^{h}. 10^{m}$ and 4^{h} a considerable change occurred.
March 6^{d}, 7^{d}, 8^{d}, and 9^{d}. Considerable changes occurred.
March 6^{d} and 7^{d}. The least difference in the mean values for consecutive days occurred.

Daily Observations from March 10 to 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 10. 14. 0	23. 15. 5	0·033601	0·038480	D	Mar. 13. 14. 0	23. 16. 3	0·034070	0·038839	P
16. 0	15. 40	033028	038696		16. 0	16. 15	034291	038687	
18. 0	17. 24	034486	038974		18. 0	18. 26	034343	038606	
20. 0	18. 2	036447	039391	D	20. 0	17. 28	034297	038859	P
22. 0	18. 35	034134	039052	J H	22. 0	17. 52	033689	038822	D
Mar. 11. 0. 0	23. 22. 33	0·034684	0·039034	J H	Mar. 14. 0. 0	23. 21. 29	0·034660	0·038757	D
1. 50	24. 31	036485	039293		1. 50	22. 59	034830	038928	
2. 0	24. 16	036817	039235	J H	2. 0	23. 4	034896	038928	
2. 10	23. 59	037127	039235	D	2. 10	23. 22	035029	038928	D
4. 0	21. 24	038153	039568		4. 0	20. 34	034993	039166	P
6. 0	19. 11	038057	039493		6. 0	19. 9	035040	039177	
8. 0	18. 52	038047	039378		8. 0	19. 28	035857	039083	
10. 0	16. 18	037593	039159	D	10. 0	19. 19	036146	039060	P
12. 0	16. 18	036491	039048	J H	12. 0	18. 43	035617	039223	D
14. 0	18. 18	035024	038812		14. 0	18. 49	035498	038981	
16. 0	18. 18	034857	038644		16. 0	16. 55	035046	038863	
18. 0	17. 53	035200	038630		18. 0	17. 18	035151	038897	
20. 0	17. 42	035318	038622	J H	20. 0	17. 0	035304	038814	D
22. 0	18. 33	034897	038913	H B	22. 0	16. 10	034723	038891	J H
Mar. 12. 0. 0	23. 23. 55	0·034529	0·039018	H B	Mar. 15. 0. 0	23. 21. 51	0·035216	0·039035	J H
1. 50	27. 34	034204	039459		1. 50	25. 49	036323	039425	
2. 0	27. 27	033983	039430		2. 0	25. 39	036367	039413	
2. 10	27. 17	034426	039395	H B	2. 10	24. 55	036522	039320	J H
4. 0	23. 27	034680	039358	J H	4. 0	21. 23	035157	040037	D
6. 0	19. 19	034379	039338		6. 0	19. 9	035972	039660	
8. 0	18. 37	034517	038933		8. 0	19. 13	036069	039362	
10. 0	16. 57	034115	038944	J H	10. 0	19. 32	035947	039213	D
12. 0	14 53	034539	038580	H B	12. 0	17. 47	035324	038958	J H
14. 0	15. 18	033524	038564		14. 0	18. 6	034773	038733	
16. 0	16. 13	033089	038752		16. 0	18. 7	034443	038612	
18. 0	16. 12	033432	038427		18. 0	17. 56	034147	038433	
20. 0	16. 1	033856	038486	H B	20. 0	16. 20	034369	038574	J H
22. 0	17. 18	033456	038546	P	22. 0	16. 4	033371	038912	P
Mar. 13. 0. 0	23. 21. 48	0·033280	0·038527	P	Mar. 16. 0. 0	23. 22. 48	0·033735	0·039109	P
1. 50	24. 41	033849	038860		1. 50	25. 25	034163	039346	
2. 0	24. 47	034070	038907		2. 0	25. 43	034340	039311	
2. 10	24. 49	034203	038953	P	2. 10	25. 40	034119	039335	P
4. 0	21. 54	034470	039575	H B	4. 0	22. 6	033953	039403	J H
6. 0	16. 59	034119	039264		6. 0	18. 48	035136	039299	
8. 0	18. 2	034912	038870		8. 0	18. 10	035099	039086	
10. 0	17. 2	034606	038899	H B	10. 0	17. 54	034980	038978	J H
12. 0	18. 22	034670	038881	P	12. 0	18. 17	034855	038897	P

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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
March 14^d. The daily range was the least in the month.
March 15^d. Between 22^h and 24^h a considerable change occurred.
March 15^d and 16^d. The least difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
March $11^d. 4^h$. The force at this time was greater than at any other during the month in the regular observations, but the greatest occurred at $30^d. 8^h. 46^m$ during extra observations.
March 11^d. Considerable changes occurred.
March 12^d. The daily range was the least in the month.

VERTICAL FORCE MAGNET.
March 13^d and 15^d. Between $2^h. 10^m$ and 4^h a considerable change occurred on each day.

Daily Observations from March 17 to 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Mar. 17. 14. 0	23. 16. 26	0·034637	0·038464	P
16. 0	16. 7	034497	038527	
18. 0	15. 27	034684	038517	
20. 0	16. 9	034604	038530	P
22. 0	17. 6	033601	038588	D
Mar. 18. 0. 0	23. 23. 22	0·033333	0·038622	D
{ 1. 50	28. 10	035723	039156	
{ 2. 0	28. 28	035967	039127	
{ 2. 10	28. 50	036166	039098	D
4. 0	24. 46	036810	040270	P
6. 0	21. 18	036205	039573	
8. 0	19. 47	036848	039261	
10. 0	13. 52	035685	039251	P
12. 0	14. 38	035895	039137	D
14. 0	17. 34	035415	038923	
16. 0	16. 38	035163	038618	
18. 0	14. 55	035532	038352	
20. 0	16. 22	034838	038516	D
22. 0	16. 34	031985	038395	J H
Mar. 19. 0. 0	23. 21. 52	0·034105	0·038665	J H
{ 1. 50	25. 19	035051	038871	
{ 2. 0	25. 41	034874	038854	
{ 2. 10	25. 11	034609	038865	J H
4. 0	23. 1	035573	039364	D
6. 0	19. 55	035503	039471	
8. 0	15. 36	035733	039419	
10. 0	17. 7	035982	039213	D
12. 0	18. 42	036258	039117	J H
14. 0	18. 30	035229	038975	
16. 0	18. 28	035042	038729	
18. 0	18. 18	034867	038707	
20. 0	17. 33	035418	038554	J H
22. 0	16. 39	034682	038701	P
Mar. 20. 0. 0	23. 20. 42	0·035005	0·038686	P
{ 1. 50	24. 17	035976	038928	
{ 2. 0	24. 18	035754	038969	
{ 2. 10	24. 14	035599	039021	P
4. 0	21. 16	035890	039119	J H
6. 0	18. 30	036325	039241	
8. 0	17. 30	036696	038981	J H
10. 0	15. 55	036529	039185	G
12. 0	14. 31	037141	038755	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Mar. 20. 14. 0	23. 17. 11	0·036437	0·038806	P
16. 0	17. 12	036505	038763	D
18. 0	18. 21	036347	038731	D
20. 0	16. 51	035555	038585	J H
22. 0	18. 8	034472	038675	G
Mar. 21. 0. 0	23. 22. 43	0·034670	0·038680	P
{ 1. 50	25. 7	035874	039153	
{ 2. 0	25. 23	035687	039195	
{ 2. 10	25. 16	036147	039236	P
4. 0	22. 47	036787	039324	G
6. 0	19. 10	036371	039625	D
8. 0	17. 33	036810	039421	D
10. 0	16. 52	036537	039161	J H
12. 0	16. 12	036972	039086	P
14. 0	16. 46	034580	038849	
16. 0	17. 35	034521	038855	
18. 0	16. 20	034447	038664	
20. 0	16. 10	033900	038780	P
22. 0	17. 28	035402	038791	D
Mar. 22. 0. 0	23. 22. 48	0·032070	0·038928	D
{ 1. 50	26. 22	033642	039098	
{ 2. 0	26. 17	033819	039069	
{ 2. 10	25. 42	033619	039052	D
4. 0	22. 59	034307	038749	P
6. 0	19. 54	034869	039504	
8. 0	18. 26	034903	039799	
10. 0	16. 3	034024	039214	P
12. 0	16. 48	034543	039266	D
14. 0	16. 37	034489	039322	
16. 0	16. 42	034492	039283	
18. 0	16. 14	034108	038929	
20. 0	16. 13	034108	039028	D
22. 0	16. 26	033088	038902	J H
Mar. 23. 0. 0	23. 22. 3	0·032390	0·038875	J H
{ 1. 50	25. 48	033138	039261	
{ 2. 0	25. 43	033226	039266	
{ 2. 10	26. 0	033581	039261	J H
4. 0	23. 23	034575	040028	D
6. 0	19. 36	035094	039810	
8. 0	18. 25	035561	039491	
10. 0	17. 39	035527	039410	D
12. 0	16. 53	034816	039256	J 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, 168°.
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, $25^s·2$.

Declination Magnet.
March 17^d. Between 22^h and 24^h a considerable change occurred.
March 18^d. Remarkable changes occurred.

Horizontal Force Magnet.
March 18^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
March 19^d and 22^d. Remarkable changes occurred.
March 21^d and 22^d. The greatest difference in the mean values for consecutive days occurred.

Vertical Force Magnet.
March 18^d and 22^d. Remarkable changes occurred.
March 23^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.

Daily Observations from March 24 to 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 24. 14. 0	23. 16. 57	0·035163	0·038872	J H	Mar. 27. 14. 0	23. 17. 44	0·035326	0·039267	J H
16. 0	16. 55	034949	038765		16. 0	15. 49	035347	039198	
18. 0	17. 1	035059	038823		18. 0	16. 26	035180	038940	
20. 0	16. 26	035126	038881	J H	20. 0	16. 50	034767	038850	J H
22. 0	16. 17	032417	038971	P	22. 0	19. 39	033828	038839	P
Mar. 25. 0. 0	23. 21. 4	0·034359	0·038874	P	Mar. 28. 0. 0	23. 26. 39	0·034250	0·039092	P
1. 50	25. 3	037112	039124		1. 50	26. 9	035956	039462	
2. 0	24. 55	037710	039112		2. 0	26. 48	036399	039462	
2. 10	25. 29	037532	039112	P	2. 10	26. 49	035978	039502	P
4. 0	23. 48	038125	039376	J H	4. 0	21. 45	037089	040076	J H
6. 0	20. 1	036903	040053		6. 0	19. 51	037913	039578	
8. 0	20. 10	036140	039482		8. 0	15. 2	036989	039578	
10. 0	19. 38	035966	039262	J H	10. 0	16. 51	036812	039219	J H
12. 0	19. 6	036213	039399	P	12. 0	17. 19	036734	039182	P
14. 0	18. 39	036622	039124		14. 0	16. 22	035990	039003	
16. 0	17. 24	035947	039058		16. 0	14. 51	035446	038811	
18. 0	17. 12	036082	039108		18. 0	15. 20	035174	038644	
20. 0	16. 54	035703	037852	P	20. 0	15. 39	034204	038596	P
22. 0	15. 40	034785	039029	D	22. 0	18. 33	032016	038538	D
Mar. 26. 0. 0	23. 22. 47	0·034744	0·039197	D	Mar. 29. 0. 0	23. 22. 21	0·033529	0·038987	D
1. 50	24. 53	036656	039441		1. 50	25. 34	034589	039888	
2. 0	24. 37	036899	039394		2. 0	25. 3	034433	039853	
2. 10	24. 31	037010	039365	D	2. 10	24. 55	034389	039836	D
4. 0	20. 52	037234	039900	P	4. 0	23. 5	035240	040175	P
6. 0	18. 34	037336	039804		6. 0	16. 36	036580	040160	
8. 0	18. 11	037284	039726		8. 0	17. 34	037573	039530	
10. 0	18. 11	037080	039510	P	10. 0	19. 2	033690	039240	P
12. 0	17. 51	037240	039355	D	12. 0	0. 29	031775	038907	D
14. 0	16. 11	036816	039310		14. 0	12. 50	030055	037372	
16. 0	16. 2	036567	039244		16. 0	8. 54	036154	037534	
18. 0	16. 13	034974	039320		18. 0	19. 1	035054	038007	
20. 0	15. 14	034311	039212	D	20. 0	20. 5	033623	037935	D
22. 0	15. 0	035528	039167	J H	22. 0	27. 12	030509	038438	J H
Mar. 27. 0. 0	23. 19. 31	0·035628	0·039162	J H	Mar. 30. 0. 0	23. 29. 8	0·030965	0·039494	J H
1. 50	22. 55	036287	039325		1. 50	32. 59	032832	039947	
2. 0	22. 55	036264	039267		2. 0	28. 17	033652	040121	
2. 10	22. 47	036420	039261	J H	2. 10	28. 43	034073	040116	J H
4. 0	21. 26	037074	039705	D	4. 0	23. 19. 18	035843	041028	D
6. 0	17. 6	037021	039674		6. 0	22. 58. 49	036584	040117	
8. 0	19. 37	036584	039668		8. 0	23. 15. 9	036569	039359	
10. 0	17. 51	036344	039548	D	10. 0	12. 2	032317	038552	D
12. 0	17. 44	035860	039272	J H	12. 0	15. 19	033349	038315	J 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, 168°.
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, $25^s{\cdot}2$.

DECLINATION MAGNET.
March 25^d and 27^d. Between 22^h and 24^h considerable changes occurred.
March 28^d and 29^d. The greatest difference in the mean daily declinations for consecutive days occurred.
March 29^d. The mean western declination was the least in the month.
March 29^d and 30^d. Large changes occurred.
March 30^d. The daily range was the greatest in the month.
March $30^d.1^h.50^m$ The western declination was the greatest in the month.
March $30^d.6^h$. The western declination was the least in the month in the two-hourly observations; but at $8^h.37^m$, during extra observations, a smaller value occurred.

HORIZONTAL FORCE MAGNET.
March 25^d, 29^d, and 30^d. Remarkable changes occurred.
March 26^d. The mean daily force was the greatest in the month.
March 30^d. The daily range was the greatest in the month.

VERTICAL FORCE MAGNET.
March 25^d, 26^d, 28^d, 29^d, and 30^d. Remarkable changes occurred.
March 27^d. The mean daily force was the greatest in the month.
March 27^d. The daily range was the least in the month.
March $30^d.4^h$. The force at this time was greater than at any other during the month in the regular observations, but the greatest occurred at $30^d.3^h.49^m$ in extra observations.
March 30^d. The daily range was the greatest in the month.

Daily Observations from March 31 to April 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 31. 14. 0	23. 16. 47	0·034102	0·039149	J H	Apr. 3. 14. 0	23. 16. 5	0·033218	0·038370	D
16. 0	16. 51	033333	038665		16. 0	22. 21	033483	038271	
18. 0	19. 20	032625	038412		18. 0	16. 25	033837	038596	
20. 0	17. 34	032628	038311	J H	20. 0	14. 30	032716	038639	D
22. 0	18. 36	032231	039028	G	22. 0	20. 21	031063	038628	J H
Apr. 1. 0. 0	23. 22. 13	0·031104	0·038897	P	Apr. 4. 0. 0	23. 25. 33	0·031454	0·038923	J H
{ 1. 50	24. 39	033726	039676		{ 1. 50	27. 34	032740	039478	
{ 2. 0	24. 52	033726	039659		{ 2. 0	27. 12	032806	039420	
{ 2. 10	25. 54	034014	039601	P	{ 2. 10	27. 0	032673	039420	J H
4. 0	22. 38	035063	040112	J H	4. 0	21. 20	033455	040239	D
6. 0	16. 57	035921	040365		6. 0	19. 27	034084	039924	
8. 0	18. 57	036176	039716		8. 0	16. 10	034445	039462	
10. 0	17. 39	035034	038918	J H	10. 0	15. 43	034113	039187	D
12. 0	16. 10	035130	039115	G	12. 0	14. 44	034872	038557	J H
14. 0	18. 34	035758	038967		14. 0	....	....	....	..
16. 0	14. 5	035215	038676		16. 0	....	....	....	..
18. 0	17. 44	035217	037723		18. 0	....	....	....	..
20. 0	17. 14	033748	037862	G	20. 0	....	....	....	..
22. 0	20. 32	031069	038354	P	22. 0	....	....	....	..
Apr. 2. 0. 0	23. 24. 15	0·033129	0·038817	P	Apr. 5. 0. 0	....	....	....	..
{ 1. 50	27. 19	034687	039403		{ 1. 50	....	....	....	..
{ 2. 0	27. 13	035018	039426		{ 2. 0	....	....	....	..
{ 2. 10	27. 6	035062	039403	P	{ 2. 10	....	....	....	..
4. 0	24. 30	034455	039884	G	4. 0	....	....	....	..
6. 0	19. 42	034600	040360		6. 0	....	....	....	..
8. 0	16. 27	034954	039733		8. 0	....	....	....	..
10. 0	13. 56	034740	039225	G	10. 0	....	....	....	..
12. 0	17. 0	034831	038993	P	12. 0	....	....	....	..
14. 0	17. 26	034423	038908		14. 0	23. 14. 17	0·033932	0·037194	J H
16. 0	19. 12	034083	038683		16. 0	11. 59	033530	037218	
18. 0	13. 35	033855	038390		18. 0	17. 34	032604	037556	
20. 0	17. 32	033334	038327	P	20. 0	16. 30	033296	037952	J H
22. 0	15. 54	030432	038618	D	22. 0	18. 1	032249	038343	P
Apr. 3. 0. 0	23. 21. 36	0·033790	0·038970	D	Apr. 6. 0. 0	23. 22. 2	0·032488	0·038612	P
{ 1. 50	25. 30	033348	039533		{ 1. 50	25. 59	034066	039198	
{ 2. 0	24. 24	033149	039486		{ 2. 0	25. 54	034066	039169	
{ 2. 10	25. 45	033126	039475	D	{ 2. 10	25. 52	034508	039139	P
4. 0	25. 39	032395	041088	P	4. 0	23. 6	034406	039291	J H
6. 0	13. 31	036482	040766		6. 0	17. 56	034509	039342	
8. 0	16. 6	033153	039692		8. 0	17. 6	034474	039129	
10. 0	18. 38	033817	039209	P	10. 0	16. 47	035988	038515	J H
12. 0	14. 44	033908	038624	D	12. 0	15. 48	035036	038464	P

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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
April 2^d and 3^d. Considerable changes occurred.

HORIZONTAL FORCE MAGNET.
April 1^d. Between 0^h and $1^h. 50^m$ a large change occurred.
April $2^d. 22^h$. The force at this time was less than at any other during the month in the regular observations, but the least occurred at $16^d. 23^h. 35^m$ during extra observations.
April 2^d, 3^d, and 6^d. Considerable changes occurred.
April 4^d. The mean daily force was the least in the month.

VERTICAL FORCE MAGNET.
April 1^d, 2^d, 3^d, 4^d, and 6^d. Remarkable changes occurred.
April 6^d. The mean daily force was the least in the month.

Daily Observations from April 7 to 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 7. 14. 0	23. 15. 49	0·034323	0·038443	P	Apr. 10. 14. 0	23. 15. 11	0·034872	0·038695	H B
16. 0	16. 39	034596	038368		16. 0	16. 19	034908	038355	
18. 0	15. 38	034460	038305		18. 0	16. 50	035081	038232	
20. 0	16. 55	034188	038395	P	20. 0	15. 51	034542	038314	H B
22. 0	17. 2	032621	038364	J H	22. 0	18. 30	033565	038329	J H
Apr. 8. 0. 0	23. 23. 14	0·033300	0·038543	D	Apr. 11. 0. 0	23. 22. 23	0·033816	0·038605	J H
1. 50	26. 38	034884	039335		1. 50	24. 54	033941	039054	
2. 0	26. 40	035062	039312		2. 0	25. 4	034473	039135	
2. 10	26. 37	035150	039288	D	2. 10	25. 0	034406	039019	J H
4. 0	22. 19	035742	039815	P	4. 0	20. 50	034651	039340	H B
6. 0	20. 5	037820	039557		6. 0	18. 41	035068	039407	
8. 0	14. 19	037232	039394		8. 0	18. 5	035203	039073	
10. 0	14. 5	036278	039118	P	10. 0	17. 31	035229	038838	H B
12. 0	15. 27	036030	038982	D	12. 0	17. 50	035281	039156	G
14. 0	19. 25	036045	038587		14. 0	17. 44	035285	038905	
16. 0	14. 27	035387	038379		16. 0	16. 14	035318	038764	
18. 0	14. 37	035741	038402		18. 0	18. 44	035590	038623	
20. 0	14. 13	035549	038504	D	20. 0	16. 22	035350	038578	G
22. 0	17. 30	034316	038591	J H	22. 0	15. 14	034298	038541	D
Apr. 9. 0. 0	23. 21. 35	0·034255	0·038475	J H	Apr. 12. 0. 0	23. 21. 43	0·033671	0·038510	D
1. 50	25. 51	034235	039140		1. 50	25. 3	034473	038997	
2. 0	25. 44	034279	039158		2. 0	25. 8	034428	038956	
2. 10	25. 40	034413	039105	J H	2. 10	24. 56	034406	038939	D
4. 0	22. 42	034117	040075	D	4. 0	23. 0	034721	039624	G
6. 0	20. 16	035625	040001		6. 0	18. 29	035086	039523	
8. 0	18. 48	036775	039490		8. 0	15. 38	035916	039109	
10. 0	17. 5	036017	039135	D	10. 0	15. 50	035676	039093	G
12. 0	16. 40	035697	038845	J H	12. 0	17. 11	035455	038723	D
14. 0	16. 34	035376	036841		14. 0	17. 11	035733	038756	
16. 0	16. 21	035241	038232		16. 0	16. 19	035648	038719	
18. 0	14. 49	034601	038188		18. 0	16. 24	035487	038890	
20. 0	13. 22	034424	037941	J H	20. 0	14. 42	035336	038817	D
22. 0	18. 28	033494	038469	H B	22. 0	16. 22	034190	038613	J H
Apr. 10. 0. 0	23. 25. 34	0·035248	0·038861	H B	Apr. 13. 0. 0	23. 22. 47	0·034037	0·038422	J H
1. 50	28. 48	034558	039478		1. 50	25. 8	035037	038681	
2. 0	28. 40	034337	039449		2. 0	25. 8	035081	038634	
2. 10	28. 15	034115	039391	H B	2. 10	24. 59	035236	038681	J H
4. 0	23. 49	035212	039649	J H	4. 0	21. 19	035646	039024	D
6. 0	19. 31	035844	039695		6. 0	18. 24	035687	039045	
8. 0	18. 33	035415	039426		8. 0	17. 18	036017	038907	
10. 0	18. 28	035310	039117	J H	10. 0	17. 4	035798	038880	D
12. 0	17. 30	035858	039068	H B	12. 0	17. 4	035637	038631	J 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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.
April 8^d and 9^d. Considerable changes occurred.
April 11^d and 12^d. Between 22^h and 24^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.
April 8^d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
April 8^d, 9^d, and 10^d. Remarkable changes occurred.
April 9^d. 14^h. The force at this time was the least in the month.
April 13^d. The daily range was the least in the month.

Daily Observations from April 14 to 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 14. 14. 0	23. 15. 15	0·036652	0·038782	J H	Apr. 17. 14. 0	23. 8. 18	0·036750	0·038595	G
16. 0	17. 55	035700	038486		16. 0	16. 12	035931	039367	
18. 0	15. 26	036349	038390		18. 0	14. 34	035406	038758	
20. 0	17. 7	035799	038351	J H	20. 0	15. 13	035387	038743	G
22. 0	16. 25	034559	038443	H B	22. 0	16. 58	036261	038236	J H
Apr. 15. 0. 0	23. 21. 22	0·035095	0·038770	H B	Apr. 18. 0. 0	23. 21. 37	0·035430	0·038506	J H
1. 50	26. 40	035413	038969		1. 50	24. 20	037693	039038	
2. 0	26. 40	035103	038987		2. 0	24. 18	037183	038986	
2. 10	26. 27	034926	038929	H B	2. 10	24. 6	037405	038945	J H
4. 0	23. 36	036340	039592	J H	4. 0	22. 11	038628	039288	G
6. 0	20. 2	037354	039578		6. 0	19. 39	039182	039482	
8. 0	15. 53	036924	039225		8. 0	19. 31	036215	039556	
10. 0	15. 58	036222	038921	J H	10. 0	13. 55	037920	039405	G
12. 0	15. 24	036491	038919	H B	12. 0	13. 11	037147	038765	J H
14. 0	15. 54	036273	038629		14. 0	17. 8	036605	038682	
16. 0	16. 54	036107	038362		16. 0	16. 47	036265	038382	
18. 0	16. 40	036000	038463		18. 0	17. 47	035921	038295	
20. 0	15. 25	036044	038488	H B	20. 0	15. 57	035076	038522	J H
22. 0	15. 39	035180	038538	D	22. 0	16. 57	034260	038594	H B
Apr. 16. 0. 0	23. 20. 16	0·035183	0·038469	D	Apr. 19. 0. 0	23. 20. 32	0·034087	0·038929	H B
1. 50	22. 41	035564	038839		1. 50	23. 51	035538	039299	
2. 0	22. 50	035476	038821		2. 0	24. 1	035648	039253	
2. 10	23. 17	035697	038810	D	2. 10	24. 1	035183	039235	H B
4. 0	22. 23	035794	039425	H B	4. 0	21. 35	036810	039411	J H
6. 0	20. 21	035676	039555		6. 0	19. 1	036546	039443	
8. 0	16. 57	035812	039215		8. 0	18. 48	037130	039306	
10. 0	16. 28	035503	038921	H B	10. 0	18. 29	036498	039109	J H
12. 0	13. 47	035693	038807	D	12. 0	18. 32	036865	039057	H B
14. 0	11. 11	036406	038410		14. 0	18. 18	036137	039080	
16. 0	9. 22	036575	038056		16. 0	16. 50	035945	038978	
18. 0	14. 54	037372	037894		18. 0	16. 5	035369	038906	
20. 0	18. 37	035734	038301	D	20. 0	13. 58	035163	039080	H B
22. 0	27. 22	029288	038752	H B	22. 0	15. 42	033973	038781	D
Apr. 17. 0. 0	23. 31. 34	0·030174	0·039761	H B	Apr. 20. 0. 0	23. 22. 36	0·033832	0·038993	D
1. 50	30. 5	035684	041614		1. 50	24. 41	034532	039283	
2. 0	30. 37	036105	041398		2. 0	24. 46	034731	039272	
2. 10	30. 52	037256	041178	H B	2. 10	24. 53	034974	039237	D
4. 0	30. 0	036378	041743	D	4. 0	22. 3	035658	039775	H B
6. 0	25. 51	038167	041774		6. 0	19. 6	036076	039721	
8. 0	13. 28	036043	040908		8. 0	17. 40	036189	039540	
10. 0	8. 43	035785	040133	D	10. 0	17. 47	035999	039210	H B
12. 0	6. 41	035256	039252	G	12. 0	17. 26	035966	039269	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, 168°.
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, $25^s·2$.

DECLINATION MAGNET.

April 16^d and 17^d. Considerable changes occurred.

April 17^d. 1^h. 9^m. The western declination was the greatest in the month during extra observations.

April 17^d. 12^h. The western declination was the smallest in the month at the two-hourly observations; the smallest occurred in the Term Observations at 25^d. 7^h. 15^m.

April 17^d and 18^d. The greatest difference between the mean daily declinations for consecutive days occurred.

April 18^d. The mean western declination was the smallest in the month.

April 19^d. The daily range was the smallest in the month.

April 19^d. Between 22^h and 24^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.

April 16^d. The daily range was the least in the month: at 23^h the force was the least in the month.

April 17^d. The daily range was the greatest in the month.

April 17^d and 18^d. The greatest difference in the mean values for consecutive days occurred.

April 17^d and 18^d. Large changes occurred.

April 18^d. The mean daily force was the greatest in the month.

April 18^d. 6^h. The force at this time was greater than at any other time during the month in the regular observations, but the greatest occurred at 25^d. 7^h. 15^m in [the Term-Day Observations.

VERTICAL FORCE MAGNET.

April 16^d and 17^d. The greatest difference in the mean values for consecutive days occurred.

April 16^d and 20^d. Between 2^h. 10^m and 4^h a considerable change occurred on each day.

April 17^d. The mean daily force was the greatest in the month.

April 17^d. The daily range was the greatest in the month.

April 17^d. 6^h. The force at this time was the greatest in the month.

April 17^d and 18^d. Remarkable changes occurred.

Daily Observations from April 21 to 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Apr. 21. 14. 0	23. 14. 1	0·036244	0·038956	D
16. 0	13. 0	036118	038970	
18. 0	14. 50	036303	038950	
20. 0	14. 29	035831	039066	D
22. 0	13. 53	034295	038942	J H
Apr. 22. 0. 0	23. 21. 58	0·034543	0·038892	J H
1. 50	24. 25	035785	039489	
2. 0	24. 19	035719	039442	
2. 10	24. 0	035719	039384	J H
4. 0	22. 32	036475	039874	D
6. 0	20. 3	036868	040022	
8. 0	18. 24	036651	039715	
10. 0	16. 30	036442	039358	D
12. 0	15. 39	036240	039022	J H
14. 0	14. 38	036229	038825	
16. 0	14. 36	036011	038687	
18. 0	12. 41	035930	038448	
20. 0	12. 16	035639	038522	J H
22. 0	13. 38	034484	038629	H B
Apr. 23. 0. 0	23. 22. 21	0·034244	0·039068	H B
1. 50	24. 43	036050	039233	
2. 0	....	.....	.....	
2. 10	23. 3	035430	039175	H B
4. 0	22. 56	036260	039771	J H
6. 0	20. 57	036616	039880	
8. 0	19. 55	036888	039627	
10. 0	18. 22	036907	039323	J H
12. 0	17. 15	036577	039284	H B
14. 0	16. 54	036271	039042	
16. 0	16. 57	035377	037961	
18. 0	14. 54	035870	038452	
20. 0	13. 40	035693	038922	H B
22. 0	14. 48	034627	038622	J H
Apr. 24. 0. 0	23. 20. 48	0·034126	0·038710	J H
1. 50	26. 20	035406	039451	
2. 0	26. 20	035583	038877	
2. 10	26. 9	035339	038825	J H
4. 0	23. 57	036404	039530	H B
6. 0	21. 29	037146	039711	
8. 0	20. 13	036304	039149	H B
10. 0	18. 19	036142	039131	G
12. 0	16. 15	036200	038754	G
Apr. 24. 14. 0	23. 16. 24	0·036051	0·038425	J H
16. 0	16. 12	035837	038480	H B
18. 0	16. 59	035793	038565	H B
20. 0	14. 39	035029	038608	D
22. 0	15. 15	034549	038604	G
Apr. 25. 0. 0	23. 24. 5	0·033464	0·038989	H B
1. 50	29. 22	033484	039306	H B
2. 0	29. 15	033518	039272	D
2. 10	31. 42	034592	039435	D
4. 0	27. 14	033556	039927	J H
6. 0	25. 48	035785	039965	G
8. 0	12. 49	034870	040061	H B
10. 0	19. 4	035877	039769	H B
12. 0	13. 46	037552	038877	D
14. 0	15. 9	035351	038726	
16. 0	13. 58	035277	038674	
18. 0	18. 21	035248	038570	
20. 0	15. 4	033388	038837	D
22. 0	18. 17	033283	038654	J H
Apr. 26. 0. 0	23. 20. 26	0·031241	0·039193	J H & H B
1. 50	28. 57	034464	040029	H B
2. 0	28. 6	034751	039925	
2. 10	27. 41	034795	039855	H B
4. 0	27. 28	035634	040905	D
6. 0	20. 27	034542	040684	
8. 0	21. 28	035967	040419	
10. 0	18. 14	035332	039704	D
12. 0	18. 24	035493	039293	J H
14. 0	16. 49	034863	038705	
16. 0	22. 5	033369	038478	
18. 0	19. 24	033417	038386	
20. 0	15. 58	032900	037916	J H
22. 0	18. 4	032378	038548	H B
Apr. 27. 0. 0	23. 24. 56	0·032396	0·038836	H B
1. 50	25. 51	033688	039380	
2. 0	25. 40	033843	039410	
2. 10	25. 26	033887	039410	H B
4. 0	22. 48	034763	039833	J H
6. 0	20. 16	036941	039845	
8. 0	19. 14	036110	039642	
10. 0	18. 58	035676	039214	J H
12. 0	21. 47	035940	038516	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, 168°; April $24^d. 1^h. 58^m$, 165°.
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, $25^s·2$.

DECLINATION MAGNET.
April 21^d, 22^d, and 23^d. Between 22^h and 24^h considerable changes occurred.
April $23^d. 2^h$. At this time visitors were examining the instruments, and the usual observations were not taken.
April 24^d, 25^d, and 26^d. Remarkable changes occurred.
April 25^d. The daily range was the greatest in the month: at $7^h. 15^m$ the western declination was the smallest in the month.
April $25^d. 2^h. 10^m$. The western declination was the greatest in the month in the two-hourly observations; the greatest occurred in extra observations on April 17^d.
April 27^d. The mean western declination was the greatest in the month.

HORIZONTAL FORCE MAGNET.
April 22^d and 23^d. The least difference in the mean values for consecutive days occurred.
April $25^d. 7^h. 15^m$. The force was the greatest in the month. (See the section of Term-Day Observations.)
April 25^d and 26^d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
April 22^d, 24^d, 25^d, 26^d, and 27^d. Remarkable changes occurred.

Daily Observations from April 28 to May 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 28. 14. 0	23. 17. 22	0·035081	0·038422	H B	May 1. 14. 0	23. 16. 58	0·034654	0·038831	G
16. 0	15. 53	034830	038561		16. 0	19. 47	034620	038954	
18. 0	15. 4	034884	038871		18. 0	17. 16	034416	038648	
20. 0	17. 15	033728	038473	H B	20. 0	17. 51	034059	038986	G
22. 0	18. 31	033100	038522	J H	22. 0	18. 44	033944	038981	H B
Apr. 29. 0. 0	23. 23. 55	0·033254	0·038792	D	May 2. 0. 0	23. 25. 48	0·033436	0·039284	H B
1. 50	30. 16	035801	039351		1. 50	25. 38	035341	039927	
2. 0	30. 14	035668	039298		2. 0	25. 32	035385	039868	
2. 10	29. 18	035314	039217	D	2. 10	25. 24	035385	039768	H B
4. 0	27. 12	036340	039597	H B	4. 0	23. 36	035996	040701	G
6. 0	21. 47	035673	039717		6. 0	19. 15	036198	040197	
8. 0	15. 32	035897	039593		8. 0	20. 16	036900	040048	
10. 0	19. 23	035649	038642	H B	10. 0	18. 1	035914	039532	G
12. 0	14. 14	036589	038511	D	12. 0	13. 19	036662	038831	H B
14. 0	17. 59	035076	038211		14. 0	17. 21	034942	038731	
16. 0	19. 34	034091	038343		16. 0	17. 37	035184	038555	
18. 0	17. 37	034940	038468		18. 0	18. 16	034362	038509	
20. 0	15. 19	034021	038539	D	20. 0	17. 13	034553	038540	H B
22. 0	17. 25	033896	038587	J H	22. 0	18. 59	034148	038620	P
Apr. 30. 0. 0	23. 26. 9	0·033834	0·038790	H B	May 3. 0. 0	23. 23. 15	0·034218	0·039141	P
1. 50	26. 8	035724	039468		1. 50	24. 17	034950	039750	
2. 0	25. 35	035834	039393		2. 0	24. 11	034751	039702	
2. 10	25. 24	036210	039352	H B	2. 10	24. 15	034950	039638	P
4. 0	22. 15	036401	039790	D	4. 0	26. 50	035408	040265	H B
6. 0	20. 15	037459	039709		6. 0	22. 18	037238	040507	
8. 0	16. 39	036744	039785		8. 0	19. 55	035836	040171	
10. 0	16. 49	036161	039286	D	10. 0	18. 20	036065	039383	H B
12. 0	20. 27	035926	038459	J H	12. 0	17. 29	035870	039288	P
14. 0	23. 27	034903	038079		14. 0	17. 55	035853	039055	
16. 0	20. 51	034798	038314		16. 0	18. 46	035603	039084	
18. 0	16. 36	034492	038408		18. 0	18. 7	035336	039264	
20. 0	13. 22	033430	038859	J H	20. 0	16. 7	034951	039233	P
22. 0	20. 2	031446	038946	H B	22. 0	17. 11	034270	039257	J H
May 1. 0. 0	23. 26. 56	0·033119	0·039231	H B	May 4. 0. 0	23. 21. 46	0·033863	0·038930	J H
1. 50	26. 26	035842	039893		1. 50	23. 52	034768	039539	
2. 0	26. 26	035931	039923		2. 0	24. 3	034790	039545	
2. 10	26. 33	035776	039882	H B	2. 10	24. 19	035011	039669	J H
4. 0	20. 51	036037	040198	J H	4. 0	22. 41	035802	039586	P
6. 0	20. 3	035603	040076		6. 0	23. 14	036466	039685	
8. 0	16. 15	036163	039855		8. 0	19. 34	036193	039555	
10. 0	14. 28	034672	039250	J H	10. 0	15. 41	035986	039496	P
12. 0	12. 59	034551	039093	G	12. 0	14. 40	035710	039208	J 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, 165°.
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, $25^s·2$; May 1^d, $25^s·0$.

DECLINATION MAGNET.
April 29^d and 30^d. The least difference in the mean daily declinations for consecutive days occurred.
April 29^d, 30^d, and May 1^d. Considerable changes occurred.
May 3^d. The mean western declination was the greatest in the month.
HORIZONTAL FORCE MAGNET.
April 29^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
May $0^d. 22^h$. The force at this time was the least in the month.
May 1^d. The mean daily force was the least in the month.
May 1^d and 2^d. Considerable changes occurred.
VERTICAL FORCE MAGNET.
April 29^d and 30^d. The least difference in the mean values for consecutive days occurred.
April 29^d, 30^d, May 1^d, 2^d, and 3^d. Remarkable changes occurred.
May 1^d. The adjustments were altered.
May 4^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.

Daily Observations from May 5 to 11.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 5. 14. 0	23. 17. 45	0 ·036278	0 ·039149	J H	May 8. 14. 0	23. 16. 42	0 ·037227	0 ·038825	G
16. 0	15. 19	035293	038722		16. 0	15. 47	037054	038356	
18. 0	16. 58	035339	038614		18. 0	15. 56	036743	038686	
20. 0	16. 8	034820	038893	J H	20. 0	13. 41	035725	039005	G
22. 0	20. 30	034092	039123	H B	22. 0	20. 21	033524	038707	J H
May 6. 0. 0	23. 25. 53	0 ·034012	0 ·039452	H B	May 9. 0. 0	23. 26. 17	0 ·034540	0 ·038986	J H
1. 50	25. 12	035246	039928		1. 50	28. 15	035129	039694	
2. 0	25. 19	035467	039899		2. 0	28. 24	035483	039694	
2. 10	24. 44	035511	039822	H B	2. 10	28. 18	035217	039694	J H
4. 0	23. 18	034206	039746	J H	4. 0	24. 56	036616	040720	G
6. 0	21. 19	036122	040215		6. 0	21. 56	036830	040659	
8. 0	20. 4	037531	040076		8. 0	20. 2	037421	040410	
10. 0	19. 20	036756	039634	J H	10. 0	19. 7	036300	039755	G
12. 0	14. 1	036541	039347	H B	12. 0	14. 45	035892	039312	J H
14. 0	15. 36	035739	039059		14. 0	19. 38	035987	038836	
16. 0	19. 29	035579	038924		16. 0	19. 8	035988	038924	
18. 0	17. 48	035440	039144		18. 0	17. 15	035210	038980	
20. 0	15. 38	034413	038887	H B	20. 0	15. 21	034942	038970	J H
22. 0	17. 8	034763	038971	P	22. 0	18. 1	034736	039162	H B
May 7. 0. 0	23. 23. 37	0 ·034143	0 ·039468	P	May 10. 0. 0	23. 21. 38	0 ·035188	0 ·039053	H B
1. 50	25. 33	035409	039993		1. 50	23 42	035909	039264	
2. 0	25. 44	035630	039934		2. 0	23. 28	035732	039270	
2. 10	25. 39	035630	039875	P	2. 10	23. 38	035732	039264	H B
4. 0	22. 45	036181	040449	H B	4. 0	23. 4	035954	039499	J H
6. 0	20. 20	037195	040671		6. 0	19. 47	036312	039763	
8. 0	19. 25	037262	040311		8. 0	20. 3	037088	039598	
10. 0	18. 28	037121	039834	H B	10. 0	18. 33	036329	039334	J H
12. 0	16. 38	036600	039350	P	12. 0	18. 32	036140	039174	H B
14. 0	16. 38	036566	039375		14. 0	15. 44	035557	038862	
16. 0	21. 1	035060	039372		16. 0	17. 7	035163	038696	
18. 0	21. 40	037752	038687		18. 0	15. 18	035114	038865	
20. 0	14. 19	036806	038704	P	20. 0	16. 29	034696	038929	H B
22. 0	16. 12	034824	038914	H B	22. 0	19. 51	034321	038797	P
May 8. 0. 0	23. 20. 51	0 ·034718	0 ·039310	H B	May 11. 0. 0	23. 24. 54	0 ·034133	0 ·038903	P
1. 50	24. 34	034012	039732		1. 50	25. 56	035430	039555	
2. 0	24. 21	034145	039702		2. 0	25. 34	035341	039496	
2. 10	23. 57	034190	039720	H B	2. 10	25. 11	035363	039437	P
4. 0	25. 4	035885	039997	P	4. 0	21. 40	034998	039983	H B
6. 0	19. 11	037000	040159		6. 0	20. 16	036463	040114	
8. 0	20. 4	037672	040390		8. 0	17. 45	036707	039869	
10. 0	18. 43	036582	040090	P	10. 0	18. 55	036223	039555	H B
12. 0	16. 38	035622	039133	G	12. 0	17. 22	036090	039232	P

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, 165°.
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, 25s·0.

DECLINATION MAGNET.
May 7d and 8d. The least difference in the mean daily declinations for consecutive days occurred.
May 7d and 8d. Considerable changes occurred.
May 10d. The daily range was the smallest in the month.

HORIZONTAL FORCE MAGNET.
May 8d and 9d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
May 6d, 7d, 8d, 9d, and 11d. Considerable changes occurred.

Daily Observations from May 12 to 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 12. 14. 0	23. 17. 35	0·035670	0·039050	P	May 15. 14. 0	23. 15. 59	0·036465	0·038875	P
16. 0	18. 38	035802	039048		16. 0	18. 44	036261	038965	
18. 0	16. 28	035104	039027		18. 0	18. 33	036466	038732	
20. 0	15. 32	034172	038960	P	20. 0	15. 40	035904	038822	P
22. 0	19. 52	034004	038934	J H	22. 0	15. 11	034844	038637	J H
May 13. 0. 0	23. 26. 0	0·034967	0·039260	J H	May 16. 0. 0	23. 24. 50	0·034566	0·038982	H B
1. 50	25. 57	036286	039844		1. 50	25. 31	035492	039635	J H
2. 0	25. 47	035975	039809		2. 0	25. 49	035692	039635	
2. 10	25. 47	036241	039791	J H	2. 10	25. 37	035603	039635	J H
4. 0	21. 26	036317	040110	P	4. 0	23. 56	037094	040053	P
6. 0	20. 3	036837	040299		6. 0	20. 33	037963	040136	
8. 0	20. 3	036786	040123		8. 0	19. 30	037614	039847	
10. 0	17. 49	036200	039709	P	10. 0	18. 37	037571	039601	P
12. 0	17. 16	036249	039285	J H	12. 0	18. 52	037374	039431	J H
14. 0	16. 9	035987	039155		14. 0	19. 15	037085	039092	
16. 0	16. 27	035913	039114		16. 0	19. 15	036600	038906	
18. 0	12. 50	036032	038171		18. 0	17. 33	036413	038975	
20. 0	10. 17	035296	038437	J H	20. 0	15. 30	035549	038680	J H
22. 0	15. 17	034477	038872	H B	22. 0	16. 1	035399	038690	H B
May 14. 0. 0	23. 26. 15	0·034108	0·039202	H B	May 17. 0. 0	23. 22. 41	0·035110	0·038842	H B
1. 50	29. 6	034549	039961		1. 50	24. 20	035690	039344	
2. 0	28. 28	034660	039973		2. 0	24. 18	035867	039368	
2. 10	27. 36	034727	039896	H B	2. 10	24. 18	035778	039374	H B
4. 0	24. 41	035530	040090	J H	4. 0	22. 41	036399	039586	J H
6. 0	20. 57	036751	040341		6. 0	20. 46	036868	039204	
8. 0	19. 12	036868	040040		8. 0	19. 56	037125	039183	
10. 0	18. 50	036022	039782	J H	10. 0	19. 59	036974	038794	J H
12. 0	16. 38	036598	039518	H B	12. 0	19. 40	036818	038895	H B
14. 0	17. 4	036752	038840		14. 0	16. 32	036338	038732	
16. 0	16. 43	034234	038241		16. 0	16. 54	035751	038255	
18. 0	15. 22	035171	038764		18. 0	15. 57	035507	038608	
20. 0	16. 17	034976	038367	H B	20. 0	14. 36	035012	038717	H B
22. 0	15. 45	034610	038457	P	22. 0	17. 20	034869	038535	P
May 15. 0. 0	23. 21. 27	0·034507	0·038878	P	May 18. 0. 0	23. 21. 44	0·035243	0·038716	P
1. 50	24. 29	035980	039472		1. 50	23. 18	036221	039306	
2. 0	24. 38	036312	039472		2. 0	22. 57	036110	039294	
2. 10	24. 34	036533	039413	P	2. 10	22. 57	036331	039247	P
4. 0	24. 10	036013	039903	H B	4. 0	21. 56	037284	039787	H B
6. 0	21. 2	036441	039862		6. 0	21. 16	038612	039800	
8. 0	20. 0	036965	039555		8. 0	20. 29	037499	039473	
10. 0	18. 21	037444	039478	H B	10. 0	18. 53	037989	039091	H B
12. 0	17. 10	037606	038929	P	12. 0	20. 33	037469	038977	P

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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.
May 12^d, 15^d, and 16^d. Between 22^h and 24^h considerable changes occurred.
May 13^d. Considerable changes occurred.
May 14^d. $1^h. 50^m$. The western declination was the greatest in the month.

HORIZONTAL FORCE MAGNET.
May 14^d. Between 14^h and 16^h a considerable change occurred.

VERTICAL FORCE MAGNET.
May 13^d, 16^d, and 17^d. Between 0^h and $1^h. 50^m$ a considerable change occurred on each day.
May 14^d, 15^d, and 18^d. Considerable changes occurred.
May 17^d and 18^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from May 19 to 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 19. 14. 0	23. 17. 4	0·036149	0·038975	P	May 22. 14. 0	23. 5. 28	0·037351	0·041081	P
16. 0	16. 40	036102	039095		16. 0	19. 12	037658	040896	
18. 0	17. 14	035906	038975		18. 0	24. 54	037693	040744	
20. 0	16. 0	035974	038831	P	20. 0	16. 6	035019	037837	P
22. 0	17. 56	035681	038924	J H	22. 0	18. 53	035900	037708	J H
May 20. 0. 0	23. 23. 56	0·035253	0·039027	J H	May 23. 0. 0	23. 24. 50	0·035731	0·038100	H B
1. 50	24. 40	036355	039746	H B	1. 50	27. 39	037771	038570	
2. 0	24. 22	036621	039719		2. 0	27. 53	037727	038561	
2. 10	23. 39	036687	039631	H B	2. 10	26. 38	037616	038502	H B
4. 0	22. 37	036193	039573	P	4. 0	23. 2	040962	038788	P
6. 0	21. 41	036142	039772		6. 0	21. 35	040498	039210	
8. 0	21. 21	036584	039603		8. 0	16. 16	040587	038903	
10. 0	19. 47	036363	039236	P	10. 0	16. 22	038867	038429	P
12. 0	18. 37	036166	039291	G	12. 0	15. 16	038607	038062	J H
14. 0	17. 49	035812	038820		14. 0	18. 1	037555	037977	
16. 0	17. 26	035830	039010		16. 0	16. 3	038215	037691	
18. 0	14. 50	035564	038826		18. 0	12. 37	037973	037857	
20. 0	13. 32	035110	038921	G	20. 0	15. 0	038203	038029	J H
22. 0	17. 15	034435	038686	J H	22. 0	17. 52	037081	038077	H B
May 21. 0. 0	23. 23. 15	0·038808	0·038698	J H	May 24. 0. 0	23. 23. 39	0·037598	0·038557	H B
1. 50	22. 29	039652	038935	P	1. 50	23. 27	038167	039648	
2. 0	23. 54	039674	038935		2. 0	22. 49	038654	039636	
2. 10	24. 11	039696	038911		2. 10	22. 23	039208	039607	H B
4. 0	23. 50	039498	039339	P	4. 0	23. 1	039294	039598	J H
6. 0	23. 0	041300	039940	G	6. 0	20. 8	040216	039559	
8. 0	22. 29	041979	039824		8. 0	19. 1	038933	039587	J H
10. 0	19. 57	040410	039556	G	10. 0	20. 5	037759	038794	G
12. 0	7. 53	039215	039138	H B	12. 0	18. 17	037231	038780	G
14. 0	14. 20	038551	038856		14. 0	16. 31	035954	038443	J H
16. 0	16. 43	038620	039051		16. 0	18. 12	036234	038525	H B
18. 0	16. 7	038358	038891		18. 0	16. 33	035647	038440	H B
20. 0	14. 27	038280	038772	H B	20. 0	15. 21	035233	038494	P
22. 0	15. 18	038102	039096	P	22. 0	17. 30	035334	038404	G
May 22. 0. 0	23. 22. 50	0·039033	0·038623	P	May 25. 0. 0	23. 22. 3	0·035717	0·038075	J H
1. 50	28. 25	039804	039232		1. 50	24. 8	037161	038559	H B
2. 0	27. 42	038918	039143		2. 0	24. 11	037332	038589	
2. 10	27. 27	039140	039114	P	2. 10	24. 7	037062	038618	H B
4. 0	27. 56	038633	039489	H B	4. 0	22. 32	037130	038899	P
6. 0	25. 30	040441	042249		6. 0	21. 39	037378	039318	H B
8. 0	21. 18	040005	041902		8. 0	20. 40	037511	039123	J H
10. 0	12. 42	039171	041691	H B	10. 0	18. 54	036322	038712	G
12. 0	17. 41	038662	041530	P	12. 0	19. 51	035887	038371	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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.
May 19^d and 20^d. Between 22^h and 24^h a considerable change occurred.
May 21^d, 22^d, and 23^d. Remarkable changes occurred.
May 22^d. The daily range was the greatest in the month.
May 22^d. 14^h. The western declination was the smallest in the month.

HORIZONTAL FORCE MAGNET.
May 20^d. The daily range was the least in the month.
May 20^d and 21^d. The greatest difference in the mean values for consecutive days occurred.
May 21^d. The daily range was the greatest in the month.
May 21^d. 0^h. The change in the position of the magnet since the previous observation is great: workmen had been employed near the building until shortly before the observation, but it is believed that all their tools had been removed previously to 0^h.
May 21^d. 8^h. The force at this time was the greatest in the month.
May 21^d and 23^d. Considerable changes occurred.
May 22^d. The mean daily force was the greatest in the month
May 23^d. 4^h to 8^h. The reading was nearly constant, and it was large; a considerable change occurred both before and after this period.

VERTICAL FORCE MAGNET.
May 20^d, between 0^h and $1^h. 50^m$, and May 21^d, between 4^h and 6^h, considerable changes occurred.
May 22^d. The mean daily force was the greatest in the month.
May 22^d. The daily range was the greatest in the month.
May 22^d. 6^h. The force at this time was the greatest in the month.
May 22^d, 23^d, and 24^d. Large changes occurred.
May 23^d. 16^h. The force at this time was the least in the month.

Daily Observations from May 26 to June 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
May 26. 14. 0	23. 17. 58	0·035526	0·038201	H B
16. 0	17. 20	035327	037998	
18. 0	16. 27	035224	038046	
20. 0	17. 37	034807	037929	H B
22. 0	17. 21	034724	037970	J H
May 27. 0. 0	23. 20. 40	0·035249	0·037941	P
1. 50	22. 51	036195	038648	
2. 0	23. 2	035973	038648	
2. 10	22. 55	035973	038648	P
4. 0	21. 57	036649	038943	H B
6. 0	20. 5	037362	039060	
8. 0	14. 31	037982	039021	
10. 0	16. 34	036291	038718	H B
12. 0	17. 0	035871	038454	P
14. 0	16. 15	036280	038412	
16. 0	15. 3	035940	038120	
18. 0	16. 39	035098	038143	
20. 0	15. 53	034559	038371	P
22. 0	21. 14	034367	038681	J H
May 28. 0. 0	23. 25. 0	0·034814	0·038600	H B
1. 50	26. 14	036314	039200	
2. 0	26. 14	036136	039170	
2. 10	25. 58	036314	039141	H B
4. 0	23. 14	036547	039058	P
6. 0	20. 0	036688	039204	
8. 0	19. 20	037403	039053	
10. 0	17. 28	037147	038897	P
12. 0	18. 50	036036	038539	J H
14. 0	18. 40	035985	038558	
16. 0	17. 38	035948	038530	
18. 0	16. 25	035224	038402	
20. 0	16. 25	034867	038238	J H
22. 0	17. 29	034453	038408	H B
May 29. 0. 0	23. 22. 59	0·035022	0·038325	H B
1. 50	25. 40	036321	038459	
2. 0	25. 40	036299	038436	
2. 10	25. 47	036365	038436	H B
4. 0	23. 5	036263	038629	J H
6. 0	20. 40	036501	038658	
8. 0	18. 53	037608	038907	
10. 0	16. 5	036618	038714	J H
12. 0	17. 17	036513	038646	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
May 29. 14. 0	23. 15. 53	0·036535	0·038705	G
16. 0	15. 44	035812	038589	
18. 0	14. 18	035590	038736	
20. 0	16. 29	034841	038413	G
22. 0	17. 36	034472	038581	H B
May 30. 0. 0	23. 21. 58	0·035420	0·038274	H B
1. 50	24. 38	036186	038940	H B
2. 0	24. 39	036340	038940	J H
2. 10	24. 33	036474	038940	
4. 0	23. 1	036663	038888	J H
6. 0	21. 5	037208	039276	G
8. 0	19. 57	036857	038887	
10. 0	18. 40	036865	039314	G
12. 0	18. 31	036491	038713	H B
14. 0	18. 30	036321	038603	
16. 0	17. 40	036182	038713	
18. 0	15. 21	035937	038351	
20. 0	15. 26	035812	038461	H B
22. 0	17. 50	035110	038530	P
May 31. 0. 0	23. 22. 55	0·036251	0·038320	P
1. 50	25. 48	037561	038704	
2. 0	25. 49	037539	038704	
2. 10	25. 53	037539	038674	P
4. 0	24. 59	038196	039089	H B
6. 0	21. 37	037998	039172	
8. 0	20. 15	037681	039153	
10. 0	20. 34	037205	038938	H B
12. 0	18. 23	036913	038757	P
14. 0	17. 40	037113	038485	
16. 0	17. 4	036705	038514	
18. 0	15. 57	036007	038351	
20. 0	16. 11	034474	038247	P
22. 0	17. 30	034738	038234	J H
June 1. 0. 0	23. 25. 13	0·035962	0·038648	J H
1. 50	27. 57	037708	039244	
2. 0	27. 57	037641	039120	
2. 10	27. 49	037708	039120	J H
4. 0	21. 51	038403	039381	D
6. 0	18. 32	037383	039207	P
8. 0	20. 33	036804	039012	
10. 0	19. 24	037383	038864	P
12. 0	15. 53	036985	037715	J 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, 165°.
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, $25^{s}\cdot 0$.

DECLINATION MAGNET.
May 27^{d}. Considerable changes occurred.
May 27^{d}. The mean western declination was the smallest in the month.
May 27^{d} and 28^{d}. The greatest difference in the mean daily declinations for consecutive days occurred.
May 31^{d}, between 22^{h} and 24^{h}, and June 1^{d}, between 2^{h} and 4^{h}, considerable changes occurred.

HORIZONTAL FORCE MAGNET.
May 27^{d} and 28^{d}. The least difference in the mean values for consecutive days occurred.

VERTICAL FORCE MAGNET.
May 27^{d}. The mean daily force was the least in the month.
May 27^{d} and 28^{d}. Between 0^{h} and $1^{h}.50^{m}$ a considerable change occurred on each day
May 29^{d}. The daily range was the least in the month.
May 30^{d} and June 1^{d}. Considerable changes occurred.

Daily Observations from June 2 to 8.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 2. 14. 0	23. 19. 43	0·035853	0·038871	J H	June 5. 14. 0	23. 17. 32	0·035759	0·038661	P
16. 0	20. 19	035687	038066		16. 0	16. 51	035656	038692	
18. 0	17. 2	036006	037954		18. 0	15. 24	035817	038487	
20. 0	15. 53	034110	037918	J H	20. 0	14. 7	035725	038570	P
22. 0	16. 5	034704	038241	H B	22. 0	17. 4	034268	038371	J H
June 3. 0. 0	23. 22. 31	0·034797	0·038376	H B	June 6. 0. 0	23. 23. 25	0·033687	0·038471	J H
1. 50	25. 5	036728	039000		1. 50	26. 28	035338	038617	D
2. 0	25. 19	036728	038971		2. 0	26. 26	035427	038511	
2. 10	25. 34	036883	038930	H B	2. 10	26. 24	035516	038493	D
4. 0	24. 3	037311	039644	J H	4. 0	24. 0	036072	038734	P
6. 0	20. 56	037057	039504		6. 0	20. 44	036822	038928	
8. 0	19. 43	036430	039368		8. 0	19. 40	036822	038824	
10. 0	17. 46	035647	038660	J H	10. 0	19. 28	036532	038810	P
12. 0	17. 43	035938	038662	H B	12. 0	19. 6	035902	038499	J H
14. 0	17. 36	035880	038417		14. 0	18. 9	035545	038274	
16. 0	17. 6	035710	038692		16. 0	16. 43	036067	038108	
18. 0	16. 26	035487	038362		18. 0	15. 56	036142	038153	
20. 0	16. 35	035162	038311	H B	20. 0	13. 59	035011	038257	J H
22. 0	17. 35	035337	038319	D	22. 0	15. 25	034126	038045	H B
June 4. 0. 0	23. 21. 10	0·035363	0·038663	D	June 7. 0. 0	23. 23. 54	0·034030	0·038153	H B
1. 50	24. 39	036866	039259		1. 50	26. 33	035238	038628	
2. 0	24. 47	036888	039223		2. 0	26. 45	035481	038616	
2. 10	24. 36	036933	039129	D	2. 10	26. 43	035348	038587	H B
4. 0	24. 47	036981	039331	H B	4. 0	23. 7	035593	038656	J H
6. 0	21. 36	036914	039453		6. 0	21. 19	036153	039029	
8. 0	20. 8	036572	039231		8. 0	20. 46	036110	038863	
10. 0	18. 48	035033	038843	H B	10. 0	19. 5	035465	038558	J H
12. 0	19. 13	035335	038569	D	12. 0	18. 43	035179	038532	H B
14. 0	19. 13	035214	038310		14. 0	17. 28	035178	038366	
16. 0	19. 13	035278	038195		16. 0	17. 8	034831	038291	
18. 0	16. 7	035403	038039		18. 0	14. 30	034395	038342	
20. 0	15. 15	034677	037912	D	20. 0	14. 3	033901	038353	H B
22. 0	16. 56	033418	038201	P	22. 0	15. 28	033271	038340	D
June 5. 0. 0	23. 24. 20	0·033826	0·038375	P	June 8. 0. 0	23. 21. 19	0·033165	0·038491	D
1. 50	26. 58	035323	039077		1. 50	24. 49	034320	038853	
2. 0	26. 58	035545	039018		2. 0	24. 48	034232	038835	
2. 10	27. 16	035788	039018	P	2. 10	24. 50	034365	038835	D
4. 0	25. 43	037184	039278	D	4. 0	24. 17	036400	039324	H B
6. 0	21. 13	037369	039276		6. 0	20. 34	036431	039107	
8. 0	20. 19	036569	039068		8. 0	20. 12	036183	039172	
10. 0	17. 11	036458	038816	D	10. 0	19. 22	035472	038822	H B
12. 0	17. 28	035936	038517	P	12. 0	17. 40	035372	038703	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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.
June 2^d, 4^d, 5^d, and 6^d. Between 22^h and 24^h a considerable change occurred.
June 4^d. The daily range was the smallest in the month.
June 6^d and 7^d. The least difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
June 3^d, 4^d, and 6^d. Considerable changes occurred.
June 4^d. The daily range was the least in the month.
June 8^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.

VERTICAL FORCE MAGNET.
June 3^d. Considerable changes occurred.
June 4^d and 5^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
June 6^d. The daily range was the least in the month.

Daily Observations from June 9 to 15.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
June 9. 14. 0	23. 16. 9	0·035759	0·038484	D
16. 0	16. 32	035242	038092	
18. 0	12. 21	035256	038077	
20. 0	15. 34	034665	038144	D
22. 0	17. 56	033979	038073	P
June 10. 0. 0	23. 24. 46	0·033603	0·038372	P
1. 50	24. 24	035693	038881	
2. 0	24. 11	035693	038822	
2. 10	23. 34	035493	038780	P
4. 0	23. 38	036315	039019	D
6. 0	20. 41	037332	039182	
8. 0	19. 33	036847	039052	
10. 0	19. 37	036264	038904	D
12. 0	17. 56	035476	038446	P
14. 0	18. 59	035449	038602	
16. 0	15. 30	034762	038039	
18. 0	14. 59	034643	038101	
20. 0	14. 34	033366	037954	P
22. 0	20. 2	032710	038170	J H
June 11. 0. 0	23. 25. 16	0·034302	0·038673	J H
1. 50	25. 1	035851	038987	
2. 0	24. 59	036028	038810	
2. 10	24. 39	036072	038810	J H
4. 0	23. 11	036871	039406	P
6. 0	19. 15	036513	039450	
8. 0	19. 20	036228	039301	
10. 0	18. 32	035406	039145	P
12. 0	17. 31	035198	038496	J H
14. 0	19. 10	035463	038353	
16. 0	19. 30	035544	037996	
18. 0	15. 28	034983	037612	
20. 0	13. 46	032855	037577	J H
22. 0	16. 56	033065	038179	D
June 12. 0. 0	23. 25. 48	0·033998	0·038741	D
1. 50	26. 0	034840	039484	
2. 0	25. 39	034707	039431	
2. 10	25. 22	034884	039419	D
4. 0	23. 56	035628	040137	J H
6. 0	20. 12	035525	039565	
8. 0	18. 52	035223	039481	
10. 0	20. 27	034956	038999	J H
12. 0	17. 2	034786	038917	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
June 12. 14. 0	23. 16. 47	0·034579	0·038761	G
16. 0	16. 11	035118	038792	
18. 0	15. 26	035294	038378	
20. 0	16. 27	034479	038378	G
22. 0	19. 21	033398	038364	D
June 13. 0. 0	23. 25. 46	0·034346	0·038701	D
1. 50	27. 21	034985	039326	
2. 0	27. 41	035185	039308	
2. 10	27. 47	035362	039279	D
4. 0	23. 37	035853	039863	G
6. 0	20. 51	035245	040019	
8. 0	19. 11	035551	039366	
10. 0	18. 16	035688	039133	G
12. 0	17. 12	035075	038932	D
14. 0	16. 46	034826	038540	
16. 0	15. 52	034522	038448	
18. 0	16. 51	034020	038292	
20. 0	15. 43	033426	038145	D
22. 0	18. 10	032888	038282	P
June 14. 0. 0	23. 26. 46	0·033586	0·038395	P
1. 50	27. 13	035697	038931	
2. 0	27. 16	035475	038925	
2. 10	27. 6	035497	038913	P
4. 0	23. 24	034852	039300	D
6. 0	19. 50	035337	039330	
8. 0	19. 7	035827	039267	
10. 0	18. 25	035550	038915	D
12. 0	18. 13	035560	038745	P
14. 0	17. 52	034987	038453	
16. 0	16. 16	034966	038383	
18. 0	14. 42	034813	038136	
20. 0	14. 29	033706	037858	P
22. 0	18. 46	032739	038251	J H
June 15. 0. 0	23. 22. 58	0·032473	0·037908	J H
1. 50	26. 22	032895	038608	
2. 0	26. 11	033028	038490	
2. 10	25. 54	033228	038478	J H
4. 0	23. 34	034642	039070	P
6. 0	19. 30	035220	039041	
8. 0	19. 25	035919	038852	
10. 0	17. 32	035578	038661	P
12. 0	17. 54	035523	038374	J H

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, 165°.
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, 25s·0.

DECLINATION MAGNET.
June 9d, 11d, 12d, and 13d. Between 22h and 24h a considerable change occurred on each day.
June 10d. Considerable changes occurred.
June 12d and 13d. The least difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
June 10d. Between 0h and 1h. 50m a considerable change occurred.
June 11d. Considerable changes occurred.
June 15d. The mean daily force was the least in the month.
June 15d. 0h. The force at this time was the least in the month.

VERTICAL FORCE MAGNET.
June 10d, 11d, 12d, 13d, and 15d. Considerable changes occurred.
June 12d. 4h. The force at this time was the greatest in the month.
June 13d. The mean daily force was the greatest in the month.
June 12d. The daily range was the greatest in the month.
June 14d. Between 0h and 1h. 50m a considerable change occurred.

Daily Observations from June 16 to 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 16. 14. 0	23. 9. 11	0·035525	0·037518	J H	June 19. 14. 0	23. 15. 17	0·035107	0·037819	J H
16. 0	15. 6	035461	037462		16. 0	15. 37	035097	038236	D
18. 0	18. 49	034781	037972		18. 0	14. 25	035002	038467	D
20. 0	15. 44	033689	037770	J H	20. 0	15. 34	034568	038350	P
22. 0	15. 44	033513	038043	D	22. 0	16. 41	033690	038114	G
June 17. 0. 0	23. 24. 5	0·035102	0·038464	D	June 20. 0. 0	23. 21. 23	0·033712	0·038174	D
1. 50	23. 53	036260	039095		1. 50	24. 31	035307	038596	P
2. 0	24. 2	036215	039053		2. 0	24. 29	035529	038611	
2. 10	24. 4	036304	039030	D	2. 10	24. 29	035546	038637	P
4. 0	24. 24	036992	039316	J H	4. 0	23. 56	036482	039021	J H
6. 0	21. 0	036819	039272		6. 0	19. 3	037011	039235	D
8. 0	15. 44	037354	039136		8. 0	19. 50	037145	038987	P
10. 0	19. 26	036071	038748	J H	10. 0	16. 20	037575	038897	G
12. 0	18. 16	036286	038607	D	12. 0	15. 23	036958	038889	J H
14. 0	24. 53	036965	038232		14. 0	13. 41	036451	038251	
16. 0	18. 9	036702	037806		16. 0	12. 10	036141	038223	
18. 0	17. 34	035592	037894		18. 0	11. 59	035256	038207	
20. 0	16. 20	034238	037915	D	20. 0	12. 6	034555	038002	J H
22. 0	17. 26	033366	037777	P	22. 0	19. 58	033928	038179	D
June 18. 0. 0	23. 23. 22	0·034122	0·037962	P	June 21. 0. 0	23. 27. 4	0·034061	0·038481	D
1. 50	26. 56	036334	038608		1. 50	30. 37	036343	039114	
2. 0	25. 55	035913	038549		2. 0	30. 6	036431	039114	
2. 10	25. 34	035869	038549	P	2. 10	30. 9	036519	039131	D
4. 0	23. 18	037072	039082	D	4. 0	26. 53	037185	040071	J H
6. 0	21. 53	037038	039130		6. 0	21. 53	037177	039861	
8. 0	20. 33	036723	038986		8. 0	20. 21	038439	039490	
10. 0	17. 31	036463	038501	D	10. 0	18. 6	037805	038821	J H
12. 0	14. 59	035630	038221	P	12. 0	15. 5	036606	038791	D
14. 0	17. 3	035869	038311		14. 0	16. 1	037974	038592	
16. 0	17. 55	035064	038049		16. 0	15. 4	036327	038441	
18. 0	15. 58	034712	038080		18. 0	17. 1	035914	038484	
20. 0	14. 45	034303	037881	P	20. 0	15. 36	035725	038291	D
22. 0	17. 49	033649	037900	D	22. 0	17. 33	035578	038298	P
June 19. 0. 0	23. 25. 0	0·034532	0·037768	D	June 22. 0. 0	23. 21. 30	0·035800	0·038390	P
1. 50	26. 33	035576	038088		1. 50	23. 41	036276	038928	
2. 0	26. 15	035642	038088		2. 0	23. 42	036276	038940	
2. 10	26. 22	035709	038105	D	2. 10	23. 47	036497	038952	P
4. 0	23. 11	036510	038465	P	4. 0	22. 14	037167	039496	D
6. 0	19. 54	036074	038514		6. 0	21. 11	037490	039516	
8. 0	19. 59	036517	038611	P	8. 0	20. 8	038152	039411	
10. 0	17. 26	035953	038420	G	10. 0	18. 39	037701	039100	D
12. 0	16. 31	035580	038288	G	12. 0	18. 27	037842	038652	P

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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.

June $16^d. 14^h$. The western declination was the smallest in the month.
June 17^d and 18^d. The greatest difference in the mean daily declinations for consecutive days occurred.
June 18^d. The mean western declination was the greatest in the month.
June 20^d. The mean western declination was the smallest in the month.
June 21^d. The daily range was the greatest in the month.
June 16^d, 17^d, and 20^d. Considerable changes occurred.
June 18^d. Between 22^h and 24^h a considerable change occurred.
June $21^d. 1^h. 50^m$. The western declination was the greatest in the month.

HORIZONTAL FORCE MAGNET.

June 18^d. Considerable changes occurred.
June 21^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
June 20^d. The daily range was the greatest in the month.

VERTICAL FORCE MAGNET.

June $16^d. 16^h$. The force at this time was the least in the month.
June 17^d, 18^d, 21^d, and 22^d. Considerable changes occurred.
June 21^d and 22^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from June 23 to 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 23. 14. 0	23. 18. 41	0·037466	0·039260	P	June 26. 14. 0	23. 18. 20	0·036168	0·038363	G
16. 0	14. 50	037262	038621		16. 0	14. 57	035954	038270	
18. 0	12. 47	037102	038416		18. 0	14. 31	035555	038400	
20. 0	13. 44	035406	038465	P	20. 0	14. 14	035404	038429	G
22. 0	15. 56	034623	038360	J H	22. 0	18. 1	034592	038154	P
June 24. 0. 0	23. 23. 6	0·034798	0·038658	J H	June 27. 0. 0	23. 22. 39	0·035750	0·037965	P
1. 50	23. 24	035385	039184		1. 50	23. 41	036725	038355	
2. 0	23. 6	035518	039149		2. 0	23. 38	036371	038355	
2. 10	23. 6	035562	039090	J H	2. 10	23. 43	036260	038355	
4. 0	20. 40	036426	039113	P	4. 0	22. 19	037009	038633	P
6. 0	18. 50	037703	039379		6. 0	20. 33	037478	038854	D
8. 0	19. 52	037737	039261		8. 0	17. 34	037574	038727	J H
10. 0	19. 28	037696	038777	P	10. 0	18. 7	037239	038985	G
12. 0	18. 2	036881	038413	J H	12. 0	17. 37	036962	038279	P
14. 0	18. 6	036684	038195		14. 0	16. 41	036885	038237	
16. 0	15. 7	036310	038134		16. 0	15. 56	036657	038018	
18. 0	14. 26	035977	038027		18. 0	14. 15	036670	038108	
20. 0	15. 30	034897	038305	J H	20. 0	14. 42	035784	038020	P
22. 0	15. 54	034630	038012	D	22. 0	17. 24	034920	037941	J H
June 25. 0. 0	23. 21. 55	0·035589	0·037748	D	June 28. 0. 0	23. 23. 22	0·036065	0·038073	J H
1. 50	23. 59	035977	038202		1. 50	24. 24	037109	038221	
2. 0	24. 3	035889	038196		2. 0	24. 30	037197	038103	
2. 10	24. 10	035800	038179	D	2. 10	24. 35	037375	038221	J H
4. 0	23. 6	036260	038279	J H	4. 0	21. 45	037980	038723	P
6. 0	19. 16	036345	038389		6. 0	20. 9	038267	038535	
8. 0	17. 11	037224	038362		8. 0	19. 16	038201	038748	
10. 0	17. 27	036608	038111	J H	10. 0	17. 58	038320	038418	P
12. 0	16. 15	035942	037992	D	12. 0	17. 39	037987	038161	J H
14. 0	15. 7	035732	037947		14. 0	17. 57	038342	038004	
16. 0	14. 39	036110	037992		16. 0	17. 5	037027	037944	
18. 0	13. 58	036037	038211		18. 0	11. 16	036362	037785	
20. 0	14. 15	035836	038029	D	20. 0	13. 34	035040	037474	J H
22. 0	18. 48	035189	037906	J H	22. 0	20. 7	033750	037856	D
June 26. 0. 0	23. 22. 37	0·035750	0·038045	P	June 29. 0. 0	23. 27. 21	0·035038	0·038294	D
1. 50	24. 57	035647	038685		1. 50	24. 50	037255	039128	
2. 0	24. 49	035426	038655		2. 0	25. 2	036967	039110	
2. 10	25. 0	035426	038608	P	2. 10	25. 10	037100	039104	D
4. 0	22. 39	036686	038767	D	4. 0	23. 58	037859	039245	J H
6. 0	19. 9	036929	038909		6. 0	20. 43	039255	039565	J H
8. 0	18. 34	037623	038846		8. 0	16. 15	039315	039152	G
10. 0	17. 26	036656	038467	D	10. 0	15. 47	038488	038745	D
12. 0	18. 49	036253	038324	G	12. 0	18. 16	037402	038465	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, 165°.
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, 25^s·0.

DECLINATION MAGNET.

June 23^d and 24^d. Between 22^h and 24^h a considerable change occurred.
June $27^d. 2^h$. The micrometer reading was registered three revolutions less than that used in deducing the above result: had the observation been correct the result would have been 23°. 28′. 20″.
June 27^d and 28^d. Remarkable changes occurred.

HORIZONTAL FORCE MAGNET.

June 27^d and 28^d. The greatest difference in the mean values for consecutive days occurred.
June 28^d. The mean daily force was the greatest in the month.
June 28^d and 29^d. The least difference in the mean values for consecutive days occurred.
June 29^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
June $29^d. 8^h$. The force at this time was the greatest in the month.

VERTICAL FORCE MAGNET.

June 24^d. Considerable changes occurred.
June 24^d and 25^d. The greatest difference in the mean values for consecutive days occurred.
June 25^d. The mean daily force was the least in the month.
June 26^d, between 0^h and $1^h. 50^m$; on 27^d, between 10^h and 12^h; and on 28^d, between $2^h. 10^m$ and 4^h; considerable changes occurred.

Daily Observations from June 30 to July 6.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
June 30. 14. 0	23. 17. 17	0·037361	0·038263	D
16. 0	20. 8	036866	038077	
18. 0	17. 9	036482	038021	
20. 0	15. 30	035603	037834	D
22. 0	17. 36	034932	037723	P
July 1. 0. 0	23. 23. 49	0·036471	0·037935	P
1. 50	25. 38	036852	038465	
2. 0	24. 40	037206	038453	
2. 10	24. 17	036962	038394	P
4. 0	22. 19	037652	038838	D
6. 0	19. 39	037949	039043	
8. 0	19. 46	038557	038681	
10. 0	17. 6	037788	038478	D
12. 0	17. 20	037162	038237	P
14. 0	17. 23	037264	038012	
16. 0	17. 13	036975	037949	
18. 0	15. 5	036976	038046	
20. 0	12. 54	036363	038018	P
22. 0	15. 41	035018	037878	J H
July 2. 0. 0	23. 23. 7	0·034957	0·037638	J H
1. 50	24. 53	036074	038028	
2. 0	24. 58	036384	037981	
2. 10	25. 25	036733	038207	J H
4. 0	24. 51	037657	038510	P
6. 0	21. 9	037401	038452	
8. 0	19. 14	037316	038678	
10. 0	15. 34	036996	038456	P
12. 0	22. 30	036871	038168	J H
14. 0	21. 31	036768	037987	
16. 0	21. 12	036462	037877	
18. 0	9. 29	035682	037949	
20. 0	12. 34	035781	037738	J H
22. 0	16. 7	035232	037968	P
July 3. 0. 0	23. 24. 25	0·035178	0·037943	D
1. 50	24. 26	037141	038293	
2. 0	24. 36	037207	038310	
2. 10	24. 30	037207	038304	D
4. 0	22. 11	037796	038639	J H
6. 0	21. 57	038201	038799	J H
8. 0	18. 55	037707	038620	P
10. 0	17. 59	037958	038279	P
12. 0	17. 48	037367	038139	G
July 3. 14. 0	23. 17. 15	0·037367	0·038316	G
16. 0	16. 3	037684	038282	
18. 0	13. 22	036533	038606	
20. 0	16. 22	036304	038228	G
22. 0	15. 29	035929	038067	D
July 4. 0. 0	23. 19. 57	0·036283	0·038018	D
1. 50	24. 51	036735	038270	
2. 0	25. 28	036934	038270	
2. 10	25. 58	036846	038247	D
4. 0	23. 48	037087	039384	G
6. 0	20. 16	037973	038069	
8. 0	19. 21	037571	038440	
10. 0	17. 35	037018	038378	G
12. 0	17. 1	036693	038173	D
14. 0	17. 1	036887	038059	
16. 0	17. 1	036710	038040	
18. 0	14. 54	036212	037898	
20. 0	13. 27	035967	037996	D
22. 0	16. 32	035972	037667	J H
July 5. 0. 0	23. 23. 11	0·035988	0·037965	P
1. 50	24. 47	036135	037828	J H
2. 0	24. 31	036090	037763	
2. 10	24. 27	036201	037869	J H
4. 0	22. 56	036844	038328	D
6. 0	20. 53	037547	038421	
8. 0	18. 51	037718	038334	
10. 0	18. 19	037345	038137	D
12. 0	17. 33	037078	037881	J H
14. 0	15. 36	036463	037900	
16. 0	15. 22	036547	037990	
18. 0	12. 51	036735	038158	
20. 0	13. 21	035807	037631	J H
22. 0	16. 25	035223	037684	P
July 6. 0. 0	23. 20. 27	0·035373	0·037755	P
1. 50	24. 22	037492	038162	D
2. 0	24. 22	037470	038144	
2. 10	24. 26	037647	038138	D
4. 0	21. 21	037832	038013	J H
6. 0	19. 41	038420	038487	J H
8. 0	19. 18	038442	038389	D
10. 0	17. 28	037810	038125	P
12. 0	16. 46	037640	038164	P

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, 165°.
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, $25^{s}\cdot 0$.

DECLINATION MAGNET.
June 30^{d} and July 1^{d}. Between 22^{h} and 24^{h} a considerable change occurred.
July 2^{d}. 18^{h}. The western declination was the smallest in the month.
July 2^{d} and 4^{d}. Considerable changes occurred.

HORIZONTAL FORCE MAGNET.
July 5^{d}. The daily range was the least in the month.
July 6^{d}. Between 0^{h} and $1^{h}.\ 50^{m}$ a considerable change occurred.

VERTICAL FORCE MAGNET.
July 1^{d}, between 0^{h} and $1^{h}.\ 50^{m}$, and on 5^{d}, between 18^{h} and 20^{h}, considerable changes occurred.
July 4^{d}. Large changes occurred.
July 5^{d} and 6^{d}. The least difference in the mean values for consecutive days occurred.

Daily Observations from July 7 to 13.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 7. 14. 0	23. 17. 14	0 ·037441	0 ·037993	P	July 10. 14. 0	23. 18. 1	0 ·037774	0 ·037671	P
16. 0	17. 14	037271	037906		16. 0	17. 23	038013	037273	
18. 0	14. 4	036977	037803		18. 0	21. 38	037537	037356	
20. 0	16. 23	037130	037602	P	20. 0	22. 26	036645	037467	P
22. 0	18. 30	035957	037712	D	22. 0	18. 8	035928	037322	B
July 8. 0. 0	23. 25. 12	0 ·035418	0 ·037962	B	July 11. 0. 0	23. 24. 2	0 ·035738	0 ·037382	D
1. 50	28. 13	036211	038780	D	1. 50	23. 31	037761	037917	J H
2. 0	27. 51	036433	038750		2. 0	23. 57	037894	037911	
2. 10	27. 49	037119	038727	D	2. 10	24. 24	037850	037911	J H
4. 0	25. 17	037213	039198	P	4. 0	22. 31	037706	038394	P
6. 0	23. 21	038064	039767	P	6. 0	19. 57	038978	038239	P
8. 0	27. 23	039988	039032	B	8. 0	19. 31	039041	038025	D
10. 0	19. 22	038796	038540	P	10. 0	18. 31	038506	037826	P
12. 0	18. 19	039142	038139	D	12. 0	16. 41	038261	037574	D
14. 0	17. 43	038561	038200		14. 0	15. 55	037818	037476	
16. 0	17. 39	038053	038083		16. 0	18. 58	038896	037238	
18. 0	18. 47	037418	037701		18. 0	15. 24	038486	037107	
20. 0	18. 11	036868	037962	D	20. 0	17. 5	037618	037006	D
22. 0	17. 27	035528	037966	B	22. 0	17. 20	035919	036838	G
July 9. 0. 0	23. 20. 28	0 ·035787	0 ·037948	B	July 12. 0. 0	23. 20. 48	0 ·036822	0 ·037116	B
1. 50	22. 19	036941	037990	J H	1. 50	22. 49	034046	037622	
2. 0	22. 34	037052	038037		2. 0	22. 43	036200	037536	
2. 10	22. 28	036897	038244	J H	2. 10	22. 38	037639	037536	B
4. 0	21. 32	037492	038626	D	4. 0	21. 1	038339	037800	D
6. 0	20. 34	038250	038456		6. 0	19. 8	038279	037853	
8. 0	19. 3	039702	038226		8. 0	18. 29	039111	037817	
10. 0	18. 53	038505	037834	D	10. 0	18. 29	038368	037500	D
12. 0	19. 31	038393	036889	J H	12. 0	17. 57	037939	037569	G
14. 0	14. 36	037695	037156		14. 0	17. 3	037854	037482	
16. 0	11. 35	037333	036983		16. 0	16. 48	037640	037442	
18. 0	15. 21	037662	037143		18. 0	18. 43	038227	037164	
20. 0	14. 48	036496	037007	J H	20. 0	13. 40	038603	037058	G
22. 0	17. 58	036049	037363	D	22. 0	18. 18	035801	036928	B
July 10. 0. 0	23. 20. 14	0 ·036917	0 ·037574	G	July 13. 0. 0	23. 24. 28	0 ·036703	0 ·037114	B
1. 50	21. 44	036907	037925	P	1. 50	25. 7	038814	037748	P
2. 0	21. 26	036907	037925		2. 0	25. 52	038814	037689	
2 10	21. 29	037128	037925	P	2. 10	25. 39	039036	037689	P
4. 0	21. 15	037703	038099	J H	4. 0	24. 24	036327	037953	B
6. 0	20. 28	039154	038337	J H	6. 0	20. 39	037228	037650	
8. 0	18. 38	038779	038144	P	8. 0	16. 55	038082	037630	B
10. 0	19. 0	038104	037993	D	10. 0	17. 56	037800	037718	G
12. 0	18. 53	037778	037717	J H	12. 0	15. 57	037854	037431	J 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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.

July 7^d, between 22^h and 24^h, and on 8^d, between 8^h and 10^h, considerable changes occurred.
July 8^d. The mean western declination was the greatest in the month.
July 9^d. The daily range was the smallest in the month.
July 10^d and 11^d. The greatest difference in the mean daily declinations for consecutive days occurred.
July 12^d. Between 22^h and 24^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.

July $8^d. 8^h$. The force at this time was the greatest in the month.
July 9^d and 10^d. The least difference in the mean values for consecutive days occurred.
July 11^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
July 12^d. The daily range was the greatest in the month.
July $12^d. 1^h. 50^m$. The force at this time was the least in the month.
July 12^d and 13^d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.

July 8^d. The mean daily force was the greatest in the month.
July 8^d. Considerable changes occurred.
July $8^d. 6^h$. The force at this time was the greatest in the month.
July 9^d, between 10^h and 12^h, and on 11^d, 12^d, and 13^d, between 0^h and $1^h. 50^m$, a considerable change occurred on each day.
July 9^d and 10^d. The greatest difference in the mean values for consecutive days occurred.

Daily Observations from July 14 to 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 14. 14. 0	23. 17. 21	0 ·037427	0 ·037388	P	July 17. 14. 0	23. 20. 22	0 ·038116	0 ·037378	G
16. 0	16. 49	037470	037240		16. 0	16. 1	037589	037340	
18. 0	17. 19	037470	037074		18. 0	13. 57	037411	037541	
20. 0	13. 22	036784	036723	P	20. 0	14. 25	036747	037470	G
22. 0	16. 36	035640	036926	D	22. 0	18. 58	034064	037133	B
July 15. 0. 0	23. 26. 41	0 ·037179	0 ·037291	B	July 18. 0. 0	23. 23. 43	0 ·035179	0 ·036976	B
1. 50	27. 9	038072	037541	G	1. 50	29. 32	037116	037504	P
2. 0	26. 50	038558	037541	B	2. 0	29. 40	037094	037445	
2. 10	26. 37	038448	037453	B	2. 10	29. 46	037515	037356	P
4. 0	23. 45	038507	038009	P	4. 0	24. 5	037767	037735	B
6. 0	20. 6	038213	038287		6. 0	20. 47	037597	038568	G
8. 0	17. 29	039443	038183		8. 0	17. 54	038158	037974	B
10. 0	15. 2	039085	037947	P	10. 0	12. 40	037179	037422	G
12. 0	17. 44	038056	037313	J H	12. 0	14. 49	037248	037229	P
14. 0	17. 23	037520	037245		14. 0	16. 49	037197	037220	
16. 0	16. 52	037010	037004		16. 0	17. 36	037079	037046	
18. 0	13. 28	036908	037046		18. 0	14. 51	036761	036931	
20. 0	14. 13	036132	036780	J H	20. 0	13. 51	035649	036809	P
22. 0	16. 1	035751	036851	B	22. 0	15. 23	034636	036763	B
July 16. 0. 0	23. 20. 32	0 ·035827	0 ·036859	B	July 19. 0. 0	23. 23. 58	0 ·034712	0 ·036927	B
1. 50	26. 39	035503	037282		1. 50	26. 21	036943	037285	
2. 0	27. 55	037717	037282		2. 0	26. 21	036876	037226	
2. 10	27. 55	037827	037282	B	2. 10	25. 57	036876	037226	B
4. 0	23. 3	037779	037539	J H	4. 0	21. 26	038203	037648	P
6. 0	19. 38	038370	037553		6. 0	18. 42	037802	037662	
8. 0	18. 27	038133	037669		8. 0	18. 35	037730	037479	
10. 0	17. 25	038305	037295	J H	10. 0	17. 10	037913	037243	P
12. 0	18. 9	038384	037293	D	12. 0	15. 55	037395	037270	D
14. 0	13. 19	037548	036956		14. 0	15. 14	037251	037142	
16. 0	15. 41	037256	037037		16. 0	16. 29	036812	036944	
18. 0	15. 8	036909	037107		18. 0	13. 51	036630	036967	
20. 0	15. 23	036521	037067	D	20. 0	13. 26	035563	036739	D
22. 0	18. 54	035716	036996	B	22. 0	18. 21	035207	036760	B
July 17. 0. 0	23. 25. 34	0 ·035307	0 ·037195	B	July 20. 0. 0	23. 24. 58	0 ·035768	0 ·037031	B
1. 50	25. 58	036839	037428	P	1. 50	25. 58	038356	037677	
2. 0	25. 52	037061	037428		2. 0	25. 56	038577	037648	
2. 10	26. 2	037061	037398	P	2. 10	25. 46	038577	037589	B
4. 0	24. 56	037939	038366	D	4. 0	23. 4	039400	038185	D
6. 0	21. 1	038032	038112		6. 0	20. 7	039195	038434	
8. 0	19. 13	038640	037849		8. 0	18. 45	038941	038331	
10. 0	15. 58	038257	037421	D	10. 0	19. 15	038895	037818	D
12. 0	12. 17	037209	037378	G	12. 0	18. 16	038124	037405	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, 165°.
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, $25^s·0$.

DECLINATION MAGNET.
July 14^d, between 22^h and 24^h, and on 16^d, between 0^h and $1^h. 50^m$, considerable changes occurred.
July 16^d and 17^d. The least difference in the mean daily declinations for consecutive days occurred.
July 17^d, 18^d, and 19^d. Remarkable changes occurred.
July $18^d. 2^h. 10^m$. The western declination was the greatest in the month in the two-hourly observations.
HORIZONTAL FORCE MAGNET.
July 15^d. The mean daily force was the greatest in the month.
July 16^d. Between $1^h. 50^m$ and 2^h, and on 19^d and 20^d, between 0^h and $1^h. 50^m$, considerable changes occurred; but the observation on July 16^d, at $1^h. 50^m$, appears to be one division of the scale in error; if so, the result would be 0 ·037717, and no change would appear to have taken place between this and the next observation.
July 18^h. Considerable changes occurred.
July 19^d and 20^d. The greatest difference in the mean values for consecutive days occurred.
VERTICAL FORCE MAGNET.
July 15^d, 18^d, and 20^d. Considerable changes occurred.
July 17^d. Between $2^h. 10^m$ and 4^h a remarkable change occurred.

Daily Observations from July 21 to 27.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
July 21. 14. 0	23. 15. 16	0·037826	0·037242	P
16. 0	14. 7	037464	037186	
18. 0	13. 50	037146	037071	
20. 0	13. 8	035618	037102	P
22. 0	15. 59	035016	037193	B
July 22. 0. 0	23. 22. 37	0·034992	0·037723	G
1. 50	22. 27	035339	038181	B
2. 0	22. 25	035339	038122	
2. 10	22. 23	035781	038092	B
4. 0	19. 40	036909	038346	P
6. 0	18. 39	038113	038455	
8. 0	19. 1	038197	038381	
10. 0	18. 32	036999	038084	P
12. 0	16. 59	037171	037891	G
14. 0	15. 48	037170	037453	
16. 0	16. 7	037051	038338	
18. 0	14. 34	036778	037282	G
20. 0	14. 41	035263	037096	B
22. 0	19. 39	035446	037270	P
July 23. 0. 0	23. 24. 28	0·035279	0·037520	B
1. 50	25. 45	036094	038195	P
2. 0	25. 54	036227	038136	
2. 10	25. 51	036359	038136	P
4. 0	22. 53	036529	037620	G
6. 0	21. 37	036954	038742	
8. 0	20. 31	037788	038508	
10. 0	16. 58	037585	037775	G
12. 0	16. 15	037517	037469	B
14. 0	15. 17	036709	037272	
16. 0	14. 30	036352	037243	
18. 0	14. 42	036540	037152	
20. 0	14. 20	036353	037242	B
22. 0	15. 31	035746	037307	D
July 24. 0. 0	23. 22. 24	0·035380	0·037552	D
1. 50	24. 52	035835	038195	
2. 0	24. 59	035813	038189	
2. 10	24. 49	036145	038761	D
4. 0	22. 47	037925	038259	B
6. 0	19. 54	037585	038178	
8. 0	19. 0	037934	038057	B
10. 0	18. 49	037909	037585	G
12. 0	18. 31	037211	037514	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
July 24. 14. 0	23. 17. 4	0·037829	0·037433	D
16. 0	14. 30	037910	037180	P
18. 0	11. 6	037604	036404	P
20. 0	18. 6	035425	036984	B
22. 0	25. 53	037155	036789	G
July 25. 0. 0	23. 25. 48	0·036377	0·037567	D
1. 50	27. 29	035899	038301	
2. 0	27. 25	035186	038354	
2. 10	27. 36	034617	038441	
4. 0	26. 35	036681	038762	D
6. 0	21. 27	037917	038966	B
8. 0	14. 34	036596	038606	P
10. 0	17. 49	038197	038301	G
12. 0	17. 22	037193	037702	P
14. 0	15. 18	036972	037615	
16. 0	14. 59	036326	037459	
18. 0	15. 42	035696	037222	
20. 0	19. 24	036063	037062	P
22. 0	17. 18	035738	037164	G
July 26. 0. 0	23. 20. 43	0·034990	0·037276	B
1. 50	23. 40	036523	037321	
2. 0	23. 52	036523	037232	
2. 10	23. 1	035637	037215	B
4. 0	21. 58	037837	037506	P
6. 0	20. 51	036854	037888	P
8. 0	20. 9	037694	037855	D
10. 0	18. 30	036803	037522	B
12. 0	15. 16	037054	037317	D
14. 0	16. 41	036395	037089	
16. 0	15. 27	036213	037200	
18. 0	15. 44	035921	037052	
20. 0	16. 49	035153	036994	D
22. 0	23. 56	034165	036888	B
July 27. 0. 0	23. 25. 32	0·034829	0·037099	B
1. 50	25. 46	037196	037879	P
2. 0	24. 43	036310	037673	
2. 10	24. 49	036531	037673	P
4. 0	23. 50	037827	038260	D
6. 0	20. 6	036912	038512	
8. 0	13. 12	037934	038534	
10. 0	16. 44	037012	037985	D
12. 0	11. 28	035347	037430	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, 165°.
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, 25^s·0.

DECLINATION MAGNET.

July 21^d and 23^d. Between 22^h and 24^h a considerable change occurred on each day.

July 25^d. The daily range was the greatest in the month.

July 25^d. 1^h. 15^m. The western declination was the greatest in the month during the Term Observations.

July 25^d. Considerable changes occurred.

July 26^d. Between 20^h and 22^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.

July 24^d. 8^h. The reading of the thermometer inclosed in the box with the magnet was 69°·1; at the preceding and following readings it differed but little from 79°·0, and but little change had taken place in the reading of the thermometer attached to the barometer. The reading has been therefore altered conjecturally to 79°·1: had the reading been correct the result would have been 0·036234.

July 25^d, 26^d, and 27^d. Remarkable changes occurred.

July 27^d. The mean daily force was the least in the month.

VERTICAL FORCE MAGNET.

July 21^d. Between 22^h and 24^h a considerable change occurred.

July 23^d, 24^d, 25^d, and 27^d. Considerable changes occurred.

July 24^d. 8^h. The reading of the thermometer was set down 70°; the previous and subsequent readings were 78°·8 and 78°·9 respectively; and it appeared that the readings of those in the Vertical Force Magnet box and in the Declination Magnet box had been interchanged. The reading was altered conjecturally to 78°·9: had the reading been correct as taken the result would have been 0·035708.

July 24^d. 18^h. 15^m. The force at this time was the least in the month during Term Observations.

July 25^d. The daily range was the greatest in the month.

Daily Observations from July 28 to Aug. 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 28. 14. 0	23. 20. 37	0 ·037595	0 ·037317	B.	July 31. 14. 0	23. 8. 15	0 ·036290	0 ·037173	G
16. 0	15. 29	035943	037184		16. 0	9. 48	036584	037133	
18. 0	15. 22	036446	037233		18. 0	8. 19	035965	037428	
20. 0	14. 46	035373	037185	B	20. 0	10. 11	035717	036842	G
22. 0	17. 31	034257	037016	D	22. 0	14. 35	034763	036667	B
July 29. 0. 0	23. 24. 37	0 ·034250	0 ·036832	P	Aug. 1. 0. 0	23. 19. 16	0 ·035580	0 ·036427	B
{ 1. 50	26. 52	035926	037279		{ 1. 50	20. 49	035307	036711	
{ 2. 0	27. 2	036191	037338		{ 2. 0	21. 11	035972	036741	
{ 2. 10	26. 52	036191	037397	P	{ 2. 10	21. 9	036414	036770	B
4. 0	24. 6	036412	037775	B	4. 0	23. 19	037809	036881	G
6. 0	20. 18	036650	037950		6. 0	21. 27	039820	037738	
8. 0	17. 28	037460	037560		8. 0	12. 35	038828	038332	
10. 0	18. 34	037068	037292	B	10. 0	4. 6	034909	037565	G
12. 0	18. 35	036907	037141	P	12. 0	6. 2	035325	036965	B
14. 0	18. 28	036741	037040		14. 0	8. 33	034124	036724	
16. 0	19. 8	036533	036990		16. 0	15. 12	034950	036840	
18. 0	13. 31	036193	036515		18. 0	11. 36	034218	037080	
20. 0	13. 42	035461	036577	P	20. 0	9. 32	034099	036816	B
22. 0	15. 53	034967	036575	B	22. 0	16. 49	032673	036808	P
July 30. 0. 0	23. 22. 7	0 ·035137	0 ·036901	B	Aug. 2. 0. 0	23. 21. 9	0 ·033426	0 ·036990	P
{ 1. 50	22. 28	036174	037093	D	{ 1. 50	24. 48	035596	037869	
{ 2. 0	22. 25	036152	037058		{ 2. 0	24. 30	035353	037692	
{ 2. 10	22. 26	036174	037046	D	{ 2. 10	22. 49	034710	037692	P
4. 0	21. 52	036976	037251	P	4. 0	19. 27	036327	038390	B
6. 0	19. 0	037861	038151		6. 0	15. 48	036992	038012	
8. 0	17. 52	038116	037366		8. 0	11. 49	038558	037828	
10. 0	16. 29	037418	037307	P	10. 0	8. 41	037673	037394	B
12. 0	13. 56	037001	037083	D	12. 0	13. 33	036720	036922	P
14. 0	15. 56	037109	036988		14. 0	12. 47	036039	036835	
16. 0	15. 21	036455	037055		16. 0	10. 7	035767	036805	
18. 0	16. 27	036101	037283		18. 0	10. 17	035529	036928	
20. 0	18. 13	036414	037149	D	20. 0	9. 59	034865	036900	P
22. 0	20. 29	034932	036925	B	22. 0	14. 38	033886	036900	B
July 31. 0. 0	23. 19. 54	0 ·035987	0 ·037159	G	Aug. 3. 0. 0	23. 18. 13	0 ·033433	0 ·037106	B
{ 1. 50	23. 56	039921	037335	P	{ 1. 50	23. 42	035892	037437	D
{ 2. 0	25. 1	039921	037335		{ 2. 0	23. 41	036158	037496	
{ 2. 10	23. 22	038150	037335	P	{ 2. 10	22. 58	035272	037496	D
4. 0	21. 16	038807	037623	D	4. 0	17. 48	036600	037642	P
6. 0	17. 8	037785	037544		6. 0	14. 14	036839	037715	
8. 0	11. 22	038094	037580		8. 0	13. 3	036320	037648	
10. 0	12. 34	036667	037151	D	10. 0	8. 9	037419	037338	P
12. 0	11. 32	036681	037142	G	12. 0	10. 3	035721	036877	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, 165°; from July 31d. 0h, 180°.
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, 25s·0.

DECLINATION MAGNET.
July 28d and 29d. Between 22h and 24h a considerable change occurred.
July 31d. The mean western declination was the smallest in the month.
August 1d. 10h. The western declination was the smallest in the month in the two-hourly observations, but a smaller occurred during extra observations on [August 16d, at 10h. 30m.
August 2d. Considerable changes occurred.
HORIZONTAL FORCE MAGNET.
July 31d, August 1d, 2d, and 3d. Large changes occurred.
August 1d. 22h. The force at this time was the least in the month.
August 1d and 2d. The greatest difference in the mean values for consecutive days occurred.
August 2d. The mean daily force was the least in the month. August 2d. The daily range was the greatest in the month.
VERTICAL FORCE MAGNET.
July 30d. The mean daily force was the least in the month.
July 30d, August 1d, and 2d. Considerable changes occurred.
July 31d. The daily range was the least in the month.

Daily Observations from August 4 to 10.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Aug. 4. 14. 0	23. 10. 5	0 ·036703	0 ·037065	D	Aug. 7. 14. 0	23. 12. 20	0 ·037300	0 ·036743	B
16. 0	11. 43	036076	036820		16. 0	12. 48	037139	036806	
18. 0	14. 45	035750	036928		18. 0	10. 32	036790	036732	
20. 0	11. 26	035322	036912	D	20. 0	10. 30	036458	036757	B
22. 0	13. 31	034626	036835	B	22. 0	13. 28	035588	037159	D
Aug. 5. 0. 0	23. 18. 1	0 ·034574	0 ·037371	B	Aug. 8. 0. 0	23. 20. 10	0 ·035547	0 ·037331	D
1. 50	17. 15	036379	037675	P	1. 50	22. 14	036393	037816	
2. 0	17. 47	037043	037687		2. 0	22. 15	036327	037804	
2. 10	17. 58	037043	037675	P	2. 10	21. 49	036260	037804	D
4. 0	15. 15	036368	037781	D	4. 0	16. 53	036660	038043	B
6. 0	13. 32	037031	037690		6. 0	14. 33	037213	038064	
8. 0	13. 19	037033	037399		8. 0	13. 3	038244	037928	
10. 0	12. 37	036509	037174	D	10. 0	14. 19	037629	037453	B
12. 0	12. 30	036652	037262	G	12. 0	12. 13	037987	037378	D
14. 0	12. 12	036408	037203		14. 0	13. 41	037404	037139	
16. 0	11. 44	036338	037364		16. 0	12. 49	037208	036918	
18. 0	10. 53	036423	037658		18. 0	12. 15	036902	036979	
20. 0	10. 22	036135	037558	G	20. 0	10. 30	036712	037084	D
22. 0	12. 10	035050	037072	P	22. 0	12. 41	036525	037038	B
Aug. 6. 0. 0	23. 14. 15	0 ·035936	0 ·036971	P	Aug. 9. 0. 0	23. 19. 38	0 ·035802	0 ·037159	B
1. 50	17. 8	036026	037363		1. 50	20. 44	035869	039193	
2. 0	17. 12	036225	037387		2. 0	22. 55	035647	039311	
2. 10	17. 17	036402	037422	P	2. 10	22. 51	036312	039281	B
4. 0	16. 21	037128	037479	G	4. 0	23. 57	039881	038721	D
6. 0	15. 10	037361	037979		6. 0	17. 57	040590	038825	
8. 0	13. 11	037366	037722	G	8. 0	14. 13	039335	038524	
10. 0	12. 34	037273	037265	B	10. 0	12. 11	037634	037846	D
12. 0	12. 26	037094	037158	P	12. 0	14. 10	037094	036816	P
14. 0	11. 39	036843	036807		14. 0	8. 53	036806	036897	
16. 0	11. 37	036721	036883		16. 0	11. 52	036234	036883	
18. 0	11. 37	036687	036664		18. 0	11. 40	035751	036957	
20. 0	8. 41	035938	036300	P	20. 0	10. 20	034797	036785	P
22. 0	10. 22	035359	036805	B	22. 0	13. 58	034934	036645	B
Aug. 7. 0. 0	23. 16. 42	0 ·035443	0 ·037047	B	Aug. 10. 0. 0	23. 17. 34	0 ·036569	0 ·036875	B
1. 50	19. 17	036545	037298	D	1. 50	20. 9	038467	037724	
2. 0	19. 13	036567	037298		2. 0	19. 38	038134	037577	
2. 10	19. 10	036722	037292	D	2. 10	19. 17	037691	037577	B
4. 0	16. 34	036548	037456	P	4. 0	14. 41	038401	038027	P
6. 0	12. 42	036873	037602		6. 0	13. 23	038449	038130	
8. 0	12. 14	037094	037392		8. 0	13. 23	038541	038046	
10. 0	12. 49	036924	037175	P	10. 0	11. 40	038320	037625	P
12. 0	12. 13	036976	037035	B	12. 0	16. 17	038334	037423	G

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, 180°.
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, 25s ·0.

DECLINATION MAGNET.
August 6d, between 22h and 24h; on 7d, between 22h and 24h; and on 8d and 9d, considerable changes occurred.
August 6d. The daily range was the smallest in the month.
August 9d. The mean western declination was the greatest in the month.

HORIZONTAL FORCE MAGNET.
August 7d. The daily range was the least in the month.
August 9d. 6h. The force at this time was the greatest in the month.
August 9d and 10d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.
August 4d, between 22h and 24h; on 6d, between 4h and 6h; on 9d; and on 10d, between 0h and 1h. 50m; considerable changes occurred.
August 6d. 14h. The scale reading as observed was three divisions less than that used in deducing the above result: had the reading as observed been correct, the result would have been 0 ·035037.
August 9d. The daily range was the greatest in the month.
August 9d. 2h. The force at this time was the greatest in the month.
August 9d. The mean daily force was the greatest in the month.

Daily Observations from August 11 to 17.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Aug. 11. 14. 0	23. 11. 16	0·036601	0·037074	B
16. 0	12. 53	033372	037098	
18. 0	10. 1	036329	037334	
20. 0	9. 30	035580	037429	B
22. 0	13. 13	036049	037109	H B
Aug. 12. 0. 0	23. 18. 53	0·036492	0·037204	H B
1. 50	19. 42	036883	037840	
2. 0	19. 22	036905	037852	
2. 10	19. 3	036950	037805	H B
4. 0	16. 20	037290	038012	B
6. 0	13. 38	036770	037796	
8. 0	13. 6	037579	037751	
10. 0	10. 10	037877	037566	B
12. 0	11. 41	037001	037569	D
14. 0	10. 32	036965	037505	
16. 0	6. 17	036538	037177	
18. 0	8. 42	036401	037078	
20. 0	9. 59	036181	037086	D
22. 0	14. 10	035469	037040	H B
Aug. 13. 0. 0	23. 17. 23	0·036496	0·037119	H B
1. 50	19. 50	037187	037430	
2. 0	19. 34	037231	037471	
2. 10	19. 34	037231	037442	H B
4. 0	15. 43	037633	037390	D
6. 0	13. 34	037367	037579	
8. 0	13. 34	037633	037390	
10. 0	12. 56	037453	037299	D
12. 0	12. 40	037344	037157	H B
14. 0	12. 40	037208	036961	
16. 0	12. 0	037137	036930	
18. 0	8. 59	036780	037002	
20. 0	7. 24	036768	037149	H B
22. 0	17. 17	036027	037025	D
Aug. 14. 0. 0	23. 13. 23	0·036755	0·037189	B
1. 50	16. 9	037845	037615	
2. 0	16. 28	037855	037585	
2. 10	15. 12	038066	037674	B
4. 0	14. 57	037979	037464	H B
6. 0	12. 28	037691	037520	
8. 0	11. 27	037562	037311	
10. 0	11. 7	037894	037241	H B
12. 0	11. 16	037322	037138	G

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Aug. 14. 14. 0	23. 10. 53	0·037698	0·037215	G
16. 0	11. 9	037787	037303	
18. 0	8. 29	037480	037325	
20. 0	5. 45	036628	037200	G
22. 0	10. 35	035376	037027	B
Aug. 15. 0. 0	23. 14. 21	0·036185	0·036932	B
1. 50	14. 58	037266	037173	
2. 0	14. 34	037266	037173	
2. 10	14. 46	037709	037173	B
4. 0	13. 54	037617	037167	G
6. 0	10. 17	037743	037575	
8. 0	10. 24	038628	037518	
10. 0	10. 7	038537	037412	G
12. 0	9. 27	038134	037275	B
14. 0	10. 7	037623	037223	
16. 0	9. 17	037300	037235	
18. 0	6. 57	036883	037191	
20. 0	7. 39	036023	037108	B
22. 0	12. 47	034790	036912	D
Aug. 16. 0. 0	23. 20. 52	0·036108	0·037050	D
1. 50	21. 35	038199	037982	H B
2. 0	21. 16	037912	037929	
2. 10	21. 2	037868	037899	H B
4. 0	17. 39	037698	038190	B
6. 0	14. 35	039469	038214	
8. 0	12. 59	038575	037856	
10. 0	5. 38	038115	037537	B
12. 0	11. 11	038165	037317	D
14. 0	10. 56	039024	037125	
16. 0	8. 27	038077	037194	
18. 0	9. 35	037735	037213	
20. 0	7. 34	035971	037220	D
22. 0	11. 19	034382	037137	H B
Aug. 17. 0. 0	23. 19. 15	0·036129	0·036968	H B
1. 50	22. 11	037999	037255	B
2. 0	22. 5	038131	037255	
2. 10	21. 53	038286	037255	B
4. 0	17. 31	037893	037646	D
6. 0	14. 0	038048	037788	
8. 0	13. 53	038383	037582	
10. 0	11. 13	038024	037262	D
12. 0	12. 33	037800	036986	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, 180°.
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, 25^s·0.

DECLINATION MAGNET.
August 13^d, between 20^h and 22^h a considerable change occurred; and on August 15^d and 16^d remarkable changes occurred.
August 15^d. The mean western declination was the smallest in the month.
August 16^d. The daily range was the greatest in the month.

HORIZONTAL FORCE MAGNET.
August 12^d, 16^d, and 17^d. Considerable changes occurred.
August 15^d and 16^d. The least difference in the mean values for consecutive days occurred.

VERTICAL FORCE MAGNET.
August 12^d and 16^d. Between 0^h and 1^h. 50^m a considerable change occurred.
August 13^d. The daily range was the least in the month.

Daily Observations from August 18 to 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Aug. 18. 14. 0	23. 10. 45	0·037495	0·036855	H B	Aug. 21. 14. 0	23. 9. 32	0·037990	0·036811	H B
16. 0	11. 20	037804	036625		16. 0	7. 21	037599	036615	
18. 0	9. 33	037051	036839		18. 0	7. 38	037480	036724	
20. 0	9. 20	036499	036666	H B	20. 0	8. 0	036875	036746	H B
22. 0	12. 45	035564	037008	D	22. 0	11. 32	036074	036637	B
Aug. 19. 0. 0	23. 19. 5	0·036160	0·037060	B	Aug. 22. 0. 0	23. 18. 10	0·036057	0·036839	B
1. 50	20. 46	038429	037608	D	1. 50	20. 2	037862	037196	
2. 0	20. 49	038452	037608		2. 0	20. 42	038416	037196	
2. 10	20. 50	038496	037584	D	2. 10	20. 57	038747	037196	B
4. 0	17. 50	038241	037976	H B	4. 0	20. 15	035876	037402	H B
6. 0	13. 50	038296	037831		6. 0	17. 28	037803	037950	
8. 0	12. 39	038710	037729		8. 0	10. 4	038303	037747	
10. 0	12. 1	038179	037522	H B	10. 0	7. 5	038100	037001	H B
12. 0	10. 52	037929	037390	G	12. 0	9. 34	036440	036895	B
14. 0	12. 50	038131	037229		14. 0	19. 7	036772	036428	
16. 0	10. 19	038094	037130		16. 0	15. 46	036998	036485	
18. 0	10. 34	038087	037366		18. 0	9. 57	036909	036951	
20. 0	10. 2	036984	037454	G	20. 0	14. 14	035683	036831	B
22. 0	13. 9	035212	037099	H B	22. 0	17. 30	035236	036890	D
Aug. 20. 0. 0	23. 18. 20	0·036404	0·037156	H B	Aug. 23. 0. 0	23. 20. 52	0·036001	0·037189	H B
1. 50	19. 42	037317	037432		1. 50	21. 23	036495	037871	D
2. 0	19. 27	037340	037337		2. 0	19. 33	036340	037859	
2. 10	18. 55	037340	037290	H B	2. 10	18. 5	036495	037859	D
4. 0	15. 19	037763	037656	G	4. 0	11. 26	038901	038633	B
6. 0	13. 35	038779	038386		6. 0	10. 21	038473	038718	
8. 0	13. 43	038365	037829		8. 0	13. 5	037570	037922	
10. 0	12. 51	038524	037650	G	10. 0	14. 35	038541	037451	B
12. 0	10. 53	038063	037321	D	12. 0	12. 14	037350	037294	D
14. 0	9. 38	038150	037151		14. 0	16. 25	037769	036998	
16. 0	8. 39	037633	037030		16. 0	11. 0	037338	036522	
18. 0	10. 40	037205	036708	D	18. 0	10. 55	036436	036692	
20. 0	10. 11	036614	036907		20. 0	11. 40	035812	036579	D
22. 0	12. 2	035724	036688	H B	22. 0	17. 29	035351	036725	H B
Aug. 21. 0. 0	23. 17. 49	0·035831	0·036747	H B	Aug. 24. 0. 0	23. 18. 48	0·036445	0·037092	H B
1. 50	19. 49	037174	036575		1. 50	18. 36	037664	037507	
2. 0	19. 52	037174	036711		2. 0	18. 46	037443	037566	
2. 10	19. 52	037130	036711	H B	2. 10	19. 1	037708	037536	H B
4. 0	18. 10	038049	037248	D	4. 0	14. 51	036526	037952	D
6. 0	14. 11	038747	037251		6. 0	13. 1	037751	037839	
8. 0	12. 35	038792	037191		8. 0	9. 2	037498	037833	
10. 0	12. 25	038601	037039	D	10. 0	7. 43	036420	037376	D
12. 0	11. 24	038669	036875	H B	12. 0	10. 11	037095	036986	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
August 18^d and 21^d, between 22^h and 24^h; and on August 22^d, between 6^h and 8^h, considerable changes occurred: on August 23^d and 24^d the changes were also large.
August 19^d and 20^d. The least difference in the mean daily declinations for consecutive days occurred.
August 22^d and 23^d. The greatest difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
August 19^d, between 0^h and $1^h. 50^m$, and on 23^d, between $2^h. 10^m$ and 4^h, considerable changes occurred.
August 20^d. The mean daily force was the greatest in the month.
August 22^d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.
August 19^d, between 0^h and $1^h. 50^m$, and on 21^d, between $2^h. 10^m$ and 4^h, considerable changes occurred.
August 20^d and 21^d, The greatest difference in the mean values for consecutive days occurred.
August 22^d and 23^d. Remarkable changes occurred.

Daily Observations from August 25 to 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Aug. 25. 14. 0	23. 10. 23	0·037402	0·036761	H B
16. 0	8. 37	037011	036630	
18. 0	15. 37	036553	036731	
20. 0	11. 31	036252	036653	H B
22. 0	16. 10	035215	036163	B
Aug. 26. 0. 0	23. 20. 14	0·035913	0·037181	G
1. 50	19. 53	037360	037292	B
2. 0	20. 1	037581	037233	
2. 10	19. 59	037581	037233	B
4. 0	14. 32	037259	037529	H B
6. 0	11. 34	037239	037314	
8. 0	12. 2	037691	036999	
10. 0	12. 23	037684	037068	H B
12. 0	10. 9	037942	037046	G
14. 0	12. 26	036772	037002	
16. 0	10. 58	036935	036951	
18. 0	10. 10	036646	037169	
20. 0	8. 51	035964	036960	G
22. 0	15. 2	035196	036634	H B
Aug. 27. 0. 0	23. 21. 3	0·035726	0·036590	B
1. 50	19. 26	036960	037110	H B
2. 0	18. 52	037071	037092	
2. 10	18. 16	037358	037092	H B
4. 0	13. 37	037164	037461	G
6. 0	12. 29	037463	037635	
8. 0	12. 45	037810	037381	
10. 0	11. 13	037769	037221	G
12. 0	11. 50	037492	036918	D
14. 0	12. 35	037743	036934	
16. 0	14. 37	037086	036865	
18. 0	11. 26	037425	036792	
20. 0	8. 57	035510	036592	D
22. 0	14. 23	034022	036383	H B
Aug. 28. 0. 0	23. 20. 27	0·035867	0·036377	H B
1. 50	21. 36	037631	036837	
2. 0	21. 6	037631	036837	
2. 10	20. 20	037631	036837	H B
4. 0	14. 9	037901	037542	D
6. 0	11. 30	037861	037657	D
8. 0	11. 30	038349	037308	G
10. 0	11. 49	037866	037047	D
12. 0	11. 8	037683	036816	H B
Aug. 28. 14. 0	23. 11. 8	0·037539	0·036782	H B
16. 0	10. 46	037255	036744	
18. 0	10. 12	036899	036531	
20. 0	9. 12	035691	036284	H B
22. 0	14. 37	034935	036466	B
Aug. 29. 0. 0	23. 20. 30	0·036332	0·036670	D
1. 50	21. 23	038349	037766	
2. 0	20. 59	038305	037748	
2. 10	20. 45	038261	037748	D
4. 0	14. 48	037936	038134	H B
6. 0	11. 44	039427	038024	
8. 0	12. 57	039013	037556	
10. 0	13. 27	037062	037778	H B
12. 0	10. 23	038943	036668	B
14. 0	10. 51	037325	036630	
16. 0	14. 8	036023	036364	
18. 0	6. 59	036918	036570	
20. 0	8. 21	034177	036437	B
22. 0	12. 41	033900	036680	D
Aug. 30. 0. 0	23. 21. 38	0·034746	0·036608	D
1. 50	25. 23	034088	037201	H B
2. 0	23. 55	035350	037248	
2. 10	23. 25	035638	037284	H B
4. 0	17. 54	038500	037898	B
6. 0	13. 4	037537	038190	
8. 0	11. 22	038040	037800	B
10. 0	13. 5	037508	037656	G
12. 0	8. 28	037205	037162	G
14. 0	9. 10	036460	036599	D
16. 0	8. 8	036720	037011	D
18. 0	18. 28	035333	037098	H B
20. 0	10. 3	035861	036995	B
22. 0	14. 25	034156	036884	G
Aug. 31. 0. 0	23. 20. 22	0·034968	0·037074	H B
1. 50	23. 57	036634	038122	B
2. 0	23. 34	036430	038057	
2. 10	25. 3	037332	038224	B
4. 0	17. 4	037740	038505	H B
6. 0	13. 26	037546	038118	G
8. 0	8. 14	037376	037822	B
10. 0	11. 33	037076	037506	D
12. 0	10. 53	036863	037017	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
August 25^d. Between 16^h and 18^h a considerable change occurred.
August 26^d, 27^d, 28^d, 29^d, 30^d, and 31^d. Remarkable changes occurred.
August 30^d. $1^h. 50^m$. The western declination was the greatest in the month.

HORIZONTAL FORCE MAGNET.
August 28^d, 29^d, 30^d, and 31^d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.
August 25^d, between 22^h and 24^h, and on 30^d, between 0^h and $1^h. 50^m$, a considerable change occurred.
August 25^d. 22^h. The force at this time was the least in the month.
August 28^d. The mean daily force was the least in the month.
August 28^d, 29^d, and 31^d. Remarkable changes occurred.
August 29^d and 30^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from September 1 to 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 1. 14. 0	23. 12. 42	0·036807	0·037023	H B	Sep. 4. 14. 0	23. 12. 22	0·037026	0·036768	B
16. 0	13. 32	036795	036888		16. 0	13. 15	037332	036675	
18. 0	14. 21	037053	037017		18. 0	10. 14	036801	036740	
20. 0	10. 34	035836	036611	H B	20. 0	10. 49	036276	036881	B
22. 0	12. 10	034662	036953	D	22. 0	14. 0	035637	036659	H B
Sep. 2. 0. 0	23. 20. 9	0·035222	0·037129	D	Sep. 5. 0. 0	23. 18. 41	0·035461	0·036417	H B
1. 50	22. 38	036471	037323		1. 50	18. 58	036359	036801	
2. 0	22. 38	036338	037270		2. 0	18. 42	036359	036813	
2. 10	22. 49	036316	037229	D	2. 10	18. 33	036359	036813	H B
4. 0	17. 11	036715	037941	H B	4. 0	14. 57	036497	037242	B
6. 0	13. 0	037287	037828		6. 0	12. 49	036446	037329	
8. 0	12. 24	037553	037322		8. 0	11. 53	037255	037240	
10. 0	11. 8	037487	036981	H B	10. 0	12. 10	037042	036940	B
12. 0	10 48	037468	036839	D	12. 0	12. 2	036994	036806	H B
14. 0	10. 58	037629	036620		14. 0	11. 43	036778	036657	
16. 0	10. 58	036282	036540		16. 0	10. 52	036507	036676	
18. 0	10. 0	036426	036545		18. 0	11. 31	036496	036587	
20. 0	9. 59	036034	036598	D	20. 0	10. 2	035714	035906	H B
22. 0	14. 35	034737	036458	H B	22. 0	11. 22	034876	036436	D
Sep. 3. 0. 0	23. 19. 26	0·035487	0·036666	H B	Sep. 6. 0. 0	23. 17. 36	0·035596	0·036538	B
1. 50	20. 30	037162	037352	B	1. 50	18. 28	036353	037083	
2. 0	20. 23	037162	037352		2. 0	18. 8	036154	037083	
2. 10	19. 42	037184	037293	B	2. 10	18. 4	036242	036523	B
4. 0	14. 56	037395	037676	H B	4. 0	14. 38	037254	037453	H B
6. 0	12 33	037594	037594	H B	6. 0	12. 11	037660	037355	
8. 0	12. 32	038022	037202	D	8. 0	10. 18	036472	037201	
10. 0	10. 44	037781	037039	D	10. 0	12. 20	037402	036979	H B
12. 0	9. 56	037427	036622	G	12. 0	12. 11	037512	036759	D
14. 0	9. 51	037213	036848		14. 0	11. 51	037751	036625	
16. 0	10. 3	037169	036978		16. 0	10. 35	037515	036509	
18. 0	12. 11	037390	037167		18. 0	10. 35	037102	036581	
20. 0	9. 5	036770	037167	G	20. 0	9. 8	037375	036412	D
22. 0	13. 43	034464	036513	H B	22. 0	12. 39	035901	036376	H B
Sep. 4. 0. 0	23. 19. 41	0·035843	0·036542	H B	Sep. 7. 0. 0	23. 18. 15	0·035986	0·036064	H B
1. 50	18. 24	037205	037307	B	1. 50	18. 4	036523	036387	
2. 0	18. 37	037381	037319		2. 0	18. 24	037142	036399	
2. 10	18. 37	037404	037289	B	2. 10	19. 9	037718	036534	H B
4. 0	17. 10	035978	037664	G	4. 0	15. 14	037444	037332	D
6. 0	14. 25	036565	037709		6. 0	14. 58	037407	037398	
8. 0	11. 56	037472	037397		8. 0	14. 15	038261	037185	
10. 0	14. 21	038494	037088	G	10. 0	12. 51	038354	037079	D
12. 0	12. 31	036947	036822	B	12. 0	10. 13	039199	036476	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, 180°.
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, $25^{s}\cdot 0$.

DECLINATION MAGNET.
Sep. 2^{d}. Considerable changes occurred.
Sep. 5^{d} and 6^{d}. Between 22^{h} and 24^{h} a considerable change occurred on each day.
HORIZONTAL FORCE MAGNET.
Sep. 3^{d}. Between 20^{h} and 22^{h} a considerable change occurred.
Sep. $3^{d}. 22^{h}$. The force at this time was the least in the month.
Sep. 3^{d} and 4^{d}. The least difference in the mean values for consecutive days occurred.
Sep. 5^{d}. The daily range was the least in the month.
Sep. 6^{d}. The mean daily force was the least in the month.
VERTICAL FORCE MAGNET.
Sep. 2^{d}. The mean daily force was the greatest in the month.
Sep. 2^{d} and 3^{d}. The greatest difference in the mean values for consecutive days occurred.
Sep. 2^{d}, 3^{d}, 4^{d}, and 6^{d}. Considerable changes occurred.
Sep. 7^{d}. Between 10^{h} and 12^{h} a considerable change occurred.

Daily Observations from September 8 to 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 8. 14. 0	23. 10. 21	0·037707	0·036617	B	Sep. 11. 14. 0	23. 11. 17	0·038117	0·036571	B
16. 0	11. 0	037656	036478		16. 0	10. 9	037879	036331	
18. 0	9. 54	036965	036409		18. 0	10. 7	037607	036283	
20. 0	12. 9	036525	036487	B	20. 0	8. 54	036091	036231	B
22. 0	12. 17	035997	036253	H B	22. 0	12. 23	034828	036144	H B
Sep. 9. 0. 0	23. 17. 41	0·036064	0·036245	H B	Sep. 12. 0. 0	23. 18. 24	0·036337	0·036258	H B
1. 50	19. 26	036903	036463		1. 50	19. 19	037869	036495	
2. 0	19. 26	037146	036486		2. 0	18. 57	037758	036513	
2. 10	19. 17	037080	036504	H B	2. 10	18. 24	037869	036513	H B
4. 0	14. 4	036720	036900	B	4. 0	14. 4	038253	036923	B
6. 0	11. 32	037980	037105		6. 0	12. 29	037478	037057	
8. 0	11. 5	037331	036887		8. 0	11. 49	037955	036902	
10. 0	12. 34	038048	036835	B	10. 0	9. 23	038646	036591	B
12. 0	11. 12	037127	036609	H B	12. 0	11. 19	038031	036673	G
14. 0	10. 56	037445	036205		14. 0	11. 28	037725	036659	
16. 0	10. 29	036372	036305		16. 0	9. 28	037968	036819	
18. 0	9. 5	036370	036308		18. 0	12. 34	038168	036925	
20. 0	9. 54	035838	036435	H B	20. 0	10. 36	036876	036574	G
22. 0	12. 9	035928	036432	D	22. 0	12. 17	035277	036071	H B
Sep. 10. 0. 0	23. 17. 21	0·036806	0·036247	B	Sep. 13. 0. 0	23. 19. 37	0·038455	0·036397	B
1. 50	17. 21	037219	036521	D	1. 50	21. 34	039360	036833	
2. 0	17. 18	037152	036562		2. 0	21. 3	039360	036833	
2. 10	16. 54	037152	036609	D	2. 10	20. 43	039581	036774	B
4. 0	13. 12	036983	036659	H B	4. 0	15. 18	039308	036894	G
6. 0	11. 47	037324	036657		6. 0	13. 7	039478	037304	
8. 0	12. 30	037740	036815		8. 0	12. 14	039943	036995	
10. 0	12. 11	037257	036565	H B	10. 0	10. 4	039593	036948	G
12. 0	11. 52	037470	036514	D	12. 0	11. 6	039980	036625	H B
14. 0	11. 41	037621	036438		14. 0	10. 45	040212	036495	
16. 0	9. 14	037307	036310		16. 0	9. 27	040190	036390	
18. 0	8. 20	036680	036142		18. 0	6. 55	039942	036310	
20. 0	7. 37	036070	036100	D	20. 0	7. 11	038909	036161	H B
22. 0	12. 32	035037	035731	H B	22. 0	13. 39	037266	036223	D
Sep. 11. 0. 0	23. 18. 28	0·036629	0·035896	B	Sep. 14. 0. 0	23. 21. 41	0·037190	0·036605	B
1. 50	18. 27	038577	036729		1. 50	21. 20	038611	037102	
2. 0	18. 46	038135	036699		2. 0	20. 16	038722	037102	
2. 10	18. 21	038910	036611	B	2. 10	20. 16	038943	037102	B
4. 0	14. 33	038703	037618	D	4. 0	17. 43	039021	037203	H B
6. 0	11. 51	038649	037310		6. 0	14. 24	038825	037272	
8. 0	12. 6	038744	037047		8. 0	5. 58	039834	037326	
10. 0	11. 57	038194	036836	D	10. 0	12. 23	038958	036830	H B
12. 0	11. 31	038116	036599	B	12. 0	12. 2	038888	036765	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
Sep. 9^d, 13^d, and 14^d. Considerable changes occurred.
Sep. 10^d. The daily range was the smallest in the month
Sep. 10^d and 11^d. The least difference in the mean daily declinations for consecutive days occurred.
Sep. 10^d, 11^d, and 12^d. Between 22^h and 24^h considerable changes occurred.

HORIZONTAL FORCE MAGNET.
Sep. 12^d and 13^d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
Sep. 11^d and 12^d. The least difference in the mean values for consecutive days occurred.
Sep. 11^d, 13^d and 14^d. Considerable changes occurred.

Daily Observations from September 15 to 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 15. 14. 0	23. 11. 31	0·040145	0·036694	B	Sep. 18. 14. 0	23. 11. 14	0·040672	0·036369	D
16. 0	12. 39	040279	036651		16. 0	10. 20	039959	036249	H B
18. 0	14. 40	040135	036607		18. 0	11. 7	039923	036169	H B
20. 0	11. 49	039803	036693	B	20. 0	..	039515	036129	B
22. 0	15. 10	038237	036531	H B	22. 0	12. 3	038613	036210	G
Sep. 16. 0. 0	23. 18. 30	0·038540	0·036566	H B	Sep. 19. 0. 0	23. 19. 13	0·038006	0·036293	H B
1. 50	20. 53	040013	036984		1. 50	21. 2	038859	036632	B
2. 0	20. 59	040146	036966		2. 0	20. 38	038809	036599	
2. 10	20. 59	040124	036966	H B	2. 10	20. 1	038611	036676	B
4. 0	17. 23	040481	037321	B	4. 0	17. 20	040646	037259	D
6. 0	12. 3	039731	037417		6. 0	13. 30	041437	037307	G
8. 0	11. 58	040918	037131		8. 0	12. 27	041282	036927	H B
10. 0	11. 58	040568	036914	B	10. 0	11. 9	040403	036529	H B
12. 0	10. 6	040707	036768	D	12. 0	11. 54	040670	036432	B
14. 0	9. 42	040057	036244		14. 0	7. 59	041337	036121	
16. 0	9. 0	039909	036464		16. 0	6. 37	041337	035659	
18. 0	9. 43	039785	036580		18. 0	13. 27	042060	035957	
20. 0	9. 3	039455	036462	D	20. 0	11. 5	040741	035848	B
22. 0	12. 6	038152	036475	H B	22. 0	10. 44	038904	035845	H B
Sep. 17. 0. 0	23. 19. 8	0·037437	0·036477	H B	Sep. 20. 0. 0	23. 23. 23	0·036611	0·036083	B
1. 50	20. 41	040286	036812		1. 50	23. 35	039385	036384	H B
2. 0	20. 29	040264	036812		2. 0	20. 8	039584	036343	
2. 10	20. 42	040065	036783		2. 10	20. 26	039983	036325	H B
4. 0	16. 51	040110	037034	H B	4. 0	19. 32	040145	037061	B
6. 0	13. 23	040195	037183	D	6. 0	23. 16. 50	038866	037525	
8. 0	12. 24	040382	036951		8. 0	22. 59. 20	040245	037433	
10. 0	12. 4	040439	036758	D	10. 0	23. 10. 7	038698	036716	B
12. 0	11. 32	040157	036561	H B	12. 0	13. 57	040304	036281	G
14. 0	10. 21	040027	036566		14. 0	10. 57	038986	036310	
16. 0	6. 42	040698	036351		16. 0	11. 31	038876	036197	
18. 0	9. 35	040220	036517		18. 0	12. 16	038997	036610	G
20. 0	8. 58	039378	036248	H B	20. 0	..	..	..	
22. 0	12. 40	038179	036602	D	22. 0	15. 55	036891	035854	H B
Sep. 18. 0. 0	23. 19. 40	0·039074	0·036354	B	Sep. 21. 0. 0	23. 17. 39	0·037601	0·036283	H B
1. 50	19. 38	039956	036433		1. 50	17. 6	039031	036915	
2. 0	18. 45	039956	036463		2. 0	18. 16	039252	036945	
2. 10	18. 47	039956	036463	B	2. 10	17. 17	038942	037357	
4. 0	14. 22	039880	036669	H B	4. 0	16. 1	038039	037003	
6. 0	12. 23	040355	036831		6. 0	11. 3	038175	037009	H B
8. 0	11. 59	040443	036637	H B	8. 0	10. 52	039640	036794	G
10. 0	9. 4	040529	036485	G	10. 0	7. 54	039957	036560	G
12. 0	11. 33	040400	036383	G	12. 0	9. 53	039706	036161	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
Sep. 16^d, 17^d, and 18^d. Between 22^h and 24^h considerable changes occurred.
Sep. 18^d. The mean western declination was the smallest in the month.
Sep. 18^d and 19^d. The greatest difference in the mean daily declinations for consecutive days occurred.
Sep. 18^d and 20^d. Considerable changes occurred: on each day at 20^h the declination observation was inadvertently omitted.

HORIZONTAL FORCE MAGNET.
Sep. 17^d, between 0^h and $1^h. 50^m$, and on 19^d, between $2^h. 10^m$ and 4^h, considerable changes occurred.
Sep. 19^d. The mean daily force was the greatest in the month.
Sep. $19^d. 18^h$. The force at this time was the greatest in the month. Sep. 20^d. The daily range was the greatest in the month.
Sep. 20^d. Considerable changes occurred: at 20^h the observation was inadvertently omitted.

VERTICAL FORCE MAGNET.
Sep. 16^d, between 12^h and 14^h, and on 19^d, between $2^h. 10^m$ and 4^h, considerable changes occurred.
Sep. 18^d. The daily range was the least in the month.
Sep. 20^d and 21^d. Considerable changes occurred: at 20^h the observation was inadvertently omitted.

Daily Observations from September 22 to 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 22. 14. 0	23. 10. 24	0 ·039148	0 ·036090	H B	Sep. 25. 14. 0	23. 18. 20	0 ·038118	0 ·035147	L
16. 0	9. 21	039295	036038		16. 0	14. 37	039115	034928	
18. 0	10. 18	039210	036123		18. 0	16. 18	040672	036428	
20. 0	14. 35	037158	035971	H B	20. 0	9. 49	036723	035580	L
22. 0	14. 4	038402	036064	G	22. 0	15. 17	036597	035192	H B
Sep. 23. 0. 0	23. 18. 48	0 ·038365	0 ·036046	J H	Sep. 26. 0. 0	23. 21. 22	0 ·036443	0 ·036105	H B
1. 50	16. 12	039247	036586	D	1. 50	22. 20	037853	037043	
2. 0	16. 1	039115	036568		2. 0	23. 26	038384	036996	
2. 10	16. 57	039668	036586	D	2. 10	22. 52	038118	036955	H B
4. 0	12. 37	038994	036969	H B	4. 0	11. 19	037027	037888	L
6. 0	13. 33	039870	036823		6. 0	23. 14. 27	039190	038223	
8. 0	9. 18	040385	036579		8. 0	22. 56. 9	035205	037397	
10. 0	12. 46	040012	036382	H B	10. 0	23. 6. 20	037300	036397	L
12. 0	12. 5	039850	036286	D	12. 0	12. 1	038244	036106	H B
14. 0	11. 7	040101	036199		14. 0	13. 0	038396	036176	
16. 0	8. 7	040135	036002		16. 0	12. 7	038477	036011	
18. 0	12. 18	040287	036039		18. 0	14. 22	039083	035902	
20. 0	11. 32	038983	035927	D	20. 0	23. 26	036342	035687	H B
22. 0	13. 23	038293	035979	J H	22. 0	6. 18	035379	035674	L
Sep. 24. 0. 0	23. 18. 26	0 ·039224	0 ·036248	H B	Sep. 27. 0. 0	23. 11. 53	0 ·036383	0 ·036074	L
1. 50	19. 40	039448	036644		1. 50	11. 46	038170	036729	
2. 0	19. 4	038806	036615	H B	2. 0	11. 37	038613	036729	
2. 10	18. 51	038142	036609	L	2. 10	11. 33	038613	036729	L
4. 0	16. 55	038584	037263	L	4. 0	15. 39	039359	037839	H B
6. 0	12. 13	039113	037011	H B	6. 0	7. 10	040763	037938	
8. 0	8. 4	039600	036693	H B	8. 0	9. 55	038714	037238	
10. 0	9. 34	039762	036525	D	10. 0	10. 55	039171	036891	H B
12. 0	10. 57	040008	036127	J H	12. 0	14. 7	039342	036460	D
14. 0	8. 40	039283	035997		14. 0	14. 7	039145	036009	
16. 0	11. 43	039136	035852		16. 0	12. 12	039882	035822	
18. 0	9. 23	039555	035672		18. 0	11. 27	038885	035496	
20. 0	10. 5	039142	035721	J H	20. 0	10. 25	038346	035623	D
22. 0	12. 20	038784	035834	H B	22. 0	12. 7	036870	036039	H B
Sep. 25. 0. 0	23. 21. 1	0 ·037660	0 ·035984	L	Sep. 28. 0. 0	23. 18. 33	0 ·037719	0 ·036142	L
1. 50	20. 17	038621	036698		1. 50	21. 27	038517	036580	
2. 0	20. 17	038953	036698		2. 0	21. 15	038628	036604	
2. 10	21. 10	039152	036698	L	2. 10	20. 52	038628	036521	L
4. 0	19. 10	040379	037833	J H	4. 0	16. 17	039577	037452	D
6. 0	15. 50	039839	037217		6. 0	5. 7	039438	037681	H B
8. 0	11. 59	039903	036898		8. 0	11. 21	039283	036748	J H
10. 0	8. 12	038244	036496	J H	10. 0	11. 29	039002	036606	H B
12. 0	0. 49	038348	035661	L	12. 0	10. 55	039172	036410	J 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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
Sep. 24^d. Between 22^h and 24^h a considerable change occurred.
Sep. 25^d, 26^d, 27^d, and 28^d. Considerable changes occurred.
Sep. 26^d. The daily range was the greatest in the month.
Sep. 26^d. 2^h and 20^h. The western declination was the greatest in the month.
Sep. 26^d. 8^h. The western declination was the smallest in the month at the two-hourly observations, but a smaller occurred at $8^h. 15^m$ during extra observations.

HORIZONTAL FORCE MAGNET.
Sep. 22^d. Between 18^h and 20^h a considerable change occurred.
Sep. 25^d and 26^d. The greatest difference in the mean values for consecutive days occurred.
Sep. 26^d and 27^d. Large changes occurred.

VERTICAL FORCE MAGNET.
Sep. 23^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
Sep. 24^d, 25^d, 26^d, 27^d, and 28^d. Considerable changes occurred.
Sep. 25^d. 16^h. The force at this time was the least in the month.
Sep. 26^d. 6^h. The force at this time was the greatest in the month.
Sep. 26^d. The daily range was the greatest in the month.

Daily Observations from September 29 to October 5.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 29. 14. 0	23. 9. 36	0·037083	0·035108	J H	Oct. 2. 14. 0	23. 10. 50	0·038746	0·036145	D
16. 0	15. 58	037658	035338		16. 0	13. 28	038561	035959	
18. 0	21. 38	036208	035204		18. 0	13. 8	039498	035984	
20. 0	18. 59	036935	035211	J H	20. 0	10. 5	038686	036033	D
22. 0	21. 5	036053	035698	H B	22. 0	11. 39	036510	036033	H B
Sep. 30. 0. 0	23. 19. 34	0·037243	0·036003	L	Oct. 3. 0. 0	23. 19. 44	0·036314	0·036115	L
1. 50	18. 59	037575	036718		1. 50	25. 50	037444	036663	
2. 0	18. 13	037775	036712		2. 0	26. 4	037289	036634	
2. 10	18. 34	037797	036735	L	2. 10	26. 47	037488	036681	L
4. 0	15. 39	040655	037742	J H	4. 0	20. 21	038395	037479	D
6. 0	13. 44	038781	037562		6. 0	16. 29	038533	037103	
8. 0	12. 45	038517	036863		8. 0	15. 3	038761	036935	D
10. 0	11. 28	039021	036312	J H	10. 0	15. 21	038397	036819	H B
12. 0	10. 24	039250	036165	H B	12. 0	13. 52	038678	036355	J H
14. 0	7. 49	040085	034838		14. 0	14. 18	037832	036362	
16. 0	12. 15	040992	034385		16. 0	15. 13	038215	036153	
18. 0	31. 19	037508	033840		18. 0	15. 17	038244	036205	
20. 0	26. 46	034017	034688	H B	20. 0	15. 48	038304	036154	J H
22. 0	24. 11	036001	035780	L	22. 0	15. 45	038211	036834	L
Oct. 1. 0. 0	23. 19. 49	0·034757	0·036814	L	Oct. 4. 0. 0	23. 16. 4	0·037454	0·036167	L
1. 50	21. 47	037819	038173		1. 50	18. 37	038594	036676	
2. 0	21. 17	036977	037943		2. 0	18. 55	038816	036634	
2. 10	19. 10	037930	037878	L	2. 10	18. 15	039037	036593	L
4. 0	13. 2	039422	038704	H B	4. 0	18. 12	039643	037443	H B
6. 0	11. 17	037068	038759		6. 0	14. 36	039564	037101	
8. 0	3. 18	034080	037446		8. 0	10. 27	039002	036945	
10. 0	9. 35	037511	036561	H B	10. 0	8. 20	039438	036385	H B
12. 0	10. 59	037913	036543	L	12. 0	12. 26	039587	036251	G
14. 0	12. 34	038528	036154		14. 0	5. 0	039021	036018	L
16. 0	12. 5	038957	036357		16. 0	11. 10	038916	036169	
18. 0	10. 49	039672	036586		18. 0	11. 29	039225	036289	
20. 0	10. 17	038873	036755	L	20. 0	13. 18	038962	036413	L
22. 0	12. 3	037853	036549	H B	22. 0	11. 57	037856	036490	H B
Oct. 2. 0. 0	23. 17. 35	0·038388	0·036296	H B	Oct. 5, 0. 0	23. 16. 15	0·038108	0·036386	H B
1. 50	16. 50	038501	036413		1. 50	17. 43	038690	036495	
2. 0	16. 53	038700	036402		2. 0	17. 31	038823	036484	
2. 10	16. 53	038766	036425	H B	2. 10	17. 23	038734	036425	H B
4. 0	15. 16	038614	037054	L	4. 0	15. 44	039490	037310	L
6. 0	12. 21	038968	037002		6. 0	13. 5	039386	036808	
8. 0	13. 50	037640	037340		8. 0	13. 53	039314	036732	
10. 0	11. 59	039241	036755	L	10. 0	7. 16	038582	036449	L
12. 0	10. 47	038630	036523	D	12. 0	9, 34	038898	036339	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
Sep. 30^d. The mean western declination was the greatest in the month.
Sep. 30^d. 18^h. The western declination was the greatest during the Civil Month of October in the two-hourly observations: but a greater occurred in Extraordinary [Observations at 20^d. 16^h. 34^m.
Sep. 30^d, and Oct. 1^d, 2^d, 3^d, and 4^d. Remarkable changes occurred.
Oct. 1^d. The daily range was the greatest in the month.
Oct. 1^d. The mean western declination was the greatest in the month.
Oct. 1^d and 2^d. The greatest difference in the mean daily declinations for consecutive days occurred.
Oct. 5^d. Between 8^h and 10^h a considerable change occurred.
HORIZONTAL FORCE MAGNET.
Sep. 30^d, and Oct. 1^d and 2^d. Considerable changes occurred.
Oct. 1^d. The daily range was the greatest in the month.
VERTICAL FORCE MAGNET.
Sep. 30^d. The mean daily force was the least in the month.
Sep. 30^d, and Oct. 1^d, 2^d, 3^d, 4^d, and 5^d. Remarkable changes occurred.
Oct. 1^d. The daily range was the greatest in the month.
Oct. 1^d. 6^h. The force at this time was the greatest in the month.
Oct. 2^d. The mean daily force was the greatest in the month.

Daily Observations from October 6 to 12.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 6. 14. 0	23. 11. 45	0 ·038688	0 ·036107	H B	Oct. 9. 14. 0	23. 11. 35	0 ·038937	0 ·036588	H B
16. 0	11. 26	038254	036114		16. 0	10. 43	038653	036379	
18. 0	10. 50	038601	035996		18. 0	10. 4	038713	036321	
20. 0	10. 18	038607	035936	H B	20. 0	9. 48	038350	036252	H B
22. 0	10. 35	038212	035769	L	22. 0	10. 19	037676	036143	L
Oct. 7. 0. 0	23. 15. 52	0 ·038205	0 ·035674	L	Oct. 10. 0. 0	23. 15. 56	0 ·037979	0 ·036254	L
1. 50	15. 58	039227	036166		1. 50	16. 44	038683	036605	
2. 0	16. 23	039271	036154		2. 0	16. 54	038594	036617	
2. 10	16. 11	039669	036101	L	2. 10	17. 0	038594	036800	L
4. 0	13. 46	040598	036816	H B	4. 0	14. 9	038720	037118	H B
6. 0	12. 42	040043	036618		6. 0	13. 0	039127	036785	
8. 0	12. 45	039599	036318		8. 0	12. 32	038919	036665	
10. 0	9. 2	039509	036054	H B	10. 0	11. 57	039082	036592	H B
12. 0	8. 44	039177	035840	D	12. 0	12. 25	038901	036440	D
14. 0	8. 41	038106	035784		14. 0	11. 36	038931	036356	
16. 0	8. 35	038536	035395		16. 0	11. 33	038705	036246	
18. 0	11. 23	038821	035762		18. 0	11. 30	038749	036177	
20. 0	9. 34	038012	035738	D	20. 0	10. 35	038312	036170	D
22. 0	11. 26	037509	035433	L	22. 0	11. 41	037081	036095	L
Oct. 8. 0. 0	23. 16. 30	0 ·038002	0 ·035847	L	Oct. 11. 0. 0	23. 18. 2	0 ·037948	0 ·036466	L
1. 50	18. 54	039353	036670		1. 50	17. 23	039167	036890	H B
2. 0	18. 15	038910	036593		2. 0	16. 42	039344	036866	L
2. 10	18. 31	038955	036599	L	2. 10	17. 4	039344	036801	L
4. 0	15. 49	039690	037042	D	4. 0	14. 25	039800	037446	D
6. 0	12. 47	039619	036736		6. 0	13. 1	040036	037089	
8. 0	12. 22	039646	036521		8. 0	11. 54	039559	036862	D
10. 0	11. 29	039316	036257	D	10. 0	11. 30	039742	036478	H B
12. 0	10. 44	039048	036076	L	12. 0	11. 56	039000	036480	L
14. 0	9. 28	038674	036053		14. 0	11. 36	039123	036434	
16. 0	10. 24	039227	035912		16. 0	10. 58	039026	036388	
18. 0	10. 51	039165	036028		18. 0	11. 17	039225	036720	
20. 0	10. 0	038845	036034	L	20. 0	10. 30	039030	036228	L
22. 0	11. 48	037703	036189	H B	22. 0	10. 31	038025	036252	H B
Oct. 9. 0. 0	23. 17. 37	0 ·038555	0 ·036142	H B	Oct. 12. 0. 0	23. 16. 50	0 ·037938	0 ·036269	H B
1. 50	17. 53	039044	036491		1. 50	19. 17	039053	036743	
2. 0	17. 15	038513	036414		2. 0	19. 19	039252	036731	
2. 10	15. 55	038026	036403	H B	2. 10	19. 5	039296	036731	H B
4. 0	13. 42	038552	036739	L	4. 0	15. 34	039259	036782	L
6. 0	12. 15	039047	036432		6. 0	13. 8	039531	036695	
8. 0	11. 47	039235	036332		8. 0	12. 21	039514	036421	
10. 0	11. 33	039336	036285	L	10. 0	11. 15	039674	036369	L
12. 0	11. 42	039130	036524	H B	12. 0	10. 57	039186	036457	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, 180°.
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, $25^s·0$.

DECLINATION MAGNET.
Oct. 10^d. The daily range was the smallest in the month.
Oct. 10^d and 11^d. Between 22^h and 24^h considerable changes occurred.
Oct. 11^d and 12^d. The least difference in the mean daily declinations for consecutive days occurred.

VERTICAL FORCE MAGNET.
Oct. 7^d and 8^d. The least difference in the mean values for consecutive days occurred.
Oct. 7^d, 8^d, and 11^d. Considerable changes occurred.

Daily Observations from October 13 to 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 13. 14. 0	23. 8. 24	0·039103	0·033729	H B	Oct. 16. 14. 0	23. 12. 45	0·040543	0·033203	H B
16. 0	9. 38	039194	033733		·16. 0	10. 23	040279	033090	
18. 0	11. 15	039494	033668		18. 0	10. 14	039901	032893	
20. 0	11. 43	039288	033604	H B	20. 0	9. 26	039161	032734	H B
22. 0	9. 41	037963	033514	L	22. 0	9. 46	037996	032959	L
Oct. 14. 0. 0	23. 15. 53	0·038698	0·033688	L	Oct. 17. 0. 0	23. 17. 29	0·038120	0·033145	L
1. 50	18. 35	039958	033816		1. 50	18. 53	039109	033463	
2. 0	18. 8	039936	033816		2. 0	18. 2	039175	033426	
2. 10	18. 5	040180	033816	L	2. 10	17. 47	039175	033421	L
4. 0	15. 45	040867	033399	H B	4. 0	16. 28	039811	033834	H B
6. 0	12. 36	041186	033452		6. 0	14. 30	039166	033768	
8. 0	12. 54	041043	033437		8. 0	13. 8	039215	033604	
10. 0	10. 11	040494	033489	H B	10. 0	8. 51	038970	033677	H B
12. 0	10. 8	040123	033531	D	12. 0	9. 42	039333	033408	D
14. 0	12. 15	040036	033320		14. 0	10. 4	039761	033308	
16. 0	11. 27	040128	033256		16. 0	9. 36	039807	033228	
18. 0	11. 27	040581	033356		18. 0	12. 35	039752	033116	
20. 0	10. 1	040299	033372	D	20. 0	9. 54	039504	033157	D
22. 0	11. 59	038732	033080	L	22. 0	10. 21	038825	032813	L
Oct. 15. 0. 0	23. 17. 41	0·039720	0·033397	L	Oct. 18. 0. 0	23. 19. 55	0·039004	0·033020	L
1. 50	19. 24	040119	033801		1. 50	21. 11	040096	033601	
2. 0	19. 28	040230	033786		2. 0	21. 14	039831	033549	
2. 10	18. 58	040119	033744	L	2. 10	20. 21	039720	033496	L
4. 0	16. 1	040348	034098	D	4. 0	18. 0	039905	033830	D
6. 0	13. 39	040312	034126		6. 0	15. 22	039553	033953	
8. 0	11. 19	040278	033974		8. 0	12. 28	039927	033668	
10. 0	11. 19	039967	033520	D	10. 0	11. 37	039900	033441	D
12. 0	11. 9	039804	033340	L	12. 0	11. 12	039793	033193	L
14. 0	10. 40	040395	033324		14. 0	11. 11	039645	033001	
16. 0	12. 25	039947	033424		16. 0	11. 23	039896	032889	
18. 0	11. 35	040051	033428		18. 0	10. 40	039682	032935	
20. 0	9. 59	039983	033517	L	20. 0	10. 43	038960	032971	L
22. 0	10. 1	038747	033542	H B	22. 0	10. 40	038238	033050	H B
Oct. 16. 0. 0	23. 15. 37	0·038377	0·033067	H B	Oct. 19. 0. 0	23. 16. 16	0·038582	0·032839	H B
1. 50	17. 51	039457	033336		1. 50	17. 5	038978	033468	
2. 0	17. 53	039524	033373		2. 0	16. 40	039066	033420	
2. 10	17. 39	039590	033346	H B	2. 10	16. 11	039177	033384	H B
4. 0	15. 26	039975	033531	L	4. 0	14. 33	039337	033631	L
6. 0	13. 26	040291	033637	D	6. 0	12. 59	039771	033343	
8. 0	12. 57	040106	033362	L	8. 0	12. 4	039617	033254	
10. 0	11. 4	040230	033336	L	10. 0	11. 5	040214	032998	L
12. 0	10. 36	040121	033151	H B	12. 0	9. 6	038977	033118	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, 180°.
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, $26^s·5$.

DECLINATION MAGNET.
Oct. 13^d, 16^d, and 17^d. Between 22^h and 24^h considerable changes occurred.
Oct. 17^d and 18^d. Considerable changes occurred.

HORIZONTAL FORCE MAGNET.
Oct. $14^d. 6^h$. The force at this time was the greatest in the month.
Oct. 15^d. The mean daily force was the greatest in the month.

VERTICAL FORCE MAGNET.
Oct. $13^d. 14^h$. The adjustments were altered.
Oct. 14^d. The daily range was the least in the month.
Oct. 18^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.

Daily Observations from October 20 to 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Oct. 20. 14. 0	23. 9. 44	0 ·037220	0 ·032906	H B
16. 0	16. 9	040835	031104	
18. 0	24. 32	031932	031251	
20. 0	15. 41	035950	032338	H B
22. 0	18. 51	029775	032984	L
Oct. 21. 0. 0	23. 22. 21	0 ·032058	0 ·033410	L
1. 50	23. 39	034901	034021	
2. 0	22. 42	035566	034021	
2. 10	22. 32	035765	034063	L
4. 0	16. 32	035906	034217	H B
6. 0	12. 24	036782	033629	
8. 0	10. 7	037015	033329	
10. 0	5. 1	038828	032878	H B
12. 0	5. 13	037132	032851	D
14. 0	11. 5	037000	033119	
16. 0	14. 1	037797	032998	
18. 0	9. 56	038266	033045	
20. 0	10. 47	037592	033102	D
22. 0	11. 47	036264	033018	L
Oct. 22. 0. 0	23. 17. 42	0 ·036818	0 ·033033	L
1. 50	17. 54	037549	033603	H B
2. 0	17. 43	037438	033603	L
2. 10	17. 2	037394	033592	L
4. 0	10. 15	037608	033894	D
6. 0	10. 35	038255	033700	
8. 0	11. 9	038266	033470	
10. 0	10. 20	038093	033326	D
12. 0	11. 43	037805	032987	L
14. 0	11. 35	037857	032986	
17. 0	11. 0	038589	032733	
18. 0	10. 21	038675	032733	
20. 0	11. 41	037437	032721	L
22. 0	13. 22	036914	032951	H B
Oct. 23. 0. 0	23. 18. 47	0 ·036386	0 ·033071	J M
1. 50	19. 8	037507	033748	H B
2. 0	19. 22	037463	033722	
2. 10	19. 30	037441	033722	H B
4. 0	14. 19	037793	034044	L
6. 0	12. 15	037365	033710	
8. 0	9. 26	038155	033738	L
10. 0	7. 46	039099	033775	D
12. 0	10. 26	038436	033466	D

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Oct. 23. 14. 0	23. 10. 26	0 ·038554	0 ·033320	J M
16. 0	10. 54	038461	033303	H B
18. 0	11. 34	038453	033176	H B
20. 0	10. 40	038136	033213	L
22. 0	11. 39	037292	033176	D
Oct. 24. 0. 0	23. 17. 11	0 ·037464	0 ·033196	H B
1. 50	17. 39	037251	033406	L
2. 0	16. 59	037362	033417	
2. 10	16. 57	037517	033443	L
4. 0	13. 25	038107	033949	H B
6. 0	10. 54	038657	033756	D
8. 0	10. 58	038749	033503	J M
10. 0	11. 5	038613	033445	L
12. 0	7. 0	038708	033389	H B
14. 0	5. 39	038623	033171	
16. 0	11. 27	038540	033308	
18. 0	10. 53	038977	033329	
20. 0	13. 48	037797	033434	H B
22. 0	20. 37	035927	033207	L
Oct. 25. 0. 0	23. 22. 18	0 ·037778	0 ·033634	J M
1. 50	17. 13	038058	033818	
2. 0	17. 17	038058	033818	
2. 10	17. 42	037991	033839	J M
4. 0	15. 45	037382	033801	H B
6. 0	11. 27	038484	033828	
8. 0	9. 3	036239	033590	
10. 0	23. 4. 48	036900	033569	H B
12. 0	22. 49. 41	037151	032917	J M
14. 0	23. 9. 3	037546	032711	
16. 0	12. 5	038239	032882	
18. 0	10. 20	039217	032735	
20. 0	18. 16	038047	032997	J M
22. 0	15. 5	036026	032975	L
Oct. 26. 0. 0	23. 17. 26	0 ·037235	0 ·033390	L
1. 50	16. 44	038214	033549	
2. 0	16. 53	038280	033565	
2. 10	17. 6	038302	033576	L
4. 0	16. 50	036672	033865	J M
6. 0	2. 33	037903	033960	
8. 0	3. 49	038661	033514	
10. 0	2. 26	036988	033193	J M
12. 0	3. 12	038214	032615	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, 180°.
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, $26^s \cdot 5$.

DECLINATION MAGNET.—Oct. $20^d. 16^h. 34^m$. The western declination was the largest in the month during Extraordinary Observations.
Oct. 20^d, 21^d, 22^d, 23^d, 24^d, and 25^d. Remarkable changes occurred. On the 22nd day at 16^h the observation was not taken; an observation at 17^h was taken: the result is not used in subsequent deductions. Oct. $25^d. 12^h$. The western declination was the smallest in the month.
Oct. 26^d. The mean western declination was the smallest in the month. Oct. 26^d. Between 4^h and 6^h a large change occurred.

HORIZONTAL FORCE MAGNET.—Oct. $20^d. 22^h$. The force at this time was the least in the month.
Oct. 21^d. The daily range was the least in the month. Oct. 21^d. The mean daily force was the least in the month.
Oct. 21^d and 22^d. The greatest difference in the mean values for consecutive days occurred. On the latter day an observation was taken at 17^h instead of 16^h: the result is not used in forming the Abstracts. Oct. 21^d, 25^d, and 26^d. Remarkable changes occurred.

VERTICAL FORCE MAGNET.—Oct. $20^d. 16^h$. The force at this time was less than at any other during the month in the regular observations, but a smaller occurred during the time of Extraordinary Observations at $20^d. 17^h$.
Oct. 21^d. The mean daily force was the least in the month.
Oct. 21^d and 22^d. The greatest difference in the mean values for consecutive days occurred. On the latter day an observation was taken at 17^h instead of 16^h: no use has been made of the observation. Oct. 21^d and 26^d. Considerable changes occurred.
Oct. 22^d and 23^d, between 0^h and $1^h. 50^m$; on 24^d, between $2^h. 10^m$ and 4^h; and on 25^d, between 10^h and 12^h; considerable changes occurred.

Daily Observations from October 27 to November 2.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 27. 14. 0	23. 8. 53	0·037083	0·032482	L	Oct. 30. 14. 0	23. 13. 7	0·039355	0·032998	L
16. 0	16. 40	038263	032596		16. 0	12. 26	039125	033167	
18. 0	13. 27	039127	032707		18. 0	12. 51	039428	033146	
20. 0	11. 12	038803	032727	L	20. 0	11. 2	039074	033182	L
22. 0	11. 2	037720	032715	H B	22. 0	11. 16	038452	033093	H B
Oct. 28. 0. 0	23. 15. 35	0·037314	0·032921	H B	Oct. 31. 0. 0	23. 16. 21	0·038409	0·033067	G
1. 50	18. 0	039634	033544		1. 50	17. 38	039224	033854	H B
2. 0	17. 55	039501	033492		2. 0	17. 37	039202	033807	
2. 10	17. 47	039678	033455	H B	2. 10	16. 52	038826	033754	H B
4. 0	15. 4	039314	033731	L	4. 0	14. 57	039055	033661	L
6. 0	10. 59	039042	033597		6. 0	14. 21	039941	033530	
8. 0	8. 56	038689	033486		8. 0	11. 55	039031	033450	
10. 0	6. 34	038561	033223	L	10. 0	8. 18	038987	033361	L
12. 0	11. 9	037756	033022	H B	12. 0	10. 39	038713	033355	H B
14. 0	10. 49	038451	033053		14. 0	11. 34	038725	033175	
16. 0	14. 19	039145	032898		16. 0	11. 13	038748	033084	
18. 0	11. 44	039085	032824		18. 0	11. 0	038723	033025	
20. 0	13. 0	037998	032781	H B	20. 0	11. 8	038692	032993	H B
22. 0	11. 50	037723	032702	L	22. 0	12. 22	037950	032812	L
Oct. 29. 0. 0	23. 18. 34	0·037934	0·032908	L	Nov. 1. 0. 0	23. 15. 51	0·038368	0·032901	L
1. 50	20. 24	038442	033553		1. 50	15. 42	039103	033286	
2. 0	19. 5	038221	033522		2. 0	15. 30	039125	033265	
2. 10	18. 34	038376	033479	L	2. 10	15. 36	039081	033260	L
4. 0	12. 56	038195	033854	H B	4. 0	14. 40	039346	033534	H B
6. 0	12. 48	039021	033646		6. 0	12. 15	039849	033403	
8. 0	7. 5	038808	033324		8. 0	9. 32	038416	033486	
10. 0	7. 47	038479	033066	H B	10. 0	10. 35	038749	033302	H B
12. 0	11. 31	038737	032992	D	12. 0	9. 10	038401	033119	G
14. 0	12. 28	038757	033065		14. 0	8. 24	037183	033192	
16. 0	15. 37	038855	033075		16. 0	10. 44	036479	033086	
18. 0	12. 28	039164	033117		18. 0	10. 42	038700	033022	
20. 0	11. 20	039279	033127	D	20. 0	11. 3	038216	033095	G
22. 0	15. 39	037328	032820	L	22. 0	13. 47	037142	032704	L
Oct. 30. 0. 0	23. 19. 39	0·037998	0·033021	L	Nov. 2. 0. 0	23. 15. 22	0·038479	0·032504	L
1. 50	18. 23	039159	033195		1. 50	17. 28	038717	032677	
2. 0	17. 36	039159	033195		2. 0	17. 7	038939	032693	
2. 10	17. 28	038982	033195	L	2. 10	18. 19	039824	032703	
4. 0	15. 26	038667	033381	H B	4. 0	14. 54	039994	033056	L
6. 0	13. 39	039760	033565	D	6. 0	14. 31	038700	033347	G
8. 0	12. 50	039582	033435		8. 0	12. 46	039563	033532	
10. 0	12. 33	039417	033350	D	10. 0	3. 53	038921	033285	G
12. 0	10. 44	039482	033061	L	12. 0	2. 28	038858	032848	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, 180°; from Nov. $1^{d}.1^{h}.50^{m}$, 186°.
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, $26^{s}\cdot5$.

DECLINATION MAGNET.
Oct. 27^{d} and 29^{d}. Remarkable changes occurred.
Nov. 2^{d}. Between 8^{h} and 10^{h} a considerable change occurred.

HORIZONTAL FORCE MAGNET.
Oct. 28^{d}, between 0^{h} and $1^{h}.50^{m}$, and on Nov. 1^{d}, between 16^{h} and 18^{h}, considerable changes occurred.
Oct. 28^{d} and 29^{d}. The least difference in the mean values for consecutive days occurred.

VERTICAL FORCE MAGNET.
Oct. 28^{d}, 29^{d}, and 31^{d}. Between 0^{h} and $1^{h}.50^{m}$ a considerable change occurred on each day.
Nov. 1^{d}. The mean daily force was the greatest in the month.

Daily Observations from November 3 to 9.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 3. 14. 0	23. 9. 36	0·038328	0·032377	L	Nov. 6. 14. 0	23. 11. 29	0·039518	0·032991	G
16. 0	12. 4	038771	032387		16. 0	10. 49	039370	032811	
18. 0	14. 38	038937	032532		18. 0	10. 26	039263	032779	
20. 0	12. 9	038983	032870	L	20. 0	9. 51	039399	032752	G
22. 0	11. 24	039418	032951	H B	22. 0	12. 4	038256	032652	L
Nov. 4. 0. 0	23. 13. 32	0·039142	0·032936	H B	Nov. 7. 0. 0	23. 16. 40	0·038812	0·032757	L
1. 50	16. 12	038864	033137		1. 50	16. 23	040012	033021	
2. 0	16. 16	038333	033137		2. 0	16. 9	039879	033021	
2. 10	16. 23	038576	033148	H B	2. 10	15. 49	039835	033042	L
4. 0	12. 7	038777	033243	L	4. 0	12. 37	040208	034045	G
6. 0	13. 53	039708	033192	L	6. 0	11. 4	040581	033547	G
8. 0	11. 26	039950	033440	H B	8. 0	8. 45	039704	033007	L
10. 0	7. 4	039030	033124	L	10. 0	9. 11	039969	033051	G
12. 0	8. 58	038957	033172	H B	12. 0	11. 45	039634	032630	L
14. 0	10. 6	039533	032844		14. 0	12. 47	039534	032587	
16. 0	11. 34	039219	032664		16. 0	12. 29	039910	032604	
18. 0	10. 20	039134	032874		18. 0	11. 57	040050	032613	
20. 0	11. 25	039137	032784	H B	20. 0	10. 50	039348	032615	L
22. 0	11. 31	039008	032546	L	22. 0	11. 15	038246	032620	H B
Nov. 5. 0. 0	23. 13. 40	0·038548	0·032778	L	Nov. 8. 0. 0	23. 16. 17	0·038368	0·032604	H B
1. 50	13. 41	039101	032995		1. 50	16. 53	038811	033026	
2. 0	13. 29	039101	033042		2. 0	16. 39	038722	033000	
2. 10	13. 32	039167	033048	L	2. 10	15. 54	038722	033000	H B
4. 0	12. 20	039429	033350	H B	4. 0	12. 48	039235	033027	L
6. 0	11. 12	039528	033156		6. 0	9. 58	039441	032834	
8. 0	9. 39	039477	033082		8. 0	10. 17	039807	032792	
10. 0	8. 39	039226	033034	H B	10. 0	8. 28	039873	032729	L
12. 0	10. 42	038880	032969	D	12. 0	10. 8	039369	032766	H B
14. 0	10. 37	038883	032843		14. 0	11. 25	039106	032633	
16. 0	10. 21	039082	032928		16. 0	11. 14	039131	032570	
18. 0	10. 7	039791	033085		18. 0	10. 31	039516	032405	
20. 0	11. 20	039860	033059	D	20. 0	10. 25	039508	032431	H B
22. 0	12. 14	039195	032736	L	22. 0	10. 23	038359	032193	L
Nov. 6. 0. 0	23. 15. 49	0·038193	0·032611	L	Nov. 9. 0. 0	23. 14. 57	0·038325	0·032208	L
1. 50	16. 31	039547	032979		1. 50	15. 54	039673	032435	
2. 0	16. 23	039392	032990		2. 0	15. 54	039629	032288	
2. 10	15. 49	039392	033000	L	2. 10	15. 25	039585	032120	L
4. 0	13. 26	039909	033297	D	4. 0	13. 7	040133	032873	H B
6. 0	11. 40	039257	033319		6. 0	11. 9	040127	032774	
8. 0	11. 16	039323	033366		8. 0	10. 50	040014	032500	
10. 0	10. 50	039511	033171	D	10. 0	10. 30	039931	032320	H B
12. 0	10. 57	039559	033045	G	12. 0	9. 38	039831	032229	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, 186°.
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, $26^s·5$.

VERTICAL FORCE MAGNET.
Nov. 4^d and 5^d. The least difference in the mean values for consecutive days occurred.
Nov. 9^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.

Daily Observations from November 10 to 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 10. 14. 0	23. 8. 54	0·039461	0·031699	D	Nov. 13. 14. 0	23. 9. 47	0·038878	0·032386	G
16. 0	11. 23	040125	031852		16. 0	9. 47	039387	032607	
18. 0	8. 13	040318	031819		18. 0	11. 33	039896	032701	
20. 0	12. 14	040495	031740	D	20. 0	14. 8	039210	032790	G
22. 0	15. 5	040257	031619	L	22. 0	12. 16	039475	032140	L
Nov. 11. 0. 0	23. 18. 45	0·038855	0·031830	L	Nov. 14. 0. 0	23. 14. 14	0·039319	0·032208	L
1. 50	17. 29	039870	032062		1. 50	15. 23	039670	032429	
2. 0	17. 14	040490	032067		2. 0	15. 29	039803	032429	
2. 10	18. 43	040268	032067	L	2. 10	15. 14	039803	032440	L
4. 0	14. 5	040646	032464	D	4. 0	12. 43	039959	033180	G
6. 0	12. 23	038488	032811		6. 0	10. 54	039918	032895	G
8. 0	11. 53	039694	032322		8. 0	10. 35	039747	032911	H B
10. 0	6. 8	038241	032294	D	10. 0	10. 11	040022	032912	G
12. 0	8. 21	038754	032252	L	12. 0	10. 13	039615	032835	D
14. 0	5. 20	038628	031875		14. 0	10. 30	039701	032671	
16. 0	12. 59	038847	032201		16. 0	10. 55	039712	032766	
18. 0	13. 41	038902	032334		18. 0	11. 38	040088	032788	
20. 0	12. 9	039160	032457	L	20. 0	11. 4	040080	032560	D
22. 0	12. 56	038860	032537	H B	22. 0	11. 14	039012	032712	L
Nov. 12. 0. 0	23. 14. 50	0·039160	0·032548	H B	Nov. 15. 0. 0	23. 13. 54	0·038981	0·032686	L
1. 50	14. 7	039183	032728		1. 50	15. 3	039754	032819	
2. 0	13. 53	039271	032722		2. 0	15. 5	039754	032814	
2. 10	14. 4	039404	032733	H B	2. 10	14. 45	039754	032850	L
4. 0	16. 55	038013	032902	L	4. 0	12. 46	039476	033030	D
6. 0	14. 33	039084	033050		6. 0	12. 46	040162	032941	
8. 0	12. 4	039099	032868		8. 0	11. 56	039963	032909	
10. 0	11. 9	039051	032869	L	10. 0	10. 46	039675	032941	D
12. 0	8. 27	038792	032917	H B	12. 0	10. 32	040084	032742	L
14. 0	11. 28	038977	032860		14. 0	8. 56	039919	032610	
16. 0	12. 59	039398	032834		16. 0	12. 0	040213	032689	
18. 0	11. 35	039236	032729		18. 0	11. 35	040849	032610	
20. 0	12. 42	039443	032739	H B	20. 0	11. 44	040384	032463	L
22. 0	12. 16	038562	032713	G	22. 0	22. 15	040128	032611	H B
Nov. 13. 0. 0	23. 14. 53	0·039173	0·032792	L	Nov. 16. 0. 0	23. 25. 11	0·037167	0·032662	H B
1. 50	14. 52	038661	033019		1. 50	30. 9	035355	033488	
2. 0	14. 46	038661	033019		2. 0	23. 40	035377	033567	
2. 10	14. 46	038528	033030	L	2. 10	18. 58	036306	033572	H B
4. 0	13. 29	039321	033105	H B	4. 0	18. 26	036126	034528	L
6. 0	11. 49	039709	032968		6. 0	15. 35	034542	034696	
8. 0	9. 6	039236	032820		8. 0	2. 12	035029	034213	
10. 0	8. 14	038937	032556	H B	10. 0	3. 10	037761	032811	L
12. 0	9. 7	038741	032476	G	12. 0	9. 42	036834	032164	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, 186°.
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, $26^s·5$.

DECLINATION MAGNET.
Nov. 11^d. Between 14^h and 16^h a considerable change occurred.
Nov. 13^d and 14^d. The least difference in the mean daily declinations for consecutive days occurred.
Nov. 15^d. Between 20^h and 22^h a large change occurred.
Nov. 16^d. The daily range was the greatest in the month. Nov. 16^d. Considerable changes occurred.
Nov. 16^d. The mean western declination was the greatest in the month.
Nov. $16^d. 1^h. 50^m$. The western declination was the greatest in the month in the two-hourly observations, but a greater occurred during the time of Extraordinary Observations at $0^h. 45^m$.
HORIZONTAL FORCE MAGNET.
Nov. 11^d. Between 4^h and 6^h a considerable change occurred.
Nov. 15^d. The mean daily force was the greatest in the month.
Nov. $15^d, 18^h$. The force at this time was greater than at any other during the month in the regular observations, but the greatest occurred at $22^d. 10^h. 47^m$ in Extraordinary Observations.
Nov. 15^d and 16^d. The greatest difference in the mean values for consecutive days occurred.
Nov 16^d. Considerable changes occurred.
VERTICAL FORCE MAGNET.
Nov. 11^d and 12^d. The greatest difference in the mean values for consecutive days occurred.
Nov. 14^d and 16^d. Considerable changes occurred.
Nov. 16^d. The daily range was the greatest in the month.
Nov. $16^d. 6^h$. The force at this time was greater than at any other during the month in the regular observations, but the greatest occurred at $16^d. 4^h. 58^m. 19^s$ in Extraordinary Observations.

Daily Observations from November 17 to 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 17. 14. 0	23. 12. 37	0·038723	0·032247	H B	Nov. 20. 14. 0	23. 11. 0	0·038830	0·032473	H B
16. 0	10. 59	038612	032400		16. 0	12. 2	038948	·032315	
18. 0	12. 37	038955	032499		18. 0	11. 38	039374	032109	
20. 0	13. 48	038955	032557	H B	20. 0	11. 23	038574	032118	H B
22. 0	13. 36	038307	032515	L	22. 0	11. 55	038615	031758	L
Nov. 18. 0. 0	23. 15. 0	0·036754	0·032731	L	Nov. 21. 0. 0	23. 14. 33	0·038525	0·031888	L
{ 1. 50	16. 9	039210	032737		{ 1. 50	15. 24	038820	032087	
{ 2. 0	16. 16	039343	032758		{ 2. 0	15. 32	038864	032108	
{ 2. 10	16. 52	039387	032758	L	{ 2. 10	15. 26	038931	032108	L
4. 0	12. 23	039015	033070	H B	4. 0	12. 5	039034	032594	H B
6. 0	12. 1	038955	032934		6. 0	12. 7	039150	032404	
8. 0	5. 3	040630	032775		8. 0	11. 18	038825	032177	
10. 0	1. 28	039926	032381	H B	10. 0	10. 22	038672	032113	H B
12. 0	8. 5	038436	032586	D	12. 0	10. 25	038942	031885	D
14. 0	13. 19	038547	032623		14. 0	10. 31	038572	031821	
16. 0	16. 13	038978	032492		16. 0	8. 48	039443	031577	
18. 0	10. 28	038465	032422		18. 0	9. 52	039462	031549	
20. 0	12. 26	038830	032490	D	20. 0	13. 20	039819	031612	D
22. 0	13. 30	037456	032316	L	22. 0	14. 25	037979	031666	L
Nov. 19. 0. 0	23. 17. 5	0·035979	0·032558	L	Nov. 22. 0. 0	23. 20. 27	0·037583	0·031997	L
{ 1. 50	16. 42	037750	032995		{ 1. 50	17. 18	038745	032277	
{ 2. 0	15. 15	037506	033000		{ 2. 0	18. 0	038811	032277	
{ 2. 10	13. 15	037728	032995	L	{ 2. 10	18. 58	038855	032282	L
4. 0	9. 42	037513	033281	D	4. 0	15. 38	038115	032637	D
6. 0	11. 16	038608	033091		6. 0	23. 11. 59	037638	032907	D
8. 0	10. 27	038788	032887		8. 0	22. 49. 35	035289	033306	G
10. 0	11. 2	039175	032860	D	10. 0	23. 10. 19	036766	032598	H B
12. 0	12. 18	038741	032633	L	12. 0	22. 54. 8	038443	031143	L
14. 0	13. 11	039051	032607		14. 0	23. 2. 58	038802	031286	
16. 0	13. 50	039312	032607		16. 0	9. 24	037127	031838	
18. 0	12. 4	039737	032607		18. 0	15. 55	037927	031811	
20. 0	11. 32	039073	032607	L	20. 0	14. 53	038717	032089	L
22. 0	12. 17	038663	032501	H B	22. 0	13. 5	036400	032188	H B
Nov. 20. 0. 0	23. 14. 36	0·037670	0·032616	H B	Nov. 23. 0. 0	23. 15. 34	0·035676	0·032361	H B
{ 1. 50	14. 31	038567	032637	D	{ 1. 50	15. 12	038193	032783	
{ 2. 0	14. 19	038479	032642		{ 2. 0	15. 53	038281	032783	
{ 2. 10	14. 27	038501	032642	D	{ 2. 10	15. 37	037551	032783	H B
4. 0	12. 12	038782	032632	L	4. 0	14. 24	038190	032587	L
6. 0	9. 14	039099	032595		6. 0	9. 54	037696	032493	
8. 0	11. 22	039431	032607		8. 0	7. 58	037693	032134	
10. 0	8. 12	038878	032580	L	10. 0	7. 22	037475	032149	L
12. 0	10. 41	038871	032669	H B	12. 0	10. 9	038061	032112	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, 186°.
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, 26^s·5.

DECLINATION MAGNET.
Nov. 18^d. Considerable changes occurred.
Nov. 21^d. Between 22^h and 24^h a considerable change occurred.
Nov. 21^d and 22^d. The greatest difference in the mean daily declinations for consecutive days occurred.
Nov. 22^d. The mean western declination was the least in the month.
Nov. 22^d. Remarkable changes occurred.
Nov. 22^d. 8^h. The western declination was the smallest in the month in the two-hourly observations, but a smaller occurred at 8^h. 22^m. 15^s during Extraordinary Observations.
HORIZONTAL FORCE MAGNET.
Nov. 18^d. 0^h. It seems probable that an error of one division of the scale has been made at this observation; if so, the reduced number should be 0·038968: the number as observed has been used in the Abstracts.
Nov. 18^d, 19^d, 22^d, and 23^d. Remarkable changes occurred.
Nov. 20^d and 21^d. The least difference in the mean values for consecutive days occurred.
Nov. 21^d. The daily range was the least in the month.
Nov. 22^d. The daily range was the greatest in the month.
Nov. 23^d. The mean daily force was the least in the month.
Nov. 23^d. 0^h. The force at this time was less than at any other during the month in the regular observations; but the least occurred at 22^d. 8^h. 31^m. 15^s, and the greatest at 22^d. 10^h. 47^m: both in the Extraordinary Observations; so that the greatest and least force were separated by only 2^h. 15^m. 45^s.
VERTICAL FORCE MAGNET.
Nov. 20^d. The daily range was the least in the month.
Nov. 22^d. Considerable changes occurred.
Nov. 22^d. Between 14^h and 16^h a considerable change occurred.

Daily Observations from November 24 to 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 24. 14. 0	23. 11. 6	0·037764	0·031616	H B	Nov. 27. 14. 0	23. 6. 15	0·038627	0·031741	H B
16. 0	15. 48	038108	031706		16. 0	9. 7	038612	031682	
18. 0	12. 2	038379	031606		18. 0	6. 25	039774	031501	
20. 0	14. 33	038228	031527	H B	20. 0	12. 21	039520	031227	H B
22. 0	12. 26	037885	031564	L	22. 0	13. 39	039231	031300	L
Nov. 25. 0. 0	23. 12. 47	0·037789	0·031706	L	Nov. 28. 0. 0	23. 18. 18	0·038241	0·031468	L
{ 1. 50	14. 56	039111	031898		{ 1. 50	20. 30	038236	031879	
{ 2. 0	14. 44	039753	031935		{ 2. 0	21. 17	038192	031853	
{ 2. 10	13. 18	039996	031892	L	{ 2. 10	21. 41	038081	031853	L
4. 0	12. 43	039392	032574	H B	4. 0	17. 1	037622	032671	H B
6. 0	10. 53	038498	032333		6. 0	12. 5	037839	032847	
8. 0	10. 28	039185	032243		8. 0	11. 22	038858	032485	
10. 0	10. 16	038813	032244	H B	10. 0	10. 11	038873	032403	H B
12. 0	9. 59	039251	032170	D	12. 0	9. 36	038455	032393	D
14. 0	10. 50	039093	032265		14. 0	10. 54	038183	032240	
16. 0	11. 12	038764	032097		16. 0	10. 44	038927	031982	
18. 0	11. 12	038716	032054		18. 0	11. 49	038745	032114	
20. 0	11. 16	039011	031911	D	20. 0	11. 32	038565	031939	D
22. 0	10. 18	038756	031629	L	22. 0	10. 53	037881	031753	L
Nov. 26. 0. 0	23. 13. 20	0·038276	0·031803	L	Nov. 29. 0. 0	23. 13. 9	0·037458	0·031875	L
{ 1. 50	13. 27	039502	032232		{ 1. 50	14. 40	038165	031932	
{ 2. 0	13. 27	039502	032232		{ 2. 0	14. 29	038320	031937	
{ 2. 10	13. 19	039390	032221	L	{ 2. 10	14. 15	038364	031942	L
4. 0	12. 7	039452	032640	D	4. 0	14. 26	038507	032269	D
6. 0	10. 41	039508	032547		6. 0	14. 6	038514	032359	
8. 0	11. 2	039153	032367		8. 0	11. 51	038890	032291	D
10. 0	9. 37	038786	031981	D	10. 0	10. 10	038713	031728	G
12. 0	9. 21	038480	031701	L	12. 0	11. 13	038735	031859	G
14. 0	10. 20	038342	031593		14. 0	12. 37	038915	032228	H B
16. 0	10. 38	038320	031539		16. 0	12. 23	039007	032255	L
18. 0	10. 2	039044	031431		18. 0	12. 7	038879	032372	L
20. 0	10. 18	037017	031078	L	20. 0	11. 31	038794	032474	D
22. 0	11. 32	038526	031260	H B	22. 0	11. 9	038286	032427	G
Nov. 27. 0. 0	23. 16. 31	0·037944	0·031550	H B	Nov. 30. 0. 0	23. 13. 1	0·037986	0·032268	H B
{ 1. 50	16. 22	039113	031988		{ 1. 50	14. 30	038313	032295	H B
{ 2. 0	16. 20	039024	031972		{ 2. 0	14. 21	038308	032301	D
{ 2. 10	16. 1	038847	031914	H B	{ 2. 10	14. 17	038313	032311	D
4. 0	12. 39	039571	032223	L	4. 0	11. 29	038454	032205	L
6. 0	11. 33	039708	032109		6. 0	10. 25	039182	032506	H B
8. 0	11. 9	039843	032016		8. 0	9. 17	038651	032443	H B
10. 0	10. 45	039621	031873	L	10. 0	9. 24	038743	032259	D
12. 0	7. 5	038690	031978	H B	12. 0	9. 28	038028	031968	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, 186°.
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, $26^s·5$.

DECLINATION MAGNET.
Nov. 26^d. The daily range was the smallest in the month, and, with the exception of Dec. 9, the smallest in the year.
Nov. 27^d. Between 18^h and 20^h a considerable change occurred.

HORIZONTAL FORCE MAGNET.
Nov. 27^d. Considerable changes occurred.

VERTICAL FORCE MAGNET.
Nov. 25^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.
Nov. $26^d. 20^h$. The force at this time was less than at any other during the month in the regular observations, but the least occurred at $22^d. 11^h. 52^m. 0^s$ in extra observations.
Nov. 27^d. The mean daily force was the least in the month.

Daily Observations from December 1 to 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 1. 14. 0	23. 11. 37	0·036689	0·031218	L	Dec. 4. 14. 0	22. 57. 16	0·037562	0·031340	L
16. 0	10. 3	036733	031260		16. 0	23. 0. 43	038108	030849	
18. 0	11. 6	037132	031297		18. 0	22. 58. 14	037784	031059	
20. 0	12. 23	037375	031381	L	20. 0	57. 58	037437	030862	L
22. 0	11. 10	037416	031503	H B	22. 0	22. 59. 3	036957	031135	H B
Dec. 2. 0. 0	23. 1. 15	0·036505	0·031603	H B	Dec. 5. 0. 0	23. 3. 1	0·037561	0·031387	H B
1. 50	3. 2	038822	031751		1. 50	3. 53	038237	031800	
2. 0	3. 9	038911	031735		2. 0	3. 29	038237	031794	
2. 10	2. 41	039066	031709	H B	2. 10	3. 30	038702	031794	H B
4. 0	23. 0. 52	039852	031932	L	4. 0	1. 17	039180	032140	L
6. 0	22. 53. 28	039447	032011		6. 0	23. 0. 28	039103	031958	
8. 0	59. 4	039219	031843		8. 0	22. 59. 56	038645	031720	
10. 0	59. 29	039313	031749	L	10. 0	58. 46	038039	031566	L
12. 0	22. 58. 19	038896	032030	H B	12. 0	22. 59. 31	037031	031676	H B
14. 0	23. 0. 8	038320	031893		14. 0	23. 0. 17	036923	031348	
16. 0	23. 1. 17	038311	031665		16. 0	22. 58. 44	036969	031231	
18. 0	22. 59. 21	038751	031744		18. 0	59. 53	036780	031145	
20. 0	59. 15	038975	031553	H B	20. 0	59. 54	036691	031028	H B
22. 0	22. 57. 55	038263	031584	L	22. 0	22. 58. 47	036684	030910	L
Dec. 3. 0. 0	23. 1. 2	0·038306	0·031616	G	Dec. 6. 0. 0	23. 2. 7	0·036985	0·031210	L
1. 50	2. 7	039656	031679	L	1. 50	2. 42	037075	031406	
2. 0	2. 17	039589	031731		2. 0	3. 16	037717	031395	
2. 10	23. 2. 25	039656	031731	L	2. 10	3. 27	037606	031448	L
4. 0	22. 59. 27	039696	032202	H B	4. 0	0. 39	039009	032053	H B
6. 0	59. 1	039661	032135		6. 0	23. 0. 34	038722	031996	
8. 0	58. 56	039010	031786		8. 0	22. 59. 26	038253	031851	
10. 0	58. 40	038687	031696	H B	10. 0	58. 43	037774	031734	H B
12. 0	58. 3	038559	031786	D	12. 0	58. 44	038482	031591	D
14. 0	58. 29	038449	031775		14. 0	22. 59. 30	037585	031352	
16. 0	58. 45	038038	031728		16. 0	23. 0. 9	037495	031093	
18. 0	58. 56	038425	031827		18. 0	22. 59. 58	037443	030959	
20. 0	59. 26	038692	031726	D	20. 0	59. 27	037343	030973	D
22. 0	22. 59. 27	038192	031552	L	22. 0	22. 58. 42	036764	030961	L
Dec. 4. 0. 0	23. 3. 38	0·039309	0·031510	L	Dec. 7. 0. 0	23. 0. 30	0·036832	0·031093	L
1. 50	9. 29	037451	031588		1. 50	2. 27	037454	031130	
2. 0	8. 58	037562	031552		2. 0	2. 32	037520	031135	
2. 10	8. 20	037606	031572	L	2. 10	2. 32	037565	031114	L
4. 0	4. 50	038011	032075	D	4. 0	23. 0. 22	039515	031554	D
6. 0	2. 7	038753	032012		6. 0	22. 58. 44	040006	031612	D
8. 0	1. 39	037313	032090		8. 0	58. 31	038710	031083	G
10. 0	23. 1. 37	038081	032006	D	10. 0	58. 36	038676	031284	D
12. 0	22. 57. 1	037494	031605	L	12. 0	58. 45	038185	031293	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, 186°; from Dec. $2^d. 0^h$, 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, $26^s·5$.

DECLINATION MAGNET.
Dec. $1^d. 20^h$. The western declination was the greatest in the month.
Dec. 2^d. The daily range was the greatest in the month.
Dec. 2^d. The mean western declination was the greatest in the month.
Dec. 2^d. Considerable changes occurred.
Dec. 2^d and 3^d. The greatest difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
Dec. 2^d. Between 0^h and $1^h. 50^m$ a considerable change occurred.
Dec. 3^d. The daily range was the least in the month.
Dec. 7^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.

VERTICAL FORCE MAGNET.
Dec. 4^d and 6^d, between $2^h. 10^m$ and 4^h, and on 7^d, between 6^h and 8^h, considerable changes occurred.
Dec. 5^d and 6^d. The least difference in the mean values for consecutive days occurred.

Daily Observations from December 8 to 14.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 8. 14. 0	22. 59. 15	0·037395	0·030613	L	Dec. 11. 14. 0	23. 0. 9	0·037580	0·030921	L
16. 0	59. 39	037240	030602		16. 0	22. 59. 41	037376	030756	
18. 0	58. 41	037262	030586		18. 0	59. 13	037649	030766	
20. 0	58. 31	037407	030560	L	20. 0	59. 19	037547	030591	L
22. 0	22. 58. 6	038511	030766	H B	22. 0	22. 59. 10	038214	030991	H B
Dec. 9. 0. 0	23. 1. 7	0·037384	0·030562	H B	Dec. 12. 0. 0	23. 1. 0	0·036821	0·031019	H B
1. 50	1. 57	039197	030826		1. 50	1. 42	037038	031029	
2. 0	1. 52	039287	030826		2. 0	1. 42	037038	031029	
2. 10	1. 50	039197	030826	H B	2. 10	1. 39	037016	031029	H B
4. 0	23. 0. 37	039768	031069	L	4. 0	23. 0. 16	038909	031245	L
6. 0	22. 59. 1	039991	031150	L	6. 0	22. 58. 26	038185	031161	
8. 0	58. 18	039945	031231	H B	8. 0	58. 29	038036	031087	
10. 0	58. 5	039006	031084	L	10. 0	57. 38	038119	031083	L
12. 0	59. 9	038761	031080	H B	12. 0	57. 23	038314	031188	H B
14. 0	22. 59. 19	038600	030989		14. 0	59. 48	036812	030966	
16. 0	23. 0. 42	038238	030968		16. 0	59. 59	037208	031013	
18. 0	22. 55. 53	038595	030757		18. 0	59. 24	038056	030886	
20. 0	59. 28	038098	030820	H B	20. 0	58. 39	037940	030485	H B
22. 0	22. 59. 33	039045	030798	L	22. 0	22. 58. 38	036956	030737	L
Dec. 10. 0. 0	23. 2. 18	0·037078	0·031162	L	Dec. 13. 0. 0	23. 1. 24	0·036364	0·030768	L
1. 50	2. 44	037432	031136		1. 50	2. 4	036471	030789	
2. 0	2. 23	037631	031136		2. 0	1. 57	036449	030789	
2. 10	2. 4	038517	031110	L	2. 10	1. 52	036560	030778	L
4. 0	23. 0. 43	039046	031443	H B	4. 0	23. 0. 13	037276	031062	H B
6. 0	22. 58. 36	039463	031317	H B	6. 0	22. 58. 23	038588	031015	
8. 0	58. 14	038646	031243	L	8. 0	58. 14	038023	031062	
10. 0	58. 4	038083	031313	H B	10. 0	58. 17	037193	030963	H B
12. 0	58. 10	037777	030981	G	12. 0	58. 1	037611	030910	D
14. 0	22. 59. 42	038457	030954		14. 0	58. 55	036774	031367	
16. 0	23. 0. 2	037461	030928		16. 0	59. 20	036912	030889	
18. 0	22. 59. 41	037427	031059		18. 0	59. 20	036956	030910	
20. 0	59. 38	038461	031006	G	20. 0	58. 22	037524	030867	D
22. 0	22. 58. 43	037812	030874	L	22. 0	22. 58. 55	039114	030815	L
Dec. 11. 0. 0	23. 1. 2	0·037276	0·030847	L	Dec. 14. 0. 0	23. 1. 6	0·037639	0·030711	L
1. 50	2. 22	036642	030878		1. 50	5. 26	037406	030711	
2. 0	1. 58	036797	030899		2. 0	5. 49	036985	030711	
2. 10	2. 4	036863	030925	L	2. 10	4. 55	036985	030738	L
4. 0	3. 15	039777	031347	G	4. 0	0. 38	037245	031281	D
6. 0	23. 0. 44	039308	031226		6. 0	23. 0. 11	035802	031366	
8. 0	22. 59. 56	038641	031148	G	8. 0	22. 58. 43	034821	032354	
10. 0	59. 19	037806	031313	D	10. 0	59. 15	036371	031987	D
12. 0	22. 58. 57	037733	030954	L	12. 0	22. 58. 45	036040	031240	L

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, 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, 20ˢ·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24ˢ·6; in Vertical Plane, 26ˢ·5.

DECLINATION MAGNET.
Dec. 9ᵈ. The daily range was the smallest in the year.
Dec. 12ᵈ and 13ᵈ. The least difference in the mean daily declinations for consecutive days occurred.

HORIZONTAL FORCE MAGNET.
Dec. 11ᵈ. Between 2ʰ. 10ᵐ and 4ʰ a considerable change occurred.
Dec. 12ᵈ and 14ᵈ. Considerable changes occurred.

VERTICAL FORCE MAGNET.
Dec. 9ᵈ. The mean daily force was the least in the month.
Dec. 11ᵈ. The daily range was the least in the month.
Dec. 12ᵈ. 20ʰ. The force at this time was the least in the month.
Dec. 14ᵈ. Considerable changes occurred.
Dec. 14ᵈ. 8ʰ. The force at this time was greater than at any other during the month in the regular observations, but the greatest occurred at 19ᵈ. 5ʰ. 55ᵐ in Term-Day Observations.

Daily Observations from December 15 to 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 15. 14. 0	23. 2. 13	0·036644	0·031135	L	Dec. 18. 14. 0	22. 58. 13	0·039766	0·032006	L
16. 0	22. 59. 15	036567	031089		16. 0	58. 55	040208	032103	H B
18. 0	59. 29	036507	031163		18. 0	58. 24	040549	032220	H B
20. 0	59. 44	036952	031263	L	20. 0	22. 58. 28	040186	032122	D
22. 0	22. 59. 47	037227	031470	H B	22. 0	23. 5. 10	039821	031963	G
Dec. 16. 0. 0	23. 2. 3	0·039619	0·031582	H B	Dec. 19. 0. 0	23. 2. 20	0·037858	0·031810	L
1. 50	2. 20	039413	031905		1. 50	3. 51	038347	032104	H B
2. 0	1. 47	039479	031879		2. 0	3. 30	038563	032062	
2. 10	1. 32	039611	031879	H B	2. 10	3. 26	038546	032077	H B
4. 0	0. 35	039715	031986	L	4. 0	23. 1. 52	036384	031997	L
6. 0	23. 1. 14	038600	032012		6. 0	22. 58. 42	038146	032340	G
8. 0	22. 56. 11	039611	031803		8. 0	58. 33	038608	032224	H B
10. 0	55. 0	040057	031919	L	10. 0	56. 29	038230	032160	D
12. 0	56. 26	039247	031972	H B	12. 0	53. 40	038537	031896	L
14. 0	57. 55	039423	031847		14. 0	57. 23	037100	031500	
16. 0	58. 55	039410	031852		16. 0	58. 42	036716	031335	
18. 0	59. 21	039740	032138		18. 0	57. 48	037106	031149	
20. 0	22. 59. 26	039255	032043	H B	20. 0	59. 46	037762	031146	L
22. 0	23. 0. 7	039263	031932	D	22. 0	22. 59. 38	038065	031240	H B
Dec. 17. 0. 0	23. 0. 52	0·039992	0·031705	L	Dec. 20. 0. 0	23. 5. 38	0·036209	0·031197	H B
1. 50	1. 44	038553	031596		1. 50	3. 51	035937	031570	D
2. 0	1. 52	038620	031575		2. 0	4. 0	036402	031659	H B
2. 10	23. 1. 52	038531	031570	L	2. 10	23. 3. 46	036402	031554	H B
4. 0	22. 59. 49	038747	031902	H B	4. 0	22. 59. 59	037715	032091	L
6. 0	59. 24	039256	032003		6. 0	57. 58	035739	031671	
8. 0	57. 40	039066	031834		8. 0	56. 1	035143	031302	
10. 0	58. 48	038716	031685	H B	10. 0	53. 9	034885	031027	L
12. 0	58. 54	039074	031638	D	12. 0	22. 56. 4	034143	031327	H B
14. 0	59. 14	038742	031659		14. 0	23. 1. 18	036813	030869	
16. 0	59. 0	038541	031574		16. 0	0. 21	036660	031006	
18. 0	58. 18	038661	031437		18. 0	3. 45	036812	031069	
20. 0	59. 38	037918	031437	D	20. 0	0. 3	036464	031132	H B
22. 0	22. 59. 38	039724	031526	L	22. 0	0. 32	035845	030999	L
Dec. 18. 0. 0	23. 0. 59	0·039144	0·031474	L	Dec. 21. 0. 0	23. 4. 33	0·033956	0·031114	L
1. 50	1. 50	038507	031526		1. 50	4. 0	034862	031113	
2. 0	1. 45	038574	031516		2. 0	3. 21	034906	031139	
2. 10	23. 1. 34	038507	031516	L	2. 10	23. 3. 40	034906	031192	L
4. 0	22. 59. 42	037414	031691	D	4. 0	22. 50. 14	035380	031908	H B
6. 0	57. 45	039699	031886		6. 0	59. 18	034977	031538	
8. 0	58. 20	039525	031993	D	8. 0	59. 45	035238	031508	H B
10. 0	57. 52	039986	031941	G	10. 0	58. 21	036789	031493	D
12. 0	54. 12	040625	031905	G	12. 0	57. 42	035737	031198	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, $26^s·5$.

DECLINATION MAGNET.
Dec. 18^d, between 20^h and 22^h; also, on 19^d, between 22^h and 24^h, considerable changes occurred.
Dec. 21^d. Considerable changes occurred.
Dec. $21^d. 4^h$. The western declination was the smallest in the month.

HORIZONTAL FORCE MAGNET.
Dec. 15^d. Between 22^h and 24^h a considerable change occurred.
Dec. 18^d, 19^d, 20^d, and 21^d. Considerable changes occurred.
Dec. 19^d and 20^d. The greatest difference in the mean values for consecutive days occurred.
Dec. $20^d. 12^h$. The force at this time was less than at any other during the month in the regular observations, but the least occurred at $21^d. 4^h. 43^m$, in [extra observations.
Dec. 21^d. The mean daily force was the least in the month.

VERTICAL FORCE MAGNET.
Dec. 19^d. The mean daily force was the greatest in the month.
Dec. 19^d and 20^d. The greatest difference in the mean values for consecutive days occurred.
Dec. 20^d. Between $2^h. 10^m$ and 4^h a considerable change occurred.

Daily Observations from December 22 to 28.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Dec. 22. 14. 0	22. 58. 58	0·035027	0·030586	D
16. 0	59. 46	035492	030691	
18. 0	59. 46	035470	030754	
20. 0	58. 30	035912	030765	D
22. 0	22. 58. 36	036157	030754	L
Dec. 23. 0. 0	23. 2. 1	0·035741	0·030818	L
1. 50	2. 53	037300	032249	
2. 0	2. 40	037367	032254	
2. 10	2. 12	037344	032259	L
4. 0	23. 1. 15	038958	031389	D
6. 0	22. 59. 24	040969	031454	
8. 0	58. 47	038845	031323	D
10. 0	58. 5	038417	031287	H B
12. 0	57. 6	037918	031208	
14. 0	58. 0	036942	031129	
16. 0	59. 38	036933	030928	
18. 0	59. 55	037110	031023	
20. 0	58. 58	037045	031006	H B
22. 0	22. 58. 46	037682	030952	L
Dec. 24. 0. 0	23. 1. 10	0·037886	0·031260	L
1. 50	1. 27	038487	031662	G
2. 0	0. 56	038465	031624	L
2. 10	1. 38	038509	031602	L
4. 0	23. 0. 4	037187	031784	H B
6. 0	22. 57. 44	036856	031627	
8. 0	58. 37	036879	031491	
10. 0	57. 36	036549	031395	H B
12. 0	22. 58. 33	036498	031284	L
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	...	...	...	..

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Dec. 25. 14. 0	23. 0. 11	0·035883	0·030729	L
16. 0	22. 59. 42	036415	030766	
18. 0	58. 48	036789	030872	
20. 0	22. 58. 37	037223	030846	L
22. 0	23. 0. 5	038319	031137	D
Dec. 26. 0. 0	23. 1. 4	0·038243	0·031651	H B
1. 50	4. 15	038471	...	
2. 0	4. 16	038294	...	
2. 10	3. 50	038228	...	H B
4. 0	1. 28	038970	...	L
6. 0	23. 0. 59	039401	...	
8. 0	22. 57. 22	039698	...	
10. 0	59. 55	038285	...	L
12. 0	59. 11	038505	...	D
14. 0	59. 11	037793	...	
16. 0	22. 58. 20	037577	...	
18. 0	23. 1. 26	038131	...	
20. 0	2. 1	037910	...	D
22. 0	2. 5	038370	...	H B
Dec. 27. 0. 0	23. 3. 11	0·037866	...	H B
1. 50	1. 33	038513	...	
2. 0	1. 41	038204	...	
2. 10	1. 38	038535	...	H B
4. 0	23. 0. 58	041819	...	D
6. 0	22. 59. 34	041558	...	
8. 0	22. 59. 15	041292	...	
10. 0	23. 0. 3	040598	...	D
12. 0	22. 55. 50	040907	...	H B
14. 0	53. 7	040269	...	
16. 0	57. 40	040911	...	
18. 0	57. 30	041344	...	
20. 0	22. 59. 59	040325	...	H B
22. 0	23. 0. 14	040593	...	L
Dec. 28. 0. 0	22. 56. 51	0·041264	...	L
1. 50	54. 17	041502	...	
2. 0	53. 59	041436	...	
2. 10	22. 53. 56	041547	...	L
4. 0	23. 0. 7	042593	...	H B
6. 0	22. 58. 6	042719	...	
8. 0	58. 20	042475	...	
10. 0	57. 57	041932	...	H B
12. 0	57. 26	041953	...	L

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, 220°; from Dec. 28d. 0h, 227½°.
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, 26s·5.

DECLINATION MAGNET.
Dec. 28d. The mean western declination was the smallest in the year.
Dec. 28d. Considerable changes occurred.

HORIZONTAL FORCE MAGNET.
Dec. 23d. The daily range was the greatest in the month.
Dec. 23d. Considerable changes occurred.
Dec. 23d and 24d. The least difference in the mean values for consecutive days occurred.
Dec. 27d. Between 2h. 10m and 4h a considerable change occurred.
Dec. 28d. The mean daily force was the greatest in the month.
Dec. 28d. 6h. The force at this time was the greatest in the month.

VERTICAL FORCE MAGNET.
Dec. 23d. The daily range was the greatest in the month.
Dec. 23d. Large changes occurred.
Dec. 26d. 0h. The instrument was taken out of its box for the purpose of examining its condition, and it was found that the knife edges were injured, particularly that one which had rested on the South agate: it was sent to Mr. Barrow for repair.

Daily Observations from December 29 to 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 29. 14. 0	22. 53. 11	0·042395	...	L	...	...	...	...	..
16. 0	52. 36	040745	...		...	...	...	...	..
18. 0	55. 47	039609	...		...	...	...	...	..
20. 0	57. 10	040463	...	L	...	...	...	...	..
22. 0	22. 59. 45	041547	...	H B	...	...	...	...	..
Dec. 30. 0. 0	23. 1. 11	0·040311	...	H B	...	...	...	...	..
1. 50	0. 30	040463	...		...	...	...	...	..
2. 0	0. 29	040574	...		...	...	...	...	..
2. 10	0. 51	040330	...	H B	...	...	...	...	..
4. 0	1. 22	040580	...	L	...	...	...	...	..
6. 0	23. 2. 34	039375	...		...	...	...	...	..
8. 0	22. 57. 21	040130	...		...	...	...	...	..
10. 0	56. 30	040627	...	L	...	...	...	...	..
12. 0	58. 8	039520	...	D	...	...	...	...	..
14. 0	58. 40	038611	...		...	...	...	...	..
16. 0	56. 42	038191	...		...	...	...	...	..
18. 0	58. 36	039951	...		...	...	...	...	..
20. 0	22. 56. 54	039560	...	D	...	...	...	...	..
22. 0	23. 0. 42	038084	...	H B	...	...	...	...	..
Dec. 31. 0. 0	23. 2. 39	0·038908	...	L	...	...	...	...	..
1. 50	5. 49	038634	...	H B	...	...	...	...	..
2. 0	5. 0	038191	...		...	...	...	...	..
2. 10	2. 34	038302	...	H B	...	...	...	...	..
4. 0	23. 1. 9	040564	...	D	...	...	...	...	..
6. 0	22. 58. 39	040990	...	D	...	...	...	...	..
8. 0	56. 20	041336	...	L	...	...	...	...	..
10. 0	51. 33	041138	...	D	...	...	...	...	..
12. 0	54. 20	039628	...	H B	...	...	...	...	..
...	...	...	...	..	...	...	...	...	..
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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, 227½°.
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, $26^s·5$.

HORIZONTAL FORCE MAGNET.
Dec. 31ᵈ. Considerable changes occurred.

ROYAL OBSERVATORY, GREENWICH.

TERM-DAY OBSERVATIONS

OF

MAGNETOMETERS.

1844.

Term-Day Observations of January 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Jan. 24. 10. 0	23. 16. 19	0·035732	0·039346	G
5	16. 29	035687	039335	
10	16. 34	035643	039335	
15	16. 38	035643	039329	
20	16. 38	035643	039329	
25	16. 38	035599	039329	
30	16. 38	035554	039329	
35	16. 37	035554	039329	
40	16. 31	035554	039329	
45	16. 28	035510	039317	
50	16. 18	035466	039323	
55	16. 18	035466	039323	
Jan. 24. 11. 0	23. 16. 13	0·035466	0·039323	G
5	16. 20	035510	039323	
10	16. 34	035493	039284	
15	16. 44	035560	039284	
20	16. 55	035560	039284	
25	16. 52	035543	039258	
30	16. 47	035476	039264	
35	16. 34	035476	039226	
40	16. 32	035459	039226	
45	16. 29	035526	039226	
50	16. 34	035526	039211	
55	16. 37	035575	039211	
Jan. 24. 12. 0	23. 16. 48	0·035619	0·039185	G
5	17. 12	035575	039185	
10	17. 27	035558	039185	
15	16. 6	035337	039116	
20	16. 4	035320	039127	
25	16. 5	035320	039127	
30	16. 5	035347	039127	
35	16. 42	035347	039156	G
40	16. 31	035529	039156	D
45	16. 14	035684	039156	
50	15. 58	035667	039156	
55	15. 46	035512	039150	
Jan. 24. 13. 0	23. 15. 40	0·035384	0·039139	D
5	15. 33	035296	039139	
10	15. 31	035141	039145	
15	15. 20	035141	039145	
20	15. 31	035119	039145	
25	15. 32	035207	039150	
30	15. 28	035229	039156	
35	15. 34	035141	039156	
40	15. 50	035030	039162	
45	15. 45	034897	039174	
50	15. 48	034986	039179	
55	16. 4	035030	039191	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Jan. 24. 14. 0	23. 16. 38	0·035030	0·039203	D
5	17. 1	034947	039208	
10	17. 1	034902	039181	
15	16. 44	035522	039161	
20	17. 49	035992	039179	
25	18. 37	036169	039163	
30	18. 31	036108	039152	
35	17. 34	035582	039097	
40	16. 14	035139	039050	
45	16. 31	034967	039007	
50	15. 54	034679	038980	
55	14. 44	034662	038974	
Jan. 24. 15. 0	23. 14. 25	0·034845	0·038948	D
5	13. 52	034833	038901	
10	14. 10	034860	038865	
15	13. 48	034887	038828	
20	13. 14	035008	038780	
25	12. 53	034908	038739	
30	13. 37	034918	038680	
35	15. 7	035017	038646	D
40	15. 42	035028	038582	J H
45	15. 46	034994	038574	
50	17. 19	034915	038521	
55	15. 44	034810	038468	
Jan. 24. 16. 0	23. 14. 21	0·034793	0·038341	J H
5	13. 5	034859	038353	
10	13. 13	034876	038379	
15	13. 13	034893	038405	
20	13. 13	034937	038405	
25	13. 13	034954	038432	
30	16. 31	034666	038458	
35	16. 56	034462	038481	
40	17. 34	034728	038554	
45	17. 34	034833	038569	
50	14. 13	034922	038569	
55	14. 3	035205	038560	
Jan. 24. 17. 0	23. 12. 52	0·035354	0·038552	J H
5	12. 55	035354	038564	
10	15. 12	034535	038552	
15	15. 31	033649	038413	
20	16. 41	033184	038459	
25	18. 43	033118	038506	
30	20. 26	033666	038532	
35	21. 14	034641	038590	
40	21. 23	035371	038520	
45	21. 32	035437	038520	
50	21. 17	036102	038474	
55	21. 17	036119	038503	

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, 168°.
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, $25^s{\cdot}2$.

Jan. $24^d. 17^h$. The western declination was smaller than at any other time during the term.
Jan. $24^d. 14^h. 25^m$. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Term-Day Observations of January 24 and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 24. 18. 0	23. 20. 26	0 ·036053	0 ·038431	J H	Jan. 24. 22. 0	23. 24. 43	0 ·033635	0 ·038817	G
5	19. 56	036053	038332		5	25. 17	033568	038817	
10	19. 56	035897	038327		10	25. 19	033347	038817	
15	19. 56	035875	038327		15	25. 26	033258	038863	
20	20. 23	035632	038327		20	25. 43	033347	038875	
25	21. 4	035233	038338		25	25. 49	033413	038886	
30	21. 38	035216	038390		30	26. 22	033014	038886	
35	22. 19	035216	038454	J H	35	26. 36	032837	038886	
40	24. 55	034973	038454	P	40	26. 41	032837	038921	
45	24. 55	034973	038454		45	26. 48	032837	038921	
50	25. 4	035039	038460		50	26. 30	032815	038921	
55	25. 14	035177	038460		55	27. 0	032793	038963	
Jan. 24. 19. 0	23. 25. 10	0 ·035177	0 ·038501	P	Jan. 24. 23. 0	23. 27. 8	0 ·032793	0 ·038992	G
5	24. 34	035199	038501		5	27. 12	032793	039003	
10	23. 54	035160	038474		10	27. 28	032793	039003	
15	23. 53	035160	038474		15	27. 39	032793	039050	
20	23. 38	035143	038448		20	27. 31	033125	039050	G
25	23. 12	034988	038448		25	27. 23	032970	039050	D
30	23. 20	034683	038432		30	27. 25	032970	039032	
35	23. 52	034462	038455		35	27. 25	032948	039073	
40	23. 55	034467	038453		40	27. 18	032948	039090	
45	24. 7	034622	038464		45	27. 0	032992	039125	
50	24. 7	034605	038467		50	27. 6	033058	039125	
55	24. 54	034649	038467		55	27. 2	033192	039137	
Jan. 24. 20. 0	23. 24. 54	0 ·034411	0 ·038446	P	Jan. 25. 0. 0	23. 26. 52	0 ·033147	0 ·039148	D
5	25. 4	034411	038458		5	27. 0	033058	039171	
10	25. 0	034189	038469		10	26. 42	033192	039166	
15	25. 0	034189	038504		15	27. 17	033302	039177	D
20	25. 0	033968	038516		20	26. 58	033258	039183	J H
25	26. 0	033730	038545		25	27. 3	033413	039166	
30	26. 0	033730	038548		30	27. 17	033325	039296	
35	25. 55	033819	038548		35	26. 34	033192	039238	
40	25. 53	033951	038606		40	26. 43	033125	039296	
45	25. 53	033951	038594		45	27. 20	032948	039337	
50	25. 21	033951	038606		50	27. 46	033036	039238	
55	24. 58	033713	038606		55	27. 42	033014	039238	
Jan. 24. 21. 0	23. 25. 7	0 ·033824	0 ·038590	P	Jan. 25. 1. 0	23. 28. 24	0 ·033214	0 ·039281	J H
5	24. 58	033890	038590		5	28. 40	033137	039308	J H
10	25. 17	034111	038590		10	28. 32	033065	039329	P
15	25. 17	034111	038590		15	29. 47	033104	039356	
20	24. 26	033912	038625		20	29. 47	033121	039382	
25	24. 36	033934	038637		25	29. 40	033133	039408	
30	24. 36	033917	038669		30	29. 40	033150	039446	
35	24. 36	033917	038669	P	35	29. 9	032946	039472	
40	24. 35	033961	038669	G	40	29. 9	032963	039472	
45	24. 30	033961	038727		45	28. 43	032997	039499	
50	24. 30	033895	038785		50	27. 57	033014	039525	
55	24. 35	033696	038796		55	27. 57	033031	039551	P

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, 168°.
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, $25^s\cdot2$.

Jan. $24^d. 18^h. 10^m$ to $18^h. 20^m$. The readings of the Vertical Force Magnet between these times were the same, and were the smallest during the term.
Jan. $24^d. 22^h. 55^m$ to $23^h. 15^m$. The readings of the Horizontal Force Magnet were the same, and were the smallest during the term.
Jan. 25^d. $1^h. 15^m$ and $1^h. 20^m$. The western declination was larger than at any other time during the month.

Term-Day Observations of January 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Jan. 25. 2. 0	23. 27. 54	0·033004	0·039551	D	Jan. 25. 6. 0	23. 18. 36	0·034359	0·039652	G
5	27. 28	033004	039578		5	18. 32	034403	039652	
10	26. 30	032977	039622		10	18. 24	034403	039641	
15	26. 18	032999	039678		15	18. 23	034403	039629	
20	27. 5	033370	039678		20	18. 8	034359	039629	
25	27. 17	033481	039750		25	18. 8	034403	039583	
30	26. 50	033276	039788		30	18. 8	034403	039554	
35	26. 40	033298	039803		35	18. 8	034403	039554	
40	26. 26	033276	039823		40	18. 4	034403	039554	
45	25. 45	032961	039850		45	18. 4	034403	039525	
50	25. 52	033470	039876		50	17. 58	034403	039525	
55	26. 33	033598	039914		55	17. 54	034403	039525	
Jan. 25. 3. 0	23. 27. 5	0·033487	0·039943	D	Jan. 25. 7. 0	23. 17. 54	0·034403	0·039525	G
5	26. 35	033465	039972		5	17. 51	034403	039513	
10	26. 33	033415	039981		10	17. 51	034420	039438	
15	26. 12	033455	040002		15	17. 47	034420	039464	
20	26. 6	033472	040000		20	17. 53	034702	039464	
25	25. 15	033555	039976		25	17. 58	034813	039446	
30	25. 15	033483	039968		30	17. 47	034808	039461	
35	25. 17	033218	039965	D	35	17. 38	034565	039443	G
40	24. 26	033456	039965	P	40	17. 37	034516	039403	J H
45	23. 47	033279	039992		45	17. 24	034516	039435	
50	23. 22	033296	039989		50	17. 24	034533	039435	
55	22. 23	033473	039873		55	17. 24	034886	039435	
Jan. 25. 4. 0	23. 22. 14	0·033933	0·039859	P	Jan. 25. 8. 0	23. 17. 1	0·035080	0·039444	J H
5	21. 56	033933	039842		5	17. 8	034925	039403	
10	22. 35	033933	039868		10	17. 8	034942	039425	
15	22. 14	033933	039856		15	17. 8	034832	039451	
20	22. 23	033950	039894		20	17. 7	034893	039381	
25	22. 49	034150	039847		25	17. 7	034849	039407	
30	22. 40	034172	039863		30	17. 7	034804	039407	
35	22. 40	034172	039834		35	17. 1	034821	039434	
40	22. 29	034189	039831		40	17. 1	034821	039460	
45	20. 48	034189	039831		45	17. 1	034821	039460	
50	20. 48	034189	039770		50	16. 54	034838	039487	
55	20. 35	034388	039741		55	16. 54	034794	039487	
Jan. 25. 5. 0	23. 20. 27	0·034427	0·039767	P	Jan. 25. 9. 0	23. 16. 54	0·034988	0·039455	J H
5	20. 3	034427	039767		5	16. 58	034679	039455	
10	19. 54	034444	039709		10	16. 58	034723	039455	
15	19. 31	034461	039735		15	17. 1	034723	039455	
20	19. 24	034478	039677		20	17. 1	034657	039441	
25	19. 24	034495	039665		25	17. 4	034723	039441	
30	19. 13	034495	039692		30	17. 5	034723	039429	
35	19. 21	034468	039657	P	35	17. 3	034640	039402	
40	19. 5	034485	039646	G	40	16. 57	034728	039356	
45	19. 3	034502	039660		45	16. 57	034750	039320	
50	18. 49	034453	039660		50	16. 54	034706	039311	
55	18. 41	034386	039643		55	16. 49	034595	039317	J H

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, 168°.
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, 25ˢ·2.

Jan. 25ᵈ. 3ʰ. 15ᵐ. The reading of the Vertical Force Magnet was the largest during the term.

Term-Day Observations of February 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 23. 10. 0	23. 16. 30	0 ·035693	0 ·036860	G	Feb. 23. 14. 0	23. 17. 26	0 ·035517	0 ·037113	P
5	17. 4	035472	036901		5	17. 31	035534	037080	
10	17. 22	035561	036901		10	17. 42	035330	037106	
15	17. 24	035693	036901		15	17. 42	035347	037075	
20	17. 27	035605	036901		20	16. 43	035364	037043	
25	17. 27	035671	036889		25	16. 43	035381	037070	
30	17. 27	035671	036889		30	16. 43	035381	037070	
35	17. 24	035605	036889		35	17. 2	035398	037096	
40	16. 28	035561	036872		40	17. 2	035415	037098	
45	16. 8	035494	036854		45	17. 2	035432	037108	
50	15. 59	035472	036854		50	17. 9	035338	037128	
55	16. 10	035339	036854		55	17. 2	035244	037132	
Feb. 23. 11. 0	23. 16. 20	0 ·035339	0 ·036854	G	Feb. 23. 15. 0	23. 17. 8	0 ·035289	0 ·037097	P
5	16. 22	035494	036854		5	17. 15	035394	037112	
10	16. 22	035605	036854		10	17. 15	035389	037114	
15	16. 22	035671	036854		15	17. 24	035517	037112	
20	16. 24	035627	036854		20	17. 20	035517	037107	
25	16. 36	035605	036796		25	17. 20	035534	037121	
30	17. 17	035605	036785		30	17. 54	035551	037148	
35	17. 40	035605	036785		35	17. 56	035772	037148	P
40	17. 44	035605	036785		40	17. 49	035811	037128	J H
45	17. 44	035605	036756		45	17. 54	035828	037154	
50	17. 44	035627	036727		50	17. 29	035868	037181	
55	17. 46	035649	036727		55	17. 29	035885	037207	
Feb. 23. 12. 0	23. 16. 59	0 ·035450	0 ·036698	G	Feb. 23. 16. 0	23. 17. 29	0 ·035879	0 ·037234	J H
5	16. 56	035484	036732		5	17. 29	035879	037234	
10	17. 35	035518	036774		10	17. 58	035857	037234	
15	17. 35	035508	036798		15	18. 15	035857	037222	
20	17. 41	035458	036795		20	18. 24	035879	037118	
25	17. 47	035386	036822	G	25	18. 24	035879	037164	
30	17. 59	035398	036875	P	30	18. 26	035896	037164	
35	17. 34	035432	036927		35	18. 35	035896	037164	
40	17. 24	035267	036968		40	18. 39	035896	037118	
45	17. 24	035284	036891		45	18. 39	036095	037118	
50	17. 15	035279	036917		50	18. 43	036184	037118	
55	17. 15	035313	036970		55	18. 17	036317	037118	
Feb. 23. 13. 0	23. 17. 13	0 ·035347	0 ·037011	P	Feb. 23. 17. 0	23. 17. 46	0 ·036312	0 ·037106	J H
5	17. 12	035364	037037		5	17. 53	036334	037106	
10	18. 0	035204	037063		10	17. 53	036334	037106	
15	18. 0	035199	037055		15	17. 51	036351	037132	
20	18. 7	035177	037044		20	17. 56	036528	037115	
25	17. 47	035327	037070		25	17. 56	036528	037028	
30	17. 47	035344	037079		30	17. 58	036678	037030	
35	17. 47	035653	037073		35	17. 59	036855	036996	
40	17. 47	035670	037007		40	18. 3	036767	036984	
45	17. 47	035687	037033		45	18. 3	036784	037011	
50	17. 47	035704	037060		50	17. 59	036828	037011	
55	17. 47	035721	037086		55	17. 56	036828	036965	

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, 168°.
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, $25^{s}·2$.

Feb. $23^{d}. 10^{h}. 50^{m}$. The western declination was smaller than at any other time during the term.

Feb. $23^{d}. 13^{h}. 20^{m}$. The reading of the Horizontal Force Magnet was smaller than at any other time during the term.

Feb. $23^{d}. 16^{h}. 0^{m}$ to $16^{h}. 10^{m}$. The readings of the Vertical Force Magnet at these times were the largest during the term.

Term-Day Observations of February 23 and 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 23. 18. 0	23. 17. 50	0·036956	0·036979	J H	Feb. 23. 22. 0	23. 20. 43	0·039304	0·036679	G
5	17. 53	036906	037006		5	20. 27	039321	036711	
10	17. 55	036906	037018		10	20. 54	039338	036708	
15	17. 55	036923	037044		15	21. 6	039338	036650	
20	17. 54	036835	037041		20	21. 12	039399	036706	
25	17. 51	036829	037039		25	21. 6	040080	036703	
30	17. 52	036913	037065		30	21. 16	039145	036730	
35	17. 57	037466	037068	J H	35	21. 22	038990	036730	
40	17. 59	037549	037034	D	40	21. 25	039007	036727	
45	18. 3	037638	037065		45	21. 30	039024	036753	
50	18. 0	037633	037091		50	21. 24	039152	036751	
55	18. 0	037694	037118		55	21. 29	039124	036794	
Feb. 23. 19. 0	23. 17. 50	0·037689	0·037139	D	Feb. 23. 23. 0	23. 21. 43	0·039075	0·036862	G
5	17. 55	037645	037121		5	22. 1	039247	036862	
10	17. 52	037711	037098		10	21. 50	039153	036888	
15	17. 52	037728	037092		15	22. 5	039237	036888	
20	17. 52	037706	037107		20	22. 8	039237	036888	
25	18. 2	037662	037078		25	22. 25	039143	036943	G
30	17. 54	037723	037060		30	22. 27	039160	036943	P
35	18. 5	037745	037049		35	22. 29	039067	036912	
40	18. 14	037900	037069		40	22. 31	039106	036854	
45	18. 54	037851	037063		45	22. 37	038990	036880	
50	18. 57	037829	037034		50	22. 38	039228	036868	
55	19. 5	037851	037017		55	22. 48	039140	036872	
Feb. 23. 20. 0	23. 19. 16	0·037912	0·037019	D	Feb. 24. 0. 0	23. 22. 42	0·039201	0·036849	P
5	19. 12	037956	037019		5	22. 57	039262	036849	
10	18. 58	038023	037014		10	23. 19	039279	036875	
15	18. 59	038267	037037		15	23. 7	039075	036830	
20	19. 10	038421	037048		20	22. 54	039186	036901	
25	19. 11	038377	037031		25	22. 54	039203	036869	
30	19. 10	038416	036996		30	23. 5	039109	036869	
35	19. 16	038460	036985		35	22. 48	039170	036779	
40	19. 23	038527	036985		40	22. 47	039143	036779	
45	19. 33	038659	036967		45	22. 43	039143	036922	
50	19. 35	038704	036967		50	22. 48	039271	036948	
55	19. 34	038726	036956		55	22. 42	039265	036948	
Feb. 23. 21. 0	23. 19. 41	0·038876	0·036983	D	Feb. 24. 1. 0	23. 22. 31	0·039238	0·036974	P
5	20. 3	039014	036965		5	22. 41	039238	036858	
10	20. 3	038975	036921		10	22. 24	039238	036885	
15	20. 6	038997	036883		15	22. 54	039194	036885	
20	20. 7	039024	036863		20	22. 41	039127	036911	
25	20. 5	039073	036857		25	22. 3	039194	036899	
30	20. 5	039123	036813		30	22. 37	039255	036891	
35	20. 5	039167	036807		35	22. 51	039432	036938	
40	20. 6	039128	036764		40	22. 22	039255	036938	P
45	20. 29	039222	036737		45	22. 30	039255	036964	J H
50	20. 27	039205	036731		50	22. 10	039277	036946	
55	20. 24	039188	036705		55	22. 7	039144	036894	

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, 168°.
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, $25^s\cdot2$.

Feb. 23^d. 22^h. 15^m. The reading of the Vertical Force Magnet was the smallest during the term.
Feb. 23^d. 22^h. 25^m. The reading of the Horizontal Force Magnet was the largest during the term.
Feb. 24^d. 0^h. 10^m. The western declination was larger than at any other time during the term.

Term-Day Observations of February 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Feb. 24. 2. 0	23. 21. 48	0 ·039427	0 ·036879	G	Feb. 24. 6. 0	23. 20. 12	0 ·038035	0 ·036987	P
5	22. 6	039427	036874		5	18. 45	038035	036981	
10	21. 41	039228	036874		10	18. 51	038035	036975	
15	21. 36	039117	036827		15	18. 51	038035	036964	
20	21. 30	039183	036843		20	18. 44	038035	036938	
25	21. 12	039161	036837		25	18. 44	038035	036938	
30	20. 57	039189	036843		30	18. 44	038035	036938	
35	20. 48	039100	036843		35	18. 44	038257	036938	
40	20. 38	038967	036869		40	18. 44	038257	036912	
45	20. 33	039033	036869		45	18. 44	038257	036912	
50	20. 46	038834	036857		50	18. 31	038257	036912	
55	20. 8	038724	036869		55	18. 26	038257	036946	
Feb. 24. 3. 0	23. 20. 38	0 ·039016	0 ·036896	G	Feb. 24. 7. 0	23. 18. 21	0 ·038257	0 ·036993	P
5	20. 38	038989	036896		5	18. 5	038235	036943	
10	20. 36	039006	036922		10	18. 5	038235	036943	
15	20. 35	039023	036922		15	18. 5	038218	036943	
20	20. 40	039134	036948		20	18. 22	038018	036943	
25	20. 44	039195	036948		25	18. 38	038018	036943	
30	20. 39	039212	036948		30	18. 21	038173	036943	
35	20. 32	038897	036975	G	35	17. 56	037337	036943	P
40	20. 32	038716	036975	D	40	18. 2	037271	036943	J H
45	20. 16	038738	037018		45	18. 0	037182	036943	
50	20. 11	038777	037012		50	17. 55	037165	036943	
55	19. 58	038683	036989		55	17. 55	037187	036931	
Feb. 24. 4. 0	23. 19. 55	0 ·038611	0 ·037016	D	Feb. 24. 8. 0	23. 17. 52	0 ·037237	0 ·036987	J H
5	19. 52	038589	037010		5	17. 52	037126	036993	
10	19. 54	038567	037010		10	17. 57	037148	036993	
15	19. 57	038545	036998		15	17. 46	037148	036970	
20	19. 49	038500	037016		20	17. 46	037220	036975	
25	19. 42	038434	036993		25	17. 41	037198	036970	
30	19. 46	038500	036981		30	17. 41	037242	036960	
35	19. 52	038545	037004		35	17. 41	037220	036943	
40	19. 59	038478	037028		40	17. 32	037181	036943	
45	20. 4	038368	037022		45	17. 32	037181	036943	
50	20. 2	038190	037016		50	17. 32	037181	036943	
55	20. 2	038079	036993		55	17. 32	037181	037001	
Feb. 24. 5. 0	23. 20. 2	0 ·038057	0 ·036975	D	Feb. 24. 9. 0	23. 17. 32	0 ·037053	0 ·036969	J H
5	19. 58	037947	036975		5	17. 26	037031	036963	
10	19. 58	037991	036964		10	17. 26	037009	036948	
15	20. 26	038323	036975		15	17. 26	036992	036922	
20	20. 20	038456	036981		20	17. 17	036925	036896	
25	20. 25	038500	036975		25	17. 16	036925	036886	
30	20. 21	038412	037001		30	17. 13	036908	036866	
35	20. 22	038346	036984	D	35	17. 13	036930	036821	
40	20. 22	037925	036984	P	40	17. 18	037046	036790	
45	20. 22	037925	036961		45	17. 16	037046	036781	
50	20. 25	037858	036961		50	17. 16	037201	036754	
55	20. 17	037814	036961		55	17. 16	037246	036728	

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, 168°.
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, $25^s·2$.

Term-Day Observations of March 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 20. 10. 0	23. 15. 55	0 ·036529	0 ·039185	G	Mar. 20. 14. 0	23. 17. 11	0 ·036437	0 ·038806	P
5	13. 45	037066	039158		5	17. 6	036393	038812	
10	13. 16	037558	039161		10	17. 6	036393	038821	
15	12. 35	038094	039134		15	17. 1	036420	038806	
20	12. 48	038060	039082		20	17. 1	036420	038826	
25	14. 2	038088	039055		25	16. 59	036420	038800	
30	14. 4	038071	039029		30	16. 59	036403	038812	
35	13. 51	037389	038973		35	16. 54	036403	038785	
40	13. 29	037156	038892		40	16. 52	036403	038764	
45	13. 25	037095	038865		45	17. 23	036386	038737	
50	14. 28	037304	038841		50	17. 23	036386	038755	
55	14. 28	037509	038832		55	17. 23	036386	038740	
Mar. 20. 11. 0	23. 14. 39	0 ·037735	0 ·038818	G	Mar. 20. 15. 0	23. 17. 11	0 ·036480	0 ·038738	P
5	14. 58	037536	038818		5	17. 6	036480	038738	
10	15. 20	037032	038791		10	17. 24	036551	038711	
15	15. 28	036811	038791		15	17. 24	036772	038722	
20	15. 19	036816	038776		20	17. 31	036556	038722	
25	15. 13	036794	038776		25	17. 31	036556	038731	
30	15. 9	036888	038767		30	17. 28	036556	038731	
35	15. 1	036998	038796		35	17. 28	036539	038739	P
40	14. 47	037042	038807		40	17. 12	036561	038745	D
45	14. 41	037092	038781		45	17. 12	036539	038749	
50	14. 20	037224	038781		50	17. 12	036500	038754	
55	14. 25	037246	038781		55	17. 10	036522	038766	
Mar. 20. 12. 0	23. 14. 31	0 ·037141	0 ·038755	G	Mar. 20. 16. 0	23. 17. 12	0 ·036505	0 ·038763	D
5	14. 48	036991	038734		5	17. 10	036527	038775	
10	14. 58	036820	038708		10	17. 2	036505	038775	
15	15. 7	036648	038739		15	16. 51	036748	038765	
20	15. 26	036515	038745		20	16. 47	036554	038794	
25	15. 48	036431	038748		25	16. 45	036554	038806	
30	16. 4	036370	038728		30	16. 45	036554	038786	
35	16. 24	036414	038739	G	35	16. 45	036554	038786	
40	17. 1	036464	038759	P	40	16. 43	036559	038791	
45	17. 28	036624	038733		45	16. 43	036559	038770	
50	17. 58	036740	038706		50	16. 46	036537	038788	
55	18. 1	036811	038720		55	16. 53	036537	038799	
Mar. 20. 13. 0	23. 17. 53	0. 036772	0 ·038712	P	Mar. 20. 17. 0	23. 17. 12	0 ·036542	0 ·038785	D
5	17. 39	036777	038712		5	17. 31	036587	038808	
10	17. 39	036777	038712		10	17. 13	036520	038782	
15	17. 6	036539	038712		15	17. 13	036459	038778	
20	17. 6	036522	038712		20	17. 7	036393	038778	
25	17. 0	036283	038712		25	17. 15	036481	038764	
30	17. 0	036266	038746		30	17. 16	036464	038770	
35	17. 7	036444	038758		35	17. 19	036442	038743	
40	17. 7	036471	038770		40	17. 33	036447	038743	
45	17. 16	036471	038770		45	17. 39	036425	038734	
50	17. 15	036454	038816		50	18. 26	036386	038734	
55	17. 15	036454	038828		55	18. 41	036386	038740	

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, 168°.
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, 25s ·2.

March 20d. 10h. 15m. The western declination was smaller than at any other time during the term.

March 20d. 10h. 15m. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

March 20d. 14h. 55m. The reading of the Micrometer of the Theodolite at this time was two revolutions larger than that used in deducing the above result. Had the observation been correct as taken, the result would have been 23°. 20′. 31″.

Term-Day Observations of March 20 and 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 20. 18. 0	23. 18. 21	0 ·036347	0 ·038731	D	Mar. 20. 22. 0	23. 18. 8	0 ·034472	0 ·038675	G
5	18. 12	036175	038716		5	18. 25	034472	038669	
10	18. 16	036180	038690		10	18. 35	034649	038669	
15	18. 48	036318	038669		15	19. 33	034649	038669	
20	19. 22	036323	038666		20	19. 47	034649	038669	
25	19. 38	036328	038646		25	19. 44	034649	038664	
30	20. 1	036267	038624		30	19. 44	034627	038664	
35	19. 30	036201	038598	D	35	19. 31	034627	038664	
40	19. 37	035874	038560	J H	40	19. 37	034649	038664	
45	19. 30	035874	038511		45	19. 43	034649	038664	
50	19. 17	035879	038531		50	19. 48	034649	038664	
55	19. 11	035879	038531		55	19. 47	034649	038664	
Mar. 20. 19. 0	23. 19. 7	0 ·036039	0 ·038481	J H	Mar. 20. 23. 0	23. 20. 2	0 ·034649	0 ·038669	G
5	19. 18	035995	038527		5	20. 6	034844	038669	P
10	19. 23	035973	038539		10	20. 40	034861	038664	
15	18. 50	035756	038513		15	21. 9	034905	038690	
20	18. 8	035690	038513		20	21. 9	034922	038655	
25	18. 0	035579	038513		25	21. 56	034939	038670	
30	18. 3	035717	038474		30	22. 41	034956	038659	
35	18. 3	035828	038509		35	22. 41	034956	038659	
40	18. 11	035634	038567		40	22. 37	034641	038667	
45	18. 4	035523	038379		45	22. 28	034325	038667	
50	17. 47	035506	038506		50	22. 45	034320	038693	
55	17. 15	035595	038506		55	22. 40	034519	038682	
Mar. 20. 20. 0	23. 16. 51	0 ·035555	0 ·038585	J H	Mar. 21. 0. 0	23. 22. 43	0 ·034670	0 ·038680	P
5	16. 34	035511	038602		5	22. 55	034598	038680	
10	16. 12	035489	038550		10	23. 6	034393	038680	
15	15. 46	035494	038500		15	23. 22	034649	038680	P
20	15. 42	035583	038511		20	23. 19	034422	038720	D
25	15. 46	035583	038523		25	23. 16	034527	038738	
30	15. 46	035428	038520		30	23. 18	034500	038752	
35	15. 54	035494	038549		35	23. 10	034645	038758	
40	16. 1	035411	038537		40	23. 41	034751	038764	
45	16. 14	035211	038516		45	23. 52	034812	038764	
50	15. 39	035411	038516		50	24. 15	035117	038746	
55	15. 37	034990	038516		55	24. 37	035045	038735	
Mar. 20. 21. 0	23. 15. 42	0 ·034752	0 ·038490	J H	Mar. 21. 1. 0	23. 24. 29	0 ·034974	0 ·039031	D
5	15. 42	034685	038490		5	24. 29	035057	039023	
10	16. 6	034702	038505		10	24. 36	034964	039076	
15	16. 17	034481	038499		15	24. 50	034981	039073	
20	16. 32	034343	038532		20	25. 8	035064	039088	
25	17. 14	034426	038543		25	25. 8	035147	039085	
30	17. 10	034360	038650		30	25. 11	035342	039065	
35	17. 35	034399	038569	J H	35	25. 0	035580	039068	
40	18. 1	034377	038672	G	40	25. 8	035531	039118	
45	18. 17	034460	038640		45	25. 5	035703	039145	D
50	18. 19	034522	038628		50	25. 7	035874	039153	P
55	18. 6	034455	038654		55	25. 8	035891	039197	

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, 168°.
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, 25s·2.

March 20d. 19h. 45m. The reading of the Vertical Force Magnet was smaller than at any other time during the term.
March 20d. 23h. 50m. The reading of the Horizontal Force Magnet was the smallest in the term.

Term-Day Observations of March 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Mar. 21. 2. 0	23. 25. 23	0·035687	0·039195	P	Mar. 21. 6. 0	23. 19. 10	0·036371	0·039625	D
5	24. 48	035908	039203		5	19. 10	036459	039636	
10	25. 16	036147	039236		10	19. 10	036371	039614	
15	24. 32	036164	039245		15	19. 1	036437	039605	
20	24. 32	036181	039240		20	18. 47	036565	039576	
25	24. 42	036419	039266		25	18. 44	036520	039530	
30	24. 42	036436	039258		30	18. 34	036432	039518	
35	24. 33	036237	039284		35	18. 16	036366	039515	
40	24. 17	036298	039337		40	18. 19	036383	039498	
45	24. 17	036315	039328		45	18. 11	036361	039480	
50	24. 10	036288	039355		50	18. 5	036294	039519	
55	24. 4	036504	039381		55	17. 16	036361	039490	
Mar. 21. 3. 0	23. 23. 56	0·036300	0·039361	P	Mar. 21. 7. 0	23. 17. 10	0·036488	0·039527	D
5	23. 49	036366	039361		5	17. 11	036488	039516	
10	23. 46	036477	039361		10	17. 14	036488	039498	
15	23. 35	036455	039337		15	17. 8	036687	039498	
20	23. 31	036322	039330		20	17. 17	036621	039487	
25	23. 21	036521	039311		25	17. 28	036599	039464	
30	23. 1	036300	039271		30	17. 13	036616	039446	
35	22. 46	036300	039271	P	35	17. 12	036726	039435	
40	22. 59	036411	039297	G	40	17. 13	036771	039423	
45	23. 4	036699	039297		45	17. 24	036815	039423	
50	23. 2	036566	039297		50	17. 26	036904	039417	
55	22. 50	036699	039291		55	17. 33	036948	039411	
Mar. 21. 4. 0	23. 22. 47	0·036787	0·039324	G	Mar. 21. 8. 0	23. 17. 33	0·036810	0·039421	D
5	22. 48	037126	039403		5	17. 28	036921	039415	D
10	22. 50	037287	039482		10	17. 28	036943	039415	J H
15	22. 36	037382	039549		15	17. 25	036788	039342	
20	22. 25	037279	039628		20	17. 25	036810	039313	
25	22. 17	037219	039708		25	17. 29	036743	039330	
30	22. 12	037049	039787		30	17. 29	036743	039304	
35	21. 49	036989	039843		35	17. 29	036677	039293	
40	21. 42	036974	039899		40	17. 2	036832	039277	
45	21. 36	037008	039905		45	17. 2	036898	039242	
50	21. 28	037042	039947		50	17. 2	036876	039251	
55	21. 17	037076	040000		55	17. 8	036876	039216	
Mar. 21. 5. 0	23. 21. 11	0·037031	0·039971	G	Mar. 21. 9. 0	23. 17. 17	0·036876	0·039214	J H
5	20. 57	036921	039944		5	17. 17	036943	039214	
10	20. 36	036854	039918		10	16. 51	036943	039179	
15	20. 25	036793	039891		15	16. 48	036948	039179	
20	20. 10	036616	039891		20	17. 5	036815	039144	
25	20. 10	036510	039847		25	17. 5	036749	039156	
30	19. 48	036378	039798	G	30	17. 7	036749	039167	
35	19. 27	036316	039771	D	35	17. 0	036444	039156	
40	19. 11	036294	039745		40	16. 53	036422	039156	
45	19. 2	036299	039716		45	16. 37	036333	039156	
50	19. 0	036299	039672		50	16. 37	036361	039161	
55	19. 1	036327	039663		55	16. 43	036361	039161	

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, 168°.
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, $25^s·2$.

March $21^d. 2^h. 0^m$. The western declination was larger than at any other time during the term.
March $21^d. 4^h. 55^m$. The reading of the Vertical Force Magnet was the largest during the term.

Term-Day Observations of April 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 24. 10. 0	23. 18. 19	0 ·036142	0 ·039131	G	Apr. 24. 14. 0	23. 16. 24	0 ·036051	0 ·038425	J H
5	17. 56	036125	039131		5	15. 59	035835	038442	
10	17. 54	036064	039122		10	16. 16	035929	038427	
15	17. 59	036064	039096		15	16. 18	035978	038424	
20	18. 2	036069	039086		20	16. 18	036005	038401	
25	18. 6	036074	039043		25	16. 49	035922	038374	
30	18. 9	036057	039017		30	16. 45	035922	038406	
35	17. 50	036057	039017		35	16. 45	035905	038406	
40	17. 42	036261	038990		40	16. 25	035905	...	
45	17. 36	036288	038964		45	16. 25	035888	...	
50	17. 29	036271	038954		50	16. 25	035888	038454	
55	17. 28	036254	038940		55	16. 8	035893	038529	
Apr. 24. 11. 0	23. 17. 18	0 ·036215	0 ·038925	G	Apr. 24. 15. 0	23. 15. 57	0 ·035871	0 ·038474	J H
5	17. 18	036215	038898		5	15. 59	035871	038474	
10	17. 14	036242	038916		10	15. 59	035871	038474	
15	17. 14	036225	038901		15	15. 59	035871	038502	
20	17. 16	036363	038880		20	15. 58	035893	038502	
25	16. 41	036236	038866		25	15. 57	035915	038479	
30	16. 35	036219	038869		30	16. 12	035876	038448	
35	16. 30	036312	038842		35	17. 0	035898	038424	J H
40	16. 29	036295	038816		40	17. 25	035810	038511	H B
45	16. 22	036234	038789		45	16. 45	035920	038430	
50	16. 18	036256	038789		50	16. 17	035743	038476	
55	16. 15	036217	038763		55	16. 12	035743	038523	
Apr. 24. 12. 0	23. 16. 15	0 ·036200	0 ·038754	G	Apr. 24. 16. 0	23. 16. 12	0 ·035837	0 ·038480	H B
5	16. 17	036166	038739		5	16. 14	035820	038520	
10	16. 22	036132	038713		10	16. 33	035692	038540	
15	17. 10	036142	038686		15	16. 15	035719	038543	
20	17. 27	036175	038680		20	16. 15	035614	038516	
25	17. 23	036274	038670		25	16. 18	035641	038507	
30	17. 8	036323	038640		30	16. 13	035557	038559	
35	16. 36	036373	038614	G	35	15. 58	035496	038533	
40	16. 25	036577	038618	J H	40	16. 10	035435	038524	
45	15. 56	036671	038553		45	16. 10	035512	038527	
50	15. 47	036659	038526		50	16. 31	035251	038511	
55	15. 47	036642	038523		55	16. 56	035411	038474	
Apr. 24. 13. 0	23. 15. 2	0 ·036315	0 ·038509	J H	Apr. 24. 17. 0	23. 17. 34	0 ·035394	0 ·038488	H B
5	15. 2	036254	038499		5	17. 34	035394	038448	
10	15. 2	036237	038473		10	17. 46	035461	038506	
15	15. 2	036109	038446		15	17. 45	035616	038535	
20	14. 53	036025	038440		20	17. 29	035572	038517	
25	14. 54	036008	038438		25	17. 14	035682	038535	
30	14. 53	036008	038452		30	16. 47	035793	038552	
35	15. 20	036058	038458		35	16. 32	035837	038552	
40	15. 31	036041	038466		40	16. 17	035837	038565	
45	15. 32	036041	038475		45	16. 4	035837	038565	
50	15. 22	035935	038436		50	17. 15	035837	038576	
55	16. 1	036024	038422		55	17. 15	035793	038576	

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, 165°.
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, 25s ·2.

April 24d. 14h. 25m. The reading of the Vertical Force Magnet was smaller than at any other time during the term.
April 24d. 14h. 40m and 45m. The observations of the Vertical Force Magnet were omitted by inadvertence.

Term-Day Observations of April 24 and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 24. 18. 0	23. 16. 59	0·035793	0·038565	H B	Apr. 24. 22. 0	23. 15. 15	0·034549	0·038604	G
5	16. 59	035904	038594		5	15. 42	034372	038604	
10	16. 55	035837	038611		10	16. 22	034262	038575	
15	16. 58	035837	038652		15	16. 44	034151	038540	
20	17. 19	035881	038671		20	17. 4	034168	038490	
25	17. 19	035948	038683		25	17. 28	034168	038490	
30	17. 19	035904	038683		30	17. 56	034014	038490	
35	17. 19	036103	038683	H B	35	18. 17	033836	038490	
40	17. 21	035881	038686	D	40	18. 34	033808	038464	
45	17. 25	035682	038674		45	18. 52	033742	038464	
50	17. 21	035549	038695		50	19. 11	033477	038464	G
55	17. 9	035572	038715		55	19. 46	033299	038527	J H
Apr. 24. 19. 0	23. 17. 9	0·035549	0·038693	D	Apr. 24. 23. 0	23. 19. 39	0·033272	0·038495	J H
5	16. 44	035549	038699		5	20. 0	033156	038575	
10	16. 22	035549	038685		10	20. 22	033350	038642	
15	16. 22	035527	038691		15	20. 47	033102	038686	
20	16. 0	035483	038670		20	20. 58	032986	038754	
25	15. 37	035483	038688		25	21. 15	033003	038717	
30	15. 29	035421	038678		30	21. 32	033003	038826	
35	15. 29	035399	038707		35	21. 43	033219	038887	
40	15. 30	035421	038687		40	22. 4	033214	038966	
45	15. 10	035156	038654		45	22. 43	033408	038976	
50	15. 6	035090	038654		50	23. 14	033408	039017	J H
55	14. 41	035024	038628		55	23. 46	033469	039026	H B
Apr. 24. 20. 0	23. 14. 39	0·035029	0·038608	D	Apr. 25. 0. 0	23. 24. 5	0·033464	0·038989	H B
5	14. 24	035139	038614		5	24. 30	033155	038983	
10	14. 25	035117	038604		10	24. 43	033360	038957	
15	14. 8	035073	038622		15	25. 0	033289	038980	
20	14. 21	035139	038651		20	25. 40	033196	038990	
25	13. 57	035073	038659		25	25. 55	033124	038974	
30	13. 46	034957	038671		30	25. 39	033180	038974	
35	13. 34	035068	038673		35	26. 6	033617	038983	
40	13. 31	035090	038696		40	26. 15	033507	039027	
45	13. 14	035024	038659		45	27. 0	033469	038981	
50	13. 40	035068	038647		50	27. 0	033818	038978	
55	13. 47	034979	038604		55	27. 16	033963	038964	
Apr. 24. 21. 0	23. 14. 0	0·035018	0·038633	D	Apr. 25. 1. 0	23. 28. 22	0·034838	0·038964	H B
5	14. 7	034908	038633		5	28. 41	034695	039028	
10	14. 11	034775	038638		10	29. 21	034906	039014	
15	14. 3	034681	038638		15	29. 41	035050	039034	
20	14. 0	034703	038644		20	30. 20	035506	039076	
25	13. 48	034698	038638		25	30. 42	035673	039117	
30	13. 53	034742	038627		30	30. 57	035579	039170	
35	14. 3	034781	038615	D	35	30. 47	035419	039205	
40	14. 15	034671	038609	G	40	30. 23	034722	039200	
45	14. 34	034577	038608		45	30. 9	034313	039224	
50	14. 40	034466	038615		50	29. 22	033484	039306	H B
55	15. 2	034532	038604		55	29. 1	033147	039268	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, 165°.
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, $25^s·2$.

April $24^d. 23^h. 20^m$. The reading of the Horizontal Force Magnet was the smallest during the term.

Term-Day Observations of April 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Apr. 25. 2. 0	23. 29. 15	0 ·033518	0 ·039272	D	Apr. 25. 6. 0	23. 25. 48	0 ·035785	0 ·039965	G
5	29. 18	033446	039376		5	25. 46	036255	039956	
10	31. 42	034592	039435		10	25. 46	036481	039987	
15	31. 45	034427	039493		15	25. 11	036747	039960	
20	31. 32	034134	039494		20	24. 8	037239	039960	
25	31. 36	033748	039549		25	23. 44	037311	039934	
30	32. 50	034429	039536		30	23. 53	037205	039908	
35	33. 9	034689	039675		35	24. 15	037188	039864	
40	33. 34	034828	039681		40	22. 26	037082	039963	
45	33. 21	034497	039763		45	21. 23	037043	039937	
50	33. 14	034115	039787		50	20. 28	036866	039910	
55	32. 49	034309	039773		55	18. 32	036628	039919	
Apr. 25. 3. 0	23. 32. 43	0 ·034415	0 ·039788	D	Apr. 25. 7. 0	23. 14. 46	0 ·036788	0 ·039980	G
5	31. 45	034786	039814		5	9. 14	037154	040101	
10	31. 5	034183	039834		10	23. 3. 9	038960	040288	
15	30. 46	033735	039847		15	22. 56. 48	040194	040370	
20	30. 41	033597	039807		20	23. 5. 47	039298	040512	
25	31. 13	033703	039805		25	9. 42	038491	040260	
30	30. 52	033432	039767		30	7. 11	037440	040099	
35	30. 49	033759	039808	D	35	6. 13	036788	040122	G
40	30. 24	034993	039884	J H	40	4. 46	036866	040012	H B
45	29. 1	034103	039937		45	6. 49	036773	040025	
50	28. 48	033699	039874		50	8. 43	036302	040078	
55	27. 56	033672	039900		55	11. 19	035296	040092	
Apr. 25. 4. 0	23. 27. 14	0 ·033556	0 ·039927	J H	Apr. 25. 8. 0	23. 12. 49	0 ·034870	0 ·040061	H B
5	25. 55	033733	039886		5	14. 51	034233	040148	
10	25. 19	034282	039900		10	15. 7	033857	040128	
15	24. 51	034697	039900		15	14. 11	033729	040041	
20	24. 54	035357	039927		20	13. 36	034420	040067	
25	25. 3	035600	039933		25	14. 25	034802	040008	
30	24. 45	036148	039959		30	15. 48	035095	039944	
35	24. 34	036303	039953		35	16. 37	034950	040094	
40	24. 34	036674	039878		40	17. 51	034889	040064	
45	24. 51	037112	039904		45	18. 2	034982	039936	
50	25. 1	037505	039898		50	18. 2	035076	040003	
55	25. 2	037372	039925		55	18. 2	035281	039933	
Apr. 25. 5. 0	23. 25. 2	0 ·037323	0 ·039908	J H	Apr. 25. 9. 0	23. 18. 17	0 ·035463	0 ·039931	H B
5	25. 21	037401	039850		5	18. 37	035640	039896	
10	26. 33	038304	039911		10	18. 37	035663	039885	
15	26. 38	038343	039911		15	18. 37	035640	039902	
20	26. 43	038515	039938		20	18. 46	035535	039827	
25	26. 42	038549	039964		25	18. 45	035557	039827	
30	26. 29	038854	039929		30	18. 50	035601	039885	
35	26. 29	038672	039932		35	18. 56	035562	039815	
40	25. 15	037626	039943		40	18. 56	035562	039844	
45	24. 53	037067	039918		45	19. 9	035562	039797	
50	25. 37	036304	039927		50	19. 9	035545	039797	
55	25. 32	035657	039956		55	19. 4	035766	039786	

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, 165°.
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, $25^s·2$.

April $25^d. 2^h. 40^m$. The western declination was larger than at any other time during the term.

April $25^d. 7^h. 15^m$. The western declination was smaller than at any other time during the term; at $7^h. 11^m. 0^s$, $7^h. 12^m. 30^s$, $7^h. 14^m. 0^s$, $7^h. 16^m. 0^s$, $7^h. 22^m. 30^s$, and $7^h. 27^m. 0^s$, the values of the declination were 23°. 0′. 33″, 22°. 59′. 32″, 22°. 56′. 56″, 23°. 0′. 10″, 23°. 9′. 23″, and 23°. 8′. 35″ respectively.

April $25^d. 7^h. 15^m$. The reading of the Horizontal Force Magnet was larger than at any other time in the month.

April $25^d. 7^h. 20^m$. The reading of the Vertical Force Magnet was the largest during the term.

Term-Day Observations of May 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 24. 10. 0	23. 20. 5	0 ·037759	0 ·038794	G	May 24. 14. 0	23. 16. 31	0 ·035954	0 ·038443	J H
5	20. 11	037581	038764		5	15. 38	036087	038443	
10	20. 9	037581	038752		10	16. 59	036070	038490	
15	19. 38	037559	038717		15	17. 17	036358	038514	
20	19. 16	037537	038705		20	17. 41	036380	038472	
25	18. 6	037094	038693		25	17. 57	036363	038472	
30	17. 33	037050	038652		30	17. 29	036363	038490	
35	17. 18	037316	038640		35	17. 15	036407	038478	
40	17. 44	037471	038676		40	16. 41	036390	038466	
45	17. 53	037870	038723		45	16. 43	036435	038490	
50	17. 15	037759	038723		50	16. 26	036390	038490	
55	16. 57	037759	038723		55	16. 22	036329	038490	
May 24. 11. 0	23. 16. 55	0 ·037803	0 ·038735	G	May 24. 15. 0	23. 17. 22	0 ·036506	0 ·038514	J H
5	16. 56	037803	038735		5	17. 43	036462	038472	
10	16. 53	037742	038755		10	18. 3	036462	038443	
15	17. 20	037631	038725		15	17. 55	036462	038431	
20	17. 33	037503	038699		20	17. 55	036312	038502	
25	17. 33	037326	038699		25	17. 23	036445	038549	
30	17. 33	037154	038672		30	17. 39	036113	038522	
35	17. 4	037154	038702		35	17. 34	036047	038522	J H
40	16. 54	037043	038731		40	17. 41	035919	038498	H B
45	17. 11	037137	038753		45	17. 49	035963	038510	
50	17. 46	037270	038794		50	18. 12	036185	038510	
55	17. 59	037231	038780		55	18. 1	036074	038599	
May 24. 12. 0	23. 18. 17	0 ·037231	0 ·038780	G	May 24. 16. 0	23. 18. 12	0 ·036234	0 ·038525	H B
5	18. 30	036975	038727		5	18. 6	036610	038632	
10	18. 31	036880	038688		10	18. 24	036549	038628	
15	18. 42	036780	038662		15	18. 2	036660	038484	
20	19. 13	036746	038636		20	17. 29	036687	038472	
25	19. 55	036557	038609		25	16. 59	036626	038464	
30	20. 39	036346	038583		30	16. 28	036448	038431	
35	19. 57	036135	038544	G	35	16. 12	036387	038449	
40	19. 29	036051	038445	J H	40	15. 49	036188	038441	
45	18. 54	036056	038418		45	15. 34	036193	038532	
50	17. 53	036022	038365		50	15. 44	036220	038573	
55	17. 33	035988	038339		55	16. 29	036220	038594	
May 24. 13. 0	23. 16. 53	0 ·036304	0 ·038360	J H	May 24. 17. 0	23. 17. 1	0 ·035938	0 ·038609	H B
5	17. 6	036591	038360		5	16. 47	035921	038582	
10	17. 12	036790	038372		10	16. 42	035904	038568	
15	17. 5	036857	038372		15	16. 16	035904	038577	
20	16. 50	036480	038378		20	16. 29	035931	038592	
25	17. 3	036503	038378		25	16. 38	035887	038554	
30	16. 31	036370	038378		30	16. 53	035981	038586	
35	16. 12	036414	038419		35	16. 25	035964	038483	
40	16. 17	036193	038431		40	16. 35	035659	038515	
45	16. 17	036193	038431		45	16. 47	035792	038501	
50	16. 20	036104	038431		50	16. 52	035775	038481	
55	16. 31	036060	038443		55	16. 33	035758	038466	

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, 165°.
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, $25^s·0$.

Term-Day Observations of May 24 and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 24. 18. 0	23. 16. 33	0 ·035647	0 ·038440	H B	May 24. 22. 0	23. 17. 30	0 ·035334	0 ·038404	G
5	16. 10	035691	038469		5	17. 35	035444	038410	
10	16. 11	035846	038472		10	17. 44	035444	038418	
15	16. 21	035802	038372		15	17. 58	035444	038418	
20	16. 21	035868	038387		20	18. 10	035461	038447	
25	16. 21	035846	038405		25	18. 25	035461	038473	
30	16. 12	035846	038508		30	18. 30	035461	038468	
35	16. 0	035824	038556		35	18. 45	035461	038495	
40	16. 10	035802	038452	H B	40	18. 47	035368	038459	
45	16. 0	035913	038481	P	45	18. 54	035368	038459	
50	16. 6	035802	038444		50	19. 4	035323	038485	
55	16. 10	035935	038426		55	19. 20	035301	038485	
May 24. 19. 0	23. 15. 47	0 ·035891	0 ·038458	P	May 24. 23. 0	23. 19. 37	0 ·035385	0 ·038512	G
5	15. 41	035802	038464		5	18. 46	035323	038459	
10	15. 55	035785	038487		10	19. 50	035351	038414	
15	15. 55	035768	038493		15	19. 56	035334	038380	
20	15. 41	035529	038517		20	20. 8	035410	038353	
25	15. 29	035512	038499		25	20. 14	035393	038300	
30	15. 12	035495	038467		30	20. 17	035532	038274	G
35	15. 16	035451	038473		35	20. 33	035537	038221	J H
40	15. 3	035478	038467		40	20. 42	035453	038189	
45	15. 3	035461	038432		45	20. 52	035436	038133	
50	15. 25	035444	038515		50	21. 25	035419	038098	
55	15. 21	035206	038515		55	21. 35	035513	038089	
May 24. 20. 0	23. 15. 21	0 ·035233	0 ·038494	P	May 25. 0. 0	23. 22. 3	0 ·035717	0 ·038075	J H
5	15. 4	035300	038518		5	21. 58	035734	038128	
10	15. 4	035366	038497		10	22. 18	035795	038154	
15	14. 53	035521	038471		15	22. 12	035751	038180	
20	15. 29	035477	038444		20	22. 28	035768	038219	
25	15. 29	035632	038418		25	22. 28	036228	038233	J H
30	15. 45	035615	038392		30	23. 12	036311	038260	P
35	15. 31	035615	038421		35	23. 29	036483	038274	P
40	15. 31	035615	038394		40	23. 41	036323	038339	J H
45	15. 41	035615	038398		45	24. 16	036296	038365	P
50	15. 38	035615	038371		50	23. 43	036269	038392	
55	15. 58	035615	038345		55	24. 11	036773	038444	P
May 24. 21. 0	23. 15. 53	0 ·035598	0 ·038319	P	May 25. 1. 0	23. 24. 32	0 ·037060	0 ·038471	H B
5	16. 5	035598	038319		5	24. 45	036773	038471	
10	16. 5	035598	038345		10	24. 13	036595	038471	
15	16. 20	035615	038345		15	23. 59	036729	038471	
20	16. 46	035504	038315		20	24. 12	036524	038471	
25	16. 46	035393	038312		25	23. 47	036568	038471	
30	16. 58	035410	038312		30	24. 3	036790	038471	
35	16. 58	035410	038339		35	24. 3	036790	038518	
40	17. 9	035410	038339		40	24. 23	036984	038530	
45	17. 11	035427	038365		45	23. 50	037471	038548	
50	17. 16	035317	038365		50	24. 8	037161	038559	
55	17. 22	035383	038392	P	55	23. 56	037205	038577	

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, 165°.
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, $25^s{\cdot}0$.

May $24^d. 19^h. 55^m$. The reading of the Horizontal Force Magnet was smaller than at any other time during the term.
May $25^d. 0^h. 0^m$. The reading of the Vertical Force Magnet was the smallest during the term.
May $25^d. 1^h. 5^m$. The western declination was larger than at any other time during the term.

Term-Day Observations of May 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
May 25. 2. 0	23. 24. 11	0·037332	0·038589	H B	May 25. 6. 0	23. 21. 39	0·037378	0·039318	H B
5	24. 22	037332	038589		5	21. 34	037334	039300	
10	24. 7	037062	038618		10	21. 50	037511	039289	
15	23. 44	037128	038644		15	21. 40	037555	039300	
20	23. 44	037079	038662		20	21. 25	037395	039285	
25	23. 44	037212	038674		25	21. 25	037683	039267	
30	23. 55	037123	038701		30	21. 25	037793	039267	
35	23. 49	037317	038689	H B	35	21. 15	037528	039238	H B
40	23. 39	037317	038701	P	40	21. 15	037810	039234	J H
45	23. 39	037317	038668		45	21. 8	038032	039234	
50	23. 48	037334	038668		50	21. 7	038121	039217	
55	23. 48	037334	038697		55	21. 7	038121	039205	
May 25. 3. 0	23. 23. 59	0·037573	0·038718	P	May 25. 7. 0	23. 20. 55	0·037717	0·039232	J H
5	23. 35	037368	038733		5	20. 47	037385	039208	
10	23. 48	037407	038733		10	20. 33	037385	039126	
15	23. 57	037624	038765		15	20. 12	037053	039114	
20	20. 39	037419	038786		20	20. 18	037301	039099	
25	23. 40	037436	038812		25	20. 24	037257	039087	
30	23. 47	037453	038838		30	20. 38	037190	039105	
35	23. 32	037603	038865		35	20. 38	037301	039105	
40	23. 0	037045	038891		40	20. 38	037284	039120	
45	22. 58	036747	038894		45	20. 38	037572	039120	
50	22. 42	036742	038885		50	20. 36	037484	039120	
55	22. 49	037113	038911		55	20. 36	037484	039167	
May 25. 4. 0	23. 22. 32	0·037130	0·038899	P	May 25. 8. 0	23. 20. 40	0·037511	0·039123	J H
5	22. 26	037572	038926		5	20. 40	037290	039106	
10	22. 26	037794	038952		10	20. 44	037068	039100	
15	22. 20	037794	038979		15	20. 27	037051	039067	
20	22. 9	037794	038993	P	20	20. 20	036963	039067	
25	22. 4	037949	038987	H B	25	20. 9	037012	039029	
30	21. 59	038032	038990	P	30	20. 9	037012	039011	
35	21. 59	038032	039046	P	35	20. 9	036929	039014	J H
40	22. 15	038032	039084	H B	40	19. 12	036884	039014	G
45	22. 1	038143	039111		45	18. 40	036729	039002	
50	22. 15	038232	039119		50	16. 10	035937	038958	
55	22. 8	038254	039122		55	14. 41	035937	038870	
May 25. 5. 0	23. 22. 10	0·038315	0·039128	H B	May 25. 9. 0	23. 11. 25	0·036584	0·038909	G
5	22. 1	038133	039143		5	10. 17	037691	038962	
10	22. 1	037973	039157		10	11. 41	038117	038964	
15	22. 1	037751	039184		15	13. 29	037851	038935	
20	21. 46	037657	039224		20	14. 5	037436	038897	
25	21. 46	037232	039251		25	14. 45	037414	038879	
30	21. 46	037470	039248		30	15. 37	037087	038823	
35	21. 59	037735	039281		35	16. 47	036910	038782	
40	22. 8	037708	039283		40	17. 9	036849	038738	
45	21. 59	037548	039309		45	17. 51	036516	038738	
50	21. 59	037521	039289		50	18. 36	036322	038741	
55	21. 32	037317	039303		55	18. 43	036322	038712	

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, 165°.
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, $25^s·0$.

May $25^d. 5^h. 0^m$. The reading of the Horizontal Force Magnet was larger than at any other time during the term.
May $25^d. 6^h. 0^m$. The reading of the Vertical Force Magnet was larger than at any other time during the term.
May $25^d. 9^h. 5^m$. The western declination was smaller than at any other time during the term.

Term-Day Observations of June 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 19. 10. 0	23. 17. 26	0 ·035953	0 ·038420	G	June 19. 14. 0	23. 15. 17	0 ·035107	0 ·037819	J H
5	17. 16	035887	038449		5	15. 18	035152	037848	
10	16. 57	035710	038449		10	15. 18	035169	037848	
15	16. 45	035710	038432		15	15. 18	035169	037874	
20	16. 38	035665	038420		20	15. 18	035257	037904	
25	16. 56	035665	038390		25	14. 53	035274	037930	
30	17. 9	035732	038390		30	14. 43	035274	037930	
35	17. 15	035821	038390		35	14. 43	035225	037957	
40	17. 16	035821	038390		40	14. 43	035225	037957	
45	16. 49	035821	038373		45	14. 43	035247	037957	
50	16. 55	035732	038361		50	14. 45	035264	038018	
55	16. 57	035665	038373		55	14. 54	035264	038042	
June 19. 11. 0	23. 16. 57	0 ·035687	0 ·038373	G	June 19. 15. 0	23. 14. 36	0 ·035237	0 ·038069	J H
5	16. 50	035687	038379		5	14. 36	035237	038069	
10	16. 50	035670	038358		10	14. 54	035259	038069	
15	16. 52	035737	038358		15	14. 41	035259	038069	
20	16. 56	035759	038358		20	14. 41	035220	038095	
25	17. 0	035676	038332		25	14. 54	035087	038095	
30	17. 8	035676	038349		30	15. 2	035175	038172	
35	17. 8	035592	038322		35	15. 6	035264	038178	J H
40	16. 59	035592	038316		40	16. 9	035114	038180	D
45	16. 47	035553	038290		45	15. 46	035136	038198	
50	16. 47	035575	038314		50	15. 31	035114	038209	
55	16. 23	035558	038288		55	15. 31	035136	038204	
June 19. 12. 0	23. 16. 31	0 ·035580	0 ·038288	G	June 19. 16. 0	23. 15. 37	0 ·035097	0 ·038236	D
5	16. 38	035580	038300		5	15. 48	035186	038254	
10	16. 48	035536	038273		10	15. 56	035296	038272	
15	16. 37	035536	038247		15	15. 51	035230	038278	
20	16. 45	035514	038237		20	15. 48	035141	038290	
25	16. 23	035514	038223		25	15. 48	035053	038301	
30	16. 21	035492	038203		30	15. 31	035097	038313	
35	16. 29	035470	038176	G	35	15. 22	035164	038349	
40	16. 30	035536	038176	J H	40	15. 9	035274	038357	
45	16. 30	035359	038162		45	15. 9	035319	038375	
50	16. 12	035359	038123		50	15. 49	035319	038381	
55	16. 13	035359	038050		55	16. 9	035319	038392	
June 19. 13. 0	23. 15. 36	0 ·035257	0 ·038083	J H	June 19. 17. 0	23. 16. 35	0 ·035274	0 ·038416	D
5	15. 49	035240	038056		5	16. 21	035274	038416	
10	15. 53	035223	038030		10	16. 4	035257	038396	
15	15. 53	035206	038003		15	16. 7	035213	038414	
20	15. 53	035189	037977		20	15. 48	035107	038388	
25	15. 53	035199	037963		25	15. 45	035085	038399	
30	15. 50	035138	037975		30	15. 41	035085	038411	
35	15. 39	035121	037942		35	15. 28	035085	038402	
40	15. 31	035087	037910		40	15. 13	035063	038414	
45	15. 18	035114	037895		45	15. 5	035063	038437	
50	15. 17	035274	037869		50	14. 49	035063	038455	
55	15. 17	035080	037848		55	14. 38	035041	038467	

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, 165°.
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, $25^s \cdot 0$.

June $19^d. 14^h. 0^m$. The reading of the Vertical Force Magnet was the smallest during the term.

Term-Day Observations of June 19 and 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 19. 18. 0	23. 14. 25	0 ·035002	0 ·038467	D	June 19. 22. 0	23. 16. 41	0 ·033690	0 ·038114	G
5	14. 22	034896	038467		5	16. 49	033580	038067	
10	14. 13	034829	038441		10	17. 1	033469	038025	
15	14. 11	034746	038423		15	17. 14	033486	037996	
20	14. 7	034746	038411		20	17. 22	033486	037969	
25	14. 19	034773	038429		25	17. 38	033486	037969	
30	14. 27	034795	038408		30	17. 53	033486	037969	
35	14. 33	034756	038402	D	35	17. 54	033464	037969	
40	14. 46	034563	038414	P	40	18. 2	033503	037943	
45	14. 46	034546	038376		45	18. 20	033393	037913	
50	14. 31	034440	038376		50	18. 25	033415	037902	
55	14. 31	034440	038350		55	18. 25	033299	037902	
June 19. 19. 0	23. 14. 31	0 ·034423	0 ·038350	P	June 19. 23. 0	23. 18. 26	0 ·033299	0 ·037854	G
5	14. 31	034423	038350		5	18. 30	033316	037880	J H
10	15. 16	034644	038350		10	18. 37	033797	037907	J H
15	15. 2	034423	038350		15	18. 50	033792	037878	G
20	15. 2	034440	038350		20	19. 8	033721	037857	
25	15. 2	034440	038350		25	19. 27	033649	037871	
30	15. 2	034440	038350		30	19. 46	033843	037898	
35	15. 14	034462	038338		35	20. 3	033860	037894	
40	15. 20	034484	038320		40	20. 14	033877	037947	
45	15. 20	034457	038350		45	20. 34	033894	037973	G
50	15. 20	034457	038350		50	20. 52	033779	037973	D
55	15. 20	034457	038350		55	21. 4	033668	038024	
June 19. 20. 0	23. 15. 34	0 ·034568	0 ·038350	P	June 20. 0. 0	23. 21. 23	0 ·033712	0 ·038174	D
5	15. 27	034457	038350		5	21. 49	034000	038095	
10	15. 38	034496	038323		10	22. 1	034017	038133	
15	15. 38	034513	038323		15	22. 11	034084	038182	
20	15. 38	034508	038297		20	22. 21	034172	038227	
25	15. 38	034481	038285		25	22. 34	034366	038271	
30	15. 38	034371	038235		30	22. 44	034410	038327	
35	15. 38	034321	038211		35	22. 38	034339	038359	
40	15. 52	034321	038211		40	22. 59	034339	038367	
45	15. 52	034338	038199		45	23. 27	034600	038388	
50	15. 45	034294	038176		50	23. 47	034733	038438	
55	15. 45	034244	038152		55	24. 15	034926	038459	
June 19. 21. 0	23. 15. 57	0 ·034133	0 ·038152	P	June 20. 1. 0	23. 24. 9	0 ·034872	0 ·038441	D
5	15. 46	034133	038179		5	24. 23	035044	038450	D
10	15. 46	034133	038167		10	24. 9	034729	038470	P
15	15. 57	034001	038138		15	24. 9	034746	038485	
20	15. 57	033912	038138		20	24. 9	034763	038511	
25	15. 51	034355	038126		25	24. 9	034780	038538	
30	15. 51	034355	038152		30	24. 14	035018	038552	
35	15. 57	034399	038146	P	35	24. 22	035057	038578	
40	15. 54	033912	038116	G	40	24. 31	035273	038587	
45	15. 54	033690	038116		45	24. 31	035290	038596	
50	16. 22	033912	038116		50	24. 31	035307	038596	
55	16. 42	033912	038114		55	24. 31	035484	038623	

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, 165°.
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, $25^s·0$.

June $19^d. 18^h. 20^m$. The western declination was smaller than at any other time during the term.

June $19^d. 22^h. 55^m$ and $23^h. 0^m$. The readings of the Horizontal Force Magnet at these times were the same, and were the smallest in the term.

Term-Day Observations of June 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
June 20. 2. 0	23. 24. 29	0·035529	0·038611	P	June 20. 6. 0	23. 19. 3	0·037011	0·039235	D
5	24. 39	035640	038637		5	18. 52	037028	039229	
10	24. 29	035546	038637		10	18. 43	037067	039250	
15	24. 29	035563	038663		15	18. 37	037128	039250	
20	24. 33	035740	038633		20	18. 36	037145	039244	
25	24. 31	035801	038655		25	18. 38	037184	039253	
30	24. 39	035801	038643		30	18. 39	037268	039249	
35	24. 41	035907	038643	P	35	18. 33	037351	039243	
40	24. 37	036040	038637	J H	40	18. 44	037280	039258	D
45	24. 37	036040	038657		45	18. 34	037053	039247	P
50	24 37	036084	038657		50	18. 34	037026	039243	
55	24. 37	036129	038669		55	18. 39	037043	039231	
June 20. 3. 0	23. 24. 27	0·036271	0·038681	J H	June 20. 7. 0	23. 18. 48	0·037060	0·039258	P
5	24. 27	036278	038708		5	18. 50	037298	039252	
10	24. 27	036295	038710		10	18. 53	037121	039223	
15	24. 27	036329	038763		15	19. 8	037232	039164	
20	24. 21	036346	038801		20	19. 12	037094	039158	
25	24. 21	036363	038828		25	19. 12	037094	039134	
30	24. 19	036402	038880		30	19. 29	037111	039111	
35	24. 19	036441	038907		35	19. 29	037128	039046	
40	24. 0	036480	038948		40	19. 29	037145	039046	
45	23. 59	036497	038986		45	19. 23	037145	039064	
50	23. 55	036404	038997		50	19. 23	037145	039064	
55	24. 0	036421	038994		55	19. 32	037145	038987	
June 20. 4. 0	23. 23. 56	0·036482	0·039021	J H	June 20. 8. 0	23. 19. 50	0·037145	0·038987	P
5	23. 55	036499	039000		5	20. 20	037366	039013	
10	23. 29	036455	039041		10	19. 15	039138	039039	
15	23. 11	036494	039055		15	19. 5	036924	039066	
20	23. 7	036533	039108		20	19. 26	037079	039033	
25	23. 4	036594	039134		25	19. 26	037079	039001	
30	22. 45	036700	039140		30	19. 26	037079	039027	
35	22. 28	036983	039167	J H	35	19. 26	037057	039053	P
40	22. 8	037088	039219	D	40	18. 42	036990	039021	G
45	22. 7	037238	039187		45	18. 36	036968	039059	
50	21. 53	037321	039219		50	18. 36	036968	039044	
55	21. 36	037206	039246		55	18. 8	037035	039044	
June 20. 5. 0	23. 21. 16	0·037112	0·039225	D	June 20. 9. 0	23. 18. 25	0·036907	0·039044	G
5	21. 1	037062	039227		5	18. 31	036907	039056	
10	20. 51	037035	039215		10	18. 11	036779	039056	
15	20. 36	037013	039242		15	18. 29	036713	039027	
20	20. 19	036985	039225		20	18. 37	036779	039015	
25	20. 13	037002	039215		25	18. 41	036873	039015	
30	19. 59	037019	039209		30	18. 5	036873	039015	
35	19. 51	037014	039213		35	18. 5	036851	039003	
40	19. 44	036965	039207		40	17. 29	036900	039003	
45	19. 40	036982	039221		45	16. 57	037077	038956	
50	19. 27	036955	039212		50	16. 19	037436	038921	
55	19. 18	036972	039221		55	16. 33	037436	038909	

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, 165°.
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, $25^s·0$.

June $20^d. 2^h. 35^m$. The western declination was larger than at any other time during the term.
June $20^d. 6^h. 40^m$ and $7^h. 0^m$. The readings of the Vertical Force Magnet at these times were the largest during the term.
June $20^d. 8^h. 10^m$. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Term-Day Observations of July 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 24. 10. 0	23. 18. 49	0·037909	0·037585	G	July 24. 14. 0	23. 17. 4	0·037829	0·037433	D
5	18. 49	037892	037532		5	16. 58	037806	037413	
10	18. 50	037897	037511		10	16. 51	037812	037407	
15	18. 52	037902	037459		15	16. 46	037856	037404	
20	18. 53	037646	037432		20	16. 33	037927	037404	
25	18. 42	037568	037395		25	16. 46	037927	037390	
30	18. 50	037330	037351		30	16. 43	037954	037390	
35	18. 47	037252	037353		35	16. 39	038087	037375	
40	18. 47	037240	037327		40	16. 57	037805	037354	
45	18. 47	037223	037365		45	15. 47	037628	037334	
50	18. 59	037228	037339		50	14. 49	037589	037319	
55	18. 57	037211	037313		55	14. 21	037594	037331	
July 24. 11. 0	23. 18. 58	0·037189	0·037319	G	July 24. 15. 0	23. 14. 40	0·037727	0·037354	D
5	18. 58	037189	037319		5	14. 43	037727	037340	
10	19. 1	037189	037325		10	14. 47	037798	037332	
15	19. 1	037189	037337		15	14. 48	037737	037297	
20	18. 56	037255	037349		20	15. 18	037852	037293	
25	18. 56	037211	037396		25	15. 55	038190	037267	
30	18. 55	037211	037425		30	16. 28	038017	037271	
35	18. 54	037211	037455		35	16. 16	037978	037255	D
40	19. 2	037255	037455		40	15. 31	038183	037229	P
45	18. 48	037255	037455		45	15. 12	038166	037208	
50	18. 50	037255	037484		50	14. 46	038149	037194	
55	18. 41	037211	037514		55	14. 28	037910	037180	
July 24. 12. 0	23. 18. 31	0·037211	0·037514	G	July 24. 16. 0	23. 14. 30	0·037910	0·037180	P
5	18. 31	037172	037514		5	13. 35	037689	037180	
10	18. 26	037155	037499		10	13. 35	037672	037182	
15	18. 24	037138	037473		15	13. 43	037721	037156	
20	18. 23	037121	037473		20	13. 43	037749	037206	
25	18. 23	037104	037522		25	13. 43	037732	037192	
30	18. 23	037109	037508		30	13. 54	038003	037166	
35	18. 25	037092	037482	G	35	13. 54	037986	037168	
40	18. 11	037208	037461	D	40	14. 28	038013	037142	
45	18. 12	037147	037447		45	14. 18	038217	037115	
50	18. 4	037108	037459		50	14. 18	038422	037107	
55	17. 58	037068	037455		55	14. 18	038405	037093	
July 24. 13. 0	23. 17. 52	0·037024	0·037497	D	July 24. 17. 0	23. 14. 7	0·038405	0·037093	P
5	17. 49	037024	037494		5	13. 19	038183	037093	
10	18. 1	037007	037518		10	13. 19	038166	037101	
15	18. 22	037361	037492		15	13. 19	038166	037099	
20	18. 40	037876	037504		20	12. 34	038371	037072	
25	18. 24	037815	037488		25	12. 24	038371	037046	
30	17. 35	037642	037486		30	10. 56	038354	037020	
35	17. 24	037625	037457		35	10. 51	038337	036993	
40	17. 7	037608	037418		40	13. 43	037988	036967	
45	17. 7	037574	037439		45	15. 44	038303	036969	
50	17. 2	037735	037413		50	10. 37	038064	036973	
55	17. 4	037696	037433		55	10. 36	037383	036947	

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, 165°.
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, 25^s·0.

July 24^d. 16^h. 20^m and 16^h. 25^m. The scale readings of the Horizontal Force Magnet at these times were one division less than those used in the reductions: had the observations been correct the results would have been 0·035535 and 0·035518 respectively. The values used in subsequent calculations are those deduced from the readings increased by one division, as inserted above.

July 24^d. 17^h. 55^m. The western declination was smaller than at any other time during the term.

Term-Day Observations of July 24 and 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 24. 18. 0	23. 11. 6	0·037604	0·036404	P	July 24. 22. 0	23. 25. 53	0·037155	0·036789	G
5	11. 57	037162	036416		5	25. 34	037288	036845	
10	13. 52	037809	036389		10	25. 42	037548	036912	
15	15. 0	037720	036333		15	25. 15	037587	037083	
20	14. 55	037371	036896		20	24. 47	037715	037157	
25	14. 6	037393	036870		25	24. 47	037732	037195	
30	14. 51	037553	036874		30	23. 57	037528	037162	
35	14. 55	037647	036906		35	21. 5	037212	037189	
40	14. 12	037741	036880		40	22. 5	037008	037212	
45	15. 46	037724	036971		45	21. 58	037069	037268	
50	16. 36	037928	036945		50	21. 42	037086	037294	
55	15. 47	037911	036919	P	55	21. 43	037280	037321	G
July 24. 19. 0	23. 14. 15	0·037247	0·036919	B	July 24. 23. 0	23. 21. 57	0·036970	0·037173	D
5	14. 23	036804	036860		5	21. 38	036788	037241	
10	14. 51	036804	036889		10	21. 27	036667	037335	
15	15. 46	036566	036978		15	22. 7	036684	037355	
20	16. 9	036566	036921		20	22. 36	036524	037364	
25	15. 50	036455	036921		25	22. 49	036386	037390	
30	15. 45	036106	036862		30	23. 28	036182	037417	
35	16. 22	035996	036921		35	24. 8	036088	037443	
40	16. 57	035979	036866		40	25. 28	036127	037469	
45	16. 33	035979	036925		45	25. 45	036122	037502	
50	18. 20	035757	036925		50	26. 57	036161	037517	
55	16. 22	035425	036984		55	27. 5	036355	037567	
July 24. 20. 0	23. 18. 6	0·035425	0·036984	B	July 25. 0. 0	23. 25. 48	0·036377	0·037567	D
5	18. 28	034650	037043		5	26. 26	036854	037601	P
10	18. 27	034778	036898		10	27. 38	036888	037507	
15	23. 40	036234	037104		15	27. 47	036479	037690	
20	23. 58	036344	037108		20	28. 14	036070	037613	
25	23. 27	036361	036964		25	27. 51	035883	037666	
30	23. 2	036378	037025		30	28. 23	035474	037836	
35	22. 24	035621	036911		35	29. 41	035486	037771	
40	22. 18	036191	036795		40	29. 32	035747	037838	
45	23. 31	037094	036793		45	29. 32	035764	037871	P
50	24. 55	037553	036832		50	29. 32	035116	037950	G
55	24. 55	038235	036832		55	29. 32	035178	038003	G
July 24. 21. 0	23. 25. 57	0·037570	0·036950	B	July 25. 1. 0	23. 29. 32	0·035576	0·038003	P
5	26. 36	037587	036732		5	29. 23	035943	038055	
10	26. 16	037937	036710		10	29. 32	035666	038078	
15	25. 23	037179	036736		15	30. 22	036785	038072	
20	25. 34	037417	036852	B	20	29. 41	036819	038273	
25	24. 42	037877	036878	G	25	29. 41	036853	038208	
30	25. 13	038337	036905		30	28. 21	036444	038208	
35	26. 17	...	036931		35	28. 21	036478	038142	
40	25. 17	037591	036839		40	27. 44	036291	038224	
45	24. 16	037497	036701		45	27. 44	036198	038254	
50	22. 24	037138	036727		50	27. 29	035899	038301	
55	20. 58	036689	036754		55	27. 25	035451	038413	

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, 165°.
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, $25^s·0$.

July $24^d. 18^h. 15^m$. The reading of the Vertical Force Magnet was smaller than at any other time during the term.

July $24^d. 20^h. 20^m$. The scale reading of the Horizontal Force Magnet was one division less than that used in deducing the above result, which is the value used in subsequent calculations: had the observation been correct the result would have been 0·034130.

July $24^d. 21^h\ 35^m$. The observation of the Horizontal Force Magnet was inadvertently omitted.

July $25^d. 1^h. 15^m$. The western declination was larger than at any other time during the term.

Term-Day Observations of July 25.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
July 25. 2. 0	23. 27. 25	0 ·035186	0 ·038354	D	July 25. 6. 0	23. 21. 27	0 ·037917	0 ·038966	B
5	28. 10	034888	038406		5	21. 49	037695	039054	
10	27. 36	034617	038441		10	22. 1	037380	038939	
15	27. 0	034545	038433		15	21. 47	037601	038909	
20	26. 18	034828	038459		20	21. 58	038061	038883	
25	26. 28	035200	038459		25	22. 17	037746	038883	
30	26. 21	035770	038479		30	22. 17	037431	038856	
35	26. 13	036274	038520		35	22. 7	036895	038856	
40	25. 16	036667	038559		40	21. 19	036701	038742	B
45	24. 46	036883	038599		45	21. 7	037260	038712	P
50	24. 4	038830	038652		50	21. 7	038163	038722	
55	26. 11	038998	038687		55	21. 15	038180	038722	
July 25. 3. 0	23. 24. 56	0 ·038135	0 ·038741	D	July 25. 7. 0	23. 21. 55	0 ·038180	0 ·038763	P
5	24. 7	037439	038702		5	21. 55	037959	038763	
10	24. 22	037539	038713		10	22. 15	038180	038716	
15	24. 53	037174	038687		15	22. 15	038180	038657	
20	25. 38	038049	038672		20	21. 2	037942	038657	
25	25. 25	038438	038725		25	21. 2	037942	038657	
30	25. 28	038699	038778		30	19. 44	037588	038630	
35	26. 17	038959	038792		35	18. 3	036392	038571	
40	25. 40	038489	038777		40	17. 38	036375	038512	
45	25. 23	038248	038786		45	16. 45	036375	038512	
50	25. 35	038190	038789		50	17. 9	036153	038512	
55	26. 30	038163	038780		55	16. 23	035976	038583	
July 25. 4. 0	23. 26. 35	0 ·036681	0 ·038762	D	July 25. 8. 0	23. 14. 34	0 ·036596	0 ·038606	P
5	26. 11	035994	038641		5	10. 51	037039	038630	
10	26. 7	035971	038676		10	11. 49	036966	038689	
15	26. 26	036547	038708		15	13. 27	039440	038722	
20	25. 42	036835	038747		20	15. 49	039180	038722	P
25	25. 1	036282	038743		25	16. 4	039141	038636	G
30	25. 14	036188	038769		30	16. 46	038903	038577	
35	25. 14	036188	038708		35	17. 18	038886	038506	
40	25. 14	036254	038734	D	40	17. 59	038248	038433	
45	24. 34	035966	038820	B	45	17. 55	038054	038433	
50	24. 16	035966	038846		50	16. 59	037883	038407	
55	24. 14	036409	038872		55	13. 15	037755	038395	
July 25. 5. 0	23. 23. 19	0 ·037073	0 ·038872	B	July 25. 9. 0	23. 16. 29	0 ·038308	0 ·038377	G
5	22. 47	037627	038872		5	16. 41	038241	038419	
10	22. 47	037627	038899		10	18. 9	038197	038377	
15	22. 2	038087	038925		15	17. 54	037910	038377	
20	21. 39	038197	038925		20	17. 56	037799	038301	
25	20. 55	038197	038952		25	16. 58	037932	038301	
30	20. 23	037993	038978		30	18. 2	038263	038301	
35	20. 18	038104	039004		35	18. 26	037799	038336	
40	20. 18	037567	039031		40	18. 21	037755	038289	
45	21. 18	037124	039057		45	18. 7	037866	038289	
50	21. 13	036699	039084		50	18. 3	037976	038301	
55	21. 27	037141	039025		55	17. 50	038197	038301	

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, 165°.
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, $25^s·0$.

July $25^d. 2^h. 15^m$. The reading of the Horizontal Force Magnet was the smallest during the term.
July $25^d. 5^h. 50^m$. The reading of the Vertical Force Magnet was larger than at any other time during the term.
July $25^d. 8^h. 15^m$. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Term-Day Observations of August 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Aug. 30. 10. 0	23. 13. 5	0·037508	0·037656	G	Aug. 30. 14. 0	23. 9. 10	0·036460	0·036599	D
5	13. 13	037375	037656		5	8. 29	036548	036646	
10	12. 35	037331	037555		10	8. 0	036620	036649	
15	12. 7	037220	037573		15	5. 23	036730	036646	
20	12. 0	037220	037579		20	4. 21	036912	036670	
25	12. 16	037308	037579		25	4. 16	037090	036666	
30	12. 18	037375	037538		30	4. 19	037051	036670	
35	12. 6	037419	037555		35	5. 1	036940	036717	
40	11. 41	037419	037567		40	4. 59	036856	036750	
45	11. 10	037264	037567		45	5. 47	036878	036788	
50	10. 56	037264	037561		50	6. 22	036839	036815	
55	10. 54	037264	037561		55	7. 14	036822	036859	
Aug. 30. 11. 0	23. 10. 44	0·037264	0·037561	G	Aug. 30. 15. 0	23. 7. 21	0·036645	0·036900	D
5	10. 43	037264	037534		5	7. 28	036446	036924	
10	10. 13	037336	037491		10	8. 19	036518	036904	
15	9. 56	037452	037458		15	8. 10	036717	036921	
20	9. 36	037678	037420		20	7. 36	036611	036901	
25	9. 8	037817	037420		25	7. 12	036545	036907	
30	9. 1	037866	037394		30	6. 45	036484	036892	
35	8. 52	038048	037355		35	6. 52	036550	036890	
40	9. 26	038164	037311		40	6. 48	036577	036910	
45	10. 41	038191	037267		45	6. 49	036666	036928	
50	10. 11	037554	037229		50	7. 40	036737	036919	
55	9. 22	037471	037173		55	8. 9	036742	036923	
Aug. 30. 12. 0	23. 8. 28	0·037205	0·037162	G	Aug. 30. 16. 0	23. 8. 8	0·036720	0·037011	D
5	7. 57	036984	037162		5	7. 55	036720	036999	D
10	8. 22	037033	037176		10	7. 36	036720	036972	H B
15	8. 23	037060	037205		15	8. 18	036814	036972	
20	8. 56	036712	037191		20	9. 15	036858	036964	
25	9. 3	036805	037209		25	9. 39	037190	036976	
30	9. 49	036854	037194		30	9. 19	037307	036978	
35	10. 32	036948	037194	G	35	8. 30	037395	036949	
40	10. 16	036688	037168	D	40	8. 10	037284	036941	
45	9. 52	036516	037162		45	8. 38	037201	036917	
50	10. 20	036543	037136		50	8. 48	037068	036885	
55	11. 15	036504	037124		55	9. 8	036891	036897	
Aug. 30. 13. 0	23. 15. 25	0·037389	0·037118	D	Aug. 30. 17. 0	23. 9. 24	0·036891	0·036897	H B
5	19. 38	037766	037112		5	9. 18	036780	036897	
10	22. 43	037411	037065		10	9. 19	036652	036885	
15	24. 3	036968	036953		15	9. 33	036874	036956	
20	23. 39	036482	036817		20	9. 42	036746	036985	
25	21. 29	035640	036611		25	9. 54	036702	037003	
30	18. 11	035175	036457		30	10. 45	036773	037044	
35	15. 39	035219	036375		35	11. 36	036530	037074	
40	12. 45	035419	036363		40	13. 10	036601	037062	
45	11. 8	035751	036404		45	14. 4	036253	037074	
50	10. 29	036039	036452		50	14. 56	036258	037103	
55	9. 51	036416	036516		55	16. 35	035665	037062	

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, 180°.
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, $25^s·0$.

Aug. $30^d. 13^h. 40^m$. The reading of the Vertical Force Magnet was smaller than at any other time during the term.
Aug. $30^d. 14^h. 25^m$. The western declination was smaller than at any other time during the term.

Term-Day Observations of August 30 and 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Aug. 30. 18. 0	23. 18. 28	0 ·035333	0 ·037098	H B	Aug. 30. 22. 0	23. 14. 25	0 ·034156	0 ·036884	G
5	19. 20	035068	037044		5	15. 17	033957	036884	
10	19. 16	035090	037035		10	16. 12	033531	036884	
15	19. 8	035134	037039		15	16. 22	033376	036855	
20	18. 6	035776	037021		20	16. 15	033548	036781	
25	17. 27	035842	037012		25	15. 33	033748	036781	
30	16. 54	035803	036986		30	15. 55	033787	036781	
35	16. 9	035958	036971		35	15. 23	033809	036728	
40	15. 46	035980	036971	H B	40	16. 9	033737	036755	
45	15. 34	036091	036944	B	45	16. 39	033826	036772	
50	15. 28	035980	036948		50	16. 40	033665	036743	
55	12. 53	036091	036891		55	17. 0	033998	036743	G
Aug. 30. 19. 0	23. 11. 26	0 ·035980	0 ·036921	B	Aug. 30. 23. 0	23. 17. 32	0 ·034241	0 ·036802	H B
5	9. 53	035980	036950		5	17. 56	034285	036802	
10	9. 25	036295	036924		10	17. 27	034856	036828	
15	9. 43	036738	036983		15	17. 21	034811	036884	
20	10. 11	036721	036987		20	17. 47	034940	036899	
25	10. 33	036566	037046		25	18. 14	034984	036928	
30	10. 57	036482	037019		30	18. 35	035178	036984	
35	10. 39	036549	037019		35	19. 29	035001	037022	
40	10. 31	036244	036993		40	19. 14	035283	037048	
45	10. 0	036227	037081		45	20. 4	035416	037070	
50	10. 30	036100	036907		50	20. 16	035190	037060	
55	10. 51	035640	037025		55	20. 29	035013	037039	
Aug. 30. 20. 0	23. 10. 3	0 ·035861	0 ·036995	B	Aug. 31. 0. 0	23. 20. 22	0 ·034968	0 ·037074	H B
5	10. 15	035418	036999		5	20. 58	034847	037092	
10	9. 12	035529	036999		10	21. 35	035280	037119	
15	8. 45	035401	037002		15	21. 45	034981	037206	H B
20	8. 41	035512	036975		20	21. 58	034750	037224	G
25	9. 20	035290	037005		25	22. 7	034983	037289	
30	10. 17	035273	036979		30	22. 51	035195	037348	
35	11. 6	035273	036981		35	22. 46	034874	037412	G
40	10. 39	035052	037011		40	22. 38	035058	037491	D
45	10. 29	035256	036985		45	22. 1	035707	037553	B
50	10. 53	035478	036959		50	22. 38	035868	037653	
55	11. 17	035256	036900		55	23. 11	036345	037706	
Aug. 30. 21. 0	23. 10. 40	0 ·035035	0 ·036900	B	Aug. 31. 0. 0	23. 23. 44	0 ·036345	0 ·037706	B
5	11. 3	034814	036900		5	24. 0	036379	037699	
10	11. 35	034371	036926		10	23. 44	036192	037726	
15	11. 51	034609	036896		15	23. 46	036780	037779	
20	11. 53	034609	036952		20	24. 37	036703	037805	
25	12. 54	034609	036922		25	24. 1	036737	037858	
30	13. 57	034626	036949		30	24. 23	036771	037911	
35	13. 12	034626	036979	B	35	24. 23	037026	037963	
40	13. 15	034361	036916	G	40	24. 13	037264	038016	
45	13. 16	034533	036899		45	23. 55	037060	038069	
50	13. 33	034444	036926		50	23. 57	036634	038122	
55	13. 48	034400	036914		55	23. 57	036651	038086	

The times of Observation of the Vertical Force an 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, 180°.
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, 25ˢ·0.

Aug. 30ᵈ. 22ʰ. 15ᵐ. The reading of the Horizontal Force Magnet was the smallest during the term.

Term-Day Observations of August 31.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Aug. 31. 2. 0	23. 23. 34	0 ·036430	0 ·038057	B	Aug. 31. 6. 0	23. 13. 26	0 ·037546	0 ·038118	G
5	23. 35	037094	038138		5	13. 18	037568	038077	
10	25. 3	037332	038224		10	13. 16	037630	038091	
15	24. 41	037261	038159		15	13. 16	037740	038117	
20	24. 3	036924	038156		20	13. 8	037868	038058	
25	23. 40	036276	038091		25	13. 5	037823	038085	
30	22. 56	036293	038144		30	12. 53	037840	038099	
35	22. 26	036598	038166	B	35	12. 53	037835	038126	
40	22. 38	036393	038332	H B	40	12. 53	037808	038158	G
45	21. 26	036344	038361		45	12. 50	037869	038160	B
50	22. 12	036427	038089		50	12. 50	037886	038158	
55	21. 45	036555	038260		55	12. 44	037992	038184	
Aug. 31. 3. 0	23. 21. 37	0 ·036157	0 ·038290	H B	Aug. 31. 7. 0	23. 12. 44	0 ·038258	0 ·038184	B
5	21. 1	036191	038307		5	12. 39	038324	038143	
10	20. 28	036734	038286		10	12. 39	038351	038099	
15	20. 14	036546	038218		15	12. 29	038063	038072	
20	20. 14	036691	038283		20	12. 17	038489	038042	
25	20. 14	036597	038294		25	12. 34	038644	038046	
30	19. 49	036305	038306		30	12. 34	038627	038020	
35	19. 9	036101	038340		35	12. 27	038362	037993	
40	18. 16	036560	038399		40	11. 27	038234	037934	
45	17. 38	036821	038399		45	10. 45	038012	037934	
50	17. 23	037325	038470		50	9. 59	037885	037878	
55	16. 49	037918	038517		55	8. 46	037664	037851	
Aug. 31. 4. 0	23. 17. 4	0 ·037740	0 ·038505	H B	Aug. 31. 8. 0	23. 8. 14	0 ·037376	0 ·037822	B
5	16. 41	037376	038511		5	8. 14	037442	037851	
10	16. 15	037415	038449		10	7. 55	037425	037855	
15	16. 15	037410	038413	H B	15	9. 12	037248	037858	
20	16. 15	037781	038439	G	20	9. 12	037098	037802	
25	16. 32	037798	038439		25	8. 36	037297	037790	
30	16. 15	037195	038466		30	8. 55	037369	037776	
35	15. 30	037035	038454		35	9. 39	037374	037790	B
40	15. 22	036565	038480		40	10. 50	037468	037747	D
45	15. 34	035896	038392		45	11. 16	037451	037752	
50	15. 41	035869	038313		50	11. 37	037279	037715	
55	15. 30	035730	038301		55	11. 28	037062	037703	
Aug. 31. 5. 0	23. 14. 37	0 ·035730	0 ·038242	G	Aug. 31. 9. 0	23. 11. 41	0 ·037018	0 ·037709	
5	13. 18	036284	038254		5	11. 58	037018	037697	
10	12. 49	036948	038254		10	12. 2	037001	037670	
15	13. 4	037701	038254		15	11. 54	036935	037670	
20	13. 3	037701	038254		20	11. 51	036984	037644	
25	12. 58	037701	038230		25	11. 56	037144	037629	
30	12. 57	037701	038212		30	11. 44	037034	037629	
35	12. 59	037944	038212		35	11. 49	036950	037603	
40	13. 25	037723	038183		40	11. 38	036933	037571	
45	13. 12	037502	038148		45	11. 35	037071	037532	
50	13. 15	037546	038148		50	11. 42	037071	037532	
55	13. 22	037546	038118		55	11. 36	037054	037506	

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, 180°.
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, 25ˢ·0.

Aug. 31ᵈ. 2ʰ. 10ᵐ. The western declination was larger than at any other time during the term.
Aug. 31ᵈ. 5ʰ. 55ᵐ. The reading of the Vertical Force Magnet was the largest during the term.
Aug. 31ᵈ. 7ʰ. 25ᵐ. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Term-Day Observations of September 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 18. 10. 0	23. 9. 4	0·040529	0·036485	G	Sep. 18. 14. 0	23. 11. 14	0·040672	0·036369	D
5	8. 54	041171	036468		5	11. 34	040694	036369	
10	10. 5	041082	036468		10	11. 43	040677	036354	
15	10. 11	040927	036503		15	11. 50	040633	036354	
20	11. 2	040529	036485		20	11. 48	040616	036334	
25	11. 11	040485	036485		25	11. 35	040572	036307	
30	11. 33	040485	036485		30	11. 12	040511	036281	
35	12. 0	040485	036485		35	11. 0	040471	036255	
40	12. 2	040485	036485		40	10. 46	040410	036228	
45	12. 1	040485	036485		45	11. 0	040349	036202	
50	12. 1	040485	036485		50	11. 0	040332	036186	
55	11. 58	040485	036485		55	11. 8	040293	036172	
Sep. 18. 11. 0	23. 11. 55	0·040485	0·036515	G	Sep. 18. 15. 0	23. 11. 1	0·040315	0·036196	D
5	11. 52	040706	036515		5	10. 33	040448	036202	
10	12. 29	041021	036488		10	10. 13	040647	036188	
15	12. 36	041087	036488		15	9. 45	040674	036217	
20	12. 36	040783	036462		20	9. 26	040541	036190	
25	12. 22	040672	036462		25	8. 57	040298	036184	
30	11. 58	040655	036435		30	8. 27	040110	036158	
35	11. 35	040655	036435		35	8. 48	039998	036170	D
40	11. 30	040638	036409		40	9. 35	039998	036199	H B
45	11. 30	040638	036409		45	10. 11	039981	036214	
50	11. 31	040511	036383		50	10. 29	039981	036231	
55	11. 31	040422	036383		55	10. 29	039848	036243	
Sep. 18. 12. 0	23. 11. 33	0·040400	0·036383	G	Sep. 18. 16. 0	23. 10. 20	0·039959	0·036249	H B
5	11. 30	040400	036412		5	10. 20	039915	036273	
10	11. 37	040383	036385		10	10. 3	039981	036290	
15	11. 40	040383	036385		15	9. 54	040120	036259	
20	12. 30	040631	036371		20	9. 48	040164	036270	
25	12. 29	040764	036389		25	9. 41	040274	036270	
30	12. 30	040791	036380	G	30	9. 47	040368	036268	
35	12. 30	040818	036374	D	35	9. 47	040346	036262	
40	12. 34	040713	036336		40	9. 45	040279	036265	
45	12. 25	040718	036336		45	9. 41	040329	036288	
50	12. 8	040546	036322		50	9. 41	040351	036268	
55	11. 49	040507	036316		55	9. 51	040395	036250	
Sep. 18. 13. 0	23. 11. 37	0·040485	0·036316	D	Sep. 18. 17. 0	23. 9. 38	0·040417	0·036262	H B
5	11. 1	040485	036316		5	9. 38	040417	036274	
10	10. 41	040507	036316		10	9. 43	040444	036265	
15	10. 29	040507	036316		15	9. 52	040444	036271	
20	10. 29	040490	036316		20	10. 11	040383	036256	
25	10. 25	040490	036328		25	10. 16	040273	036256	
30	10. 29	040490	036339		30	10. 16	040145	036248	
35	10. 30	040490	036345		35	10. 37	040101	036221	
40	10. 48	040539	036369		40	11. 5	039951	036230	
45	10. 55	040562	036369		45	10. 57	039890	036203	
50	11. 2	040584	036369		50	10. 50	039873	036195	
55	11. 6	040628	036369		55	10. 55	039967	036169	

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, 180°.
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, $25^s·0$.

Sep. $18^d. 13^h. 20^m$ to 35^m. The scale readings of the Vertical Force Magnet were evidently erroneous, those at 20^m and 25^m by one division of the scale, and those at 30^m and 35^m by two divisions, the readings being too small by those amounts: the values above are those deduced by increasing the readings by one division or two divisions as seemed to be needed, and they have been used in subsequent calculations. Had the observations as taken been correct, the results would have been 0·035726, 0·035738, 0·035159, and 0·035165 respectively.

Term-Day Observations of September 18 and 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 18. 18. 0	23. 11. 7	0 ·039923	0 ·036169	H B	Sep. 18. 22. 0	23. 12. 3	0 ·038613	0 ·036210	G
5	11. 2	039967	036193		5	12. 12	038613	036210	
10	10. 49	040143	036213		10	12. 19	038453	036236	
15	10. 38	040232	036213		15	12. 47	038519	036224	
20	10. 30	040254	036205		20	13. 16	038647	036309	
25	10. 28	040143	036246		25	13. 24	038758	036309	
30	10. 24	040254	036195		30	13. 35	038841	036336	
35	10. 10	040342	036219	H B	35	13. 58	038725	036362	
40	10. 12	040409	036211	B	40	14. 52	038742	036389	
45	10. 12	040298	036193		45	15. 0	038737	036359	G
50	9. 56	040298	036191		50	14. 58	038688	036368	D
55	10. 27	040298	036167		55	14. 58	038660	036382	
Sep. 18. 19. 0	23. 10. 34	0 ·040298	0 ·036167	B	Sep. 18. 23. 0	23. 15. 8	0 ·038771	0 ·036382	D
5	10. 40	040077	036167		5	15. 36	038815	036388	
10	10. 14	040171	036199		10	15. 45	038616	036388	
15	9. 57	040281	036169		15	15. 47	038549	036382	
20	10. 2	040486	036114		20	16. 0	038289	036382	
25	10. 41	040419	036173		25	16. 24	038245	036376	
30	10. 52	040247	036234		30	17. 4	038355	036364	
35	10. 52	040247	036205		35	17. 34	038377	036347	
40	10. 37	039899	036149		40	17. 58	038272	036329	
45	10. 18	039771	036094		45	18. 13	038294	036323	D
50	10. 11	039754	036126		50	18. 17	038228	036311	H B
55	10. 17	039626	036100		55	18. 48	038272	036311	
Sep. 18. 20. 0	....	0 ·039515	0 ·036129	B	Sep. 19. 0. 0	23. 19. 13	0 ·038006	0 ·036293	H B
5	23. 10. 27	039515	036100		5	19. 16	037996	036303	
10	10. 6	039343	036129		10	19. 33	038035	036317	
15	9. 22	039498	036132		15	19. 52	038057	036332	
20	10. 1	039437	036191		20	20. 24	038313	036352	
25	10. 0	039371	036161		25	20. 29	038169	036366	
30	9. 37	039354	036135		30	20. 43	038071	036364	
35	9. 42	039354	036194		35	20. 49	038171	036349	
40	9. 19	039337	036194		40	21. 8	038449	036429	
45	9. 35	039226	036168		45	21. 14	038576	036396	
50	9. 43	039209	036168		50	21. 25	038505	036410	
55	9. 23	039147	036168		55	21. 13	038494	036437	
Sep. 18. 21. 0	23. 9. 48	0 ·039192	0 ·036168	B	Sep. 19. 1. 0	23. 21. 0	0 ·038517	0 ·036425	H B
5	9. 57	039192	036198		5	21. 14	038573	036433	
10	10. 7	039209	036198		10	21. 13	038811	036472	
15	10. 38	039209	036227		15	21. 34	039028	036524	
20	10. 28	039226	036198		20	21. 42	039045	036522	
25	11. 19	039115	036198		25	21. 38	039062	036506	
30	11. 39	038844	036198	B	30	21. 38	039012	036542	
35	11. 30	038800	036210	G	35	21. 24	039184	036556	
40	11. 24	038795	036210		40	21. 24	039201	036609	H B
45	11. 27	038640	036227		45	21. 21	039019	036636	B
50	11. 32	038657	036227		50	21. 2	038859	036632	
55	11. 53	038591	036245		55	21. 15	038986	036599	

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, 180°.
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, $25^s{\cdot}0$.

Sep. $18^d. 19^h. 45^m$. The reading of the Vertical Force Magnet was smaller than at any other time during the term.
Sep. $18^d. 20^h. 0^m$. The declination observation was omitted by inadvertence.
Sep. $19^d. 0^h. 5^m$. The reading of the Horizontal Force Magnet was smaller than at any other time during the term.
Sep. $19^d. 1^h. 20^m$. The western declination was larger than at any other time during the term.

Term-Day Observations of September 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Sep. 19. 2. 0	23. 20. 38	0·038809	0·036599	B	Sep. 19. 6. 0	23. 13. 30	0·041437	0·037307	G
5	20. 27	038799	036641		5	13. 29	041437	037277	
10	20. 1	038611	036676		10	13. 29	041420	037250	
15	19. 47	038867	036729		15	13. 27	041420	037250	
20	19. 47	038679	036782		20	13. 27	041403	037195	
25	19. 21	038918	036834		25	13. 23	041403	037183	
30	19. 2	039156	036857		30	13. 17	041386	037138	
35	19. 8	039284	036881		35	13. 17	041386	037109	
40	19. 1	039633	036907		40	13. 9	041369	037083	
45	18. 37	039650	036934		45	12. 56	041369	037071	
50	18. 34	039888	036989		50	12. 45	041463	037027	
55	18. 28	040016	036987		55	12. 43	041418	037027	
Sep. 19. 3. 0	23. 18. 12	0·040127	0·036987	B	Sep. 19. 7. 0	23. 12. 45	0·041352	0·037010	G
5	18. 12	040188	037039		5	12. 40	041352	037010	
10	17. 57	040382	037121		10	12. 39	041446	037010	
15	18. 3	040399	037089		15	12. 25	041579	036968	
20	17. 47	040416	037086		20	12. 24	041562	036924	
25	18. 6	040433	037112		25	12. 16	041562	036912	
30	18. 6	040450	037139		30	12. 16	041545	036936	
35	17. 59	040467	037106	B	35	12. 24	041439	036912	G
40	17. 55	040506	037188	D	40	12. 28	041223	036915	H B
45	17. 47	040545	037173		45	12. 39	041250	036904	
50	17. 32	040629	037206		50	12. 28	041388	036927	
55	17. 20	040712	037253		55	12. 32	041371	036927	
Sep. 19. 4. 0	23. 17. 20	0·040646	0·037259	D	Sep. 19. 8. 0	23. 12. 27	0·041282	0·036927	H B
5	16. 56	040579	037253		5	12. 25	041260	036921	
10	16. 50	040619	037261		10	12. 13	041199	036927	
15	16. 50	040769	037250		15	11. 59	041066	036894	
20	16. 42	040786	037228		20	11. 59	040934	036900	
25	16. 40	040808	037223		25	11. 49	040895	036894	
30	16. 25	040670	037238		30	10. 2	040562	036892	
35	16. 15	040714	037226		35	6. 52	040186	036845	
40	16. 2	040664	037240		40	4. 0	039903	036792	
45	15. 50	040731	037244		45	2. 1	040102	036807	
50	15. 37	040792	037246		50	1. 36	040750	036836	
55	15. 22	040876	037254		55	2. 43	041104	036943	
Sep. 19. 5. 0	23. 15. 13	0·041009	0·037237	D	Sep. 19. 9. 0	23. 4. 4	0·041104	0·036972	H B
5	14. 53	041075	037225		5	4. 55	041237	036972	
10	14. 54	041136	037207		10	6. 36	040866	036907	
15	14. 41	041202	037228		15	7. 38	040627	036849	
20	14. 31	041330	037199		20	8. 7	040477	036742	
25	14. 15	041352	037219		25	8. 37	040483	036705	
30	14. 15	041369	037234		30	9. 6	040355	036679	
35	14. 1	041342	037254	D	35	10. 5	040338	036634	
40	13. 47	041386	037256	G	40	10. 29	040210	036596	
45	13. 42	041293	037283		45	10. 46	040216	036569	
50	13. 39	041310	037280		50	10. 46	040375	036543	
55	13. 37	041437	037307		55	10. 59	040381	036558	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, 180°.
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, $25^s·0$.

Sep. $19^d. 5^h. 55^m$ and $6^h. 0^m$. The readings of the Vertical Force Magnet at these times were the largest during the term.

Sep. $19^d. 7^h. 15^m$. The reading of the Horizontal Force Magnet was the largest during the term.

Sep. $19^d. 8^h. 50^m$. The western declination was smaller than at any other time during the term.

Term-Day Observations of October 23.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 23. 10. 0	23. 7. 46	0·039099	0·033775	D	Oct. 23. 14. 0	23. 10. 26	0·038554	0·033320	J M
5	7. 41	039055	033786		5	10. 53	038310	033320	
10	7. 59	038967	033786		10	10. 47	038238	033293	
15	7. 58	038790	033781		15	10. 36	038194	033267	
20	7. 34	038591	033765		20	10. 34	038145	033267	
25	7. 19	038546	033734		25	10. 27	038122	033267	
30	7. 24	038436	033708		30	10. 2	038162	033240	
35	7. 37	038458	033681		35	10. 4	038162	033266	
40	8. 19	038369	033670		40	10. 4	038289	033240	
45	8. 47	038236	033670		45	10. 21	038400	033250	
50	9. 36	038170	033670		50	10. 34	038528	033240	
55	9. 51	038170	033676		55	10. 34	038506	033256	
Oct. 23. 11. 0	23. 10. 57	0·038347	0·033676	D	Oct. 23. 15. 0	23. 11. 41	0·038550	0·033267	J M
5	10. 27	038391	033670		5	11. 42	038749	033267	
10	10. 29	038480	033650		10	9. 54	038528	033267	
15	10. 27	038657	033623		15	9. 54	038528	033204	
20	10. 3	038900	033607		20	9. 40	038417	033250	
25	9. 24	038878	033597		25	9. 31	038373	033240	
30	8. 48	038768	033550		30	9. 31	038328	033219	
35	8. 15	038679	033486		35	9. 48	038306	033255	J M
40	7. 18	038569	033503		40	10. 16	038262	033271	H B
45	6. 50	038657	033498		45	10. 22	038284	033257	
50	7. 51	038834	033487		50	10. 35	038262	033303	
55	9. 50	038657	033503		55	10. 31	038351	033319	
Oct. 23. 12. 0	23. 10. 26	0·038436	0·033466	D	Oct. 23. 16. 0	23. 10. 54	0·038461	0·033303	H B
5	10. 41	038413	033435		5	11. 7	038427	033308	
10	10. 34	038281	033414		10	11. 21	038455	033255	
15	11. 54	037993	033376		15	11. 39	038416	033271	
20	11. 52	038170	033340		20	11. 37	038487	033250	
25	13. 28	038170	033356		25	11. 56	038537	033261	
30	13. 57	038347	033325	D	30	11. 56	038520	033250	
35	16. 18	038657	033330	J M	35	11. 44	038547	033223	
40	15. 23	038834	033320		40	11. 36	038552	033208	
45	14. 54	038945	033267		45	11. 26	038513	033175	
50	14. 6	038790	033256		50	11. 19	038518	033139	
55	12. 28	038790	033214		55	11. 19	038501	033129	
Oct. 23. 13. 0	23. 11. 40	0·038701	0·033162	J M	Oct. 23. 17. 0	23. 11. 6	0·038501	0·033118	H B
5	11. 1	038569	033162		5	11. 6	038523	033123	
10	10. 37	038485	033188		10	11. 17	038540	033134	
15	10. 30	038357	033214		15	11. 26	038540	033134	
20	10. 24	038562	033224		20	11. 33	038535	033139	
25	10. 54	038700	033266		25	11. 24	038513	033150	
30	10. 57	038639	033319		30	11. 29	038419	033150	
35	10. 29	038688	033293		35	11. 27	038441	033155	
40	10. 1	038715	033309		40	11. 35	038480	033165	
45	9. 54	038742	033293		45	11. 44	038436	033165	
50	10. 21	038659	033346		50	11. 41	038497	033181	
55	10. 26	038487	033336		55	11. 34	038475	033176	

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, 180°.
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, 26s·5.

Oct. 23d. 10h. 0m. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Oct. 23d. 10h. 10m. The reading of the Horizontal Force Magnet was set down two divisions less than that used for reducing this observation: had the observation been correct the result would have been 0·034539.

Oct. 23d. 11h. 45m. The western declination was smaller than at any other time during the term.

Oct. 23d. 17h. 0m. The reading of the Vertical Force Magnet was smaller than at any other time during the term.

Term-Day Observations of October 23 and 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 23. 18. 0	23. 11. 34	0·038453	0·033176	H B	Oct. 23. 22. 0	23. 11. 39	0·037292	0·033176	D
5	11. 34	038564	033176		5	11. 53	037292	033170	
10	11. 37	038453	033197		10	12. 0	037247	033160	
15	11. 37	038525	033186		15	12. 6	037225	033160	
20	11. 34	038458	033160		20	12. 26	037336	033160	
25	11. 23	038436	033170		25	12. 45	037336	033176	
30	11. 30	038353	033197		30	12. 49	037275	033170	
35	11. 26	038264	033213		35	12. 58	037142	033165	
40	11. 26	038331	033255	H B	40	13. 7	037142	033170	
45	11. 22	038358	033213	L	45	13. 31	037031	033181	
50	11. 47	038336	033208		50	13. 43	037075	033197	
55	11. 45	038225	033213		55	13. 57	037031	033202	
Oct. 23. 19. 0	23. 11. 45	0·038026	0·033213	L	Oct. 23. 23. 0	23. 14. 23	0·037142	0·033202	D
5	11. 31	038092	033218		5	14. 36	037125	033218	
10	11. 16	037848	033218		10	14. 50	037174	033218	
15	11. 32	037915	033213		15	15. 3	037179	033201	
20	11. 18	037915	033213		20	15. 30	037162	033207	
25	10. 55	038136	033213		25	15. 34	037079	033222	
30	11. 20	038136	033218		30	15. 51	037128	033212	
35	11. 13	038026	033213		35	16. 1	037023	033202	
40	10. 57	038181	033228		40	16. 9	037072	033190	D
45	11. 7	038092	033228		45	16. 19	037144	033175	H B
50	11. 17	037959	033213		50	16. 33	037171	033122	
55	10. 47	037959	033208		55	16. 47	037132	033169	
Oct. 23. 20. 0	23. 10. 40	0·038136	0·033213	L	Oct. 24. 0. 0	23. 17. 11	0·037464	0·033196	H B
5	10. 20	038158	033202		5	17. 39	037398	033217	
10	10. 45	038225	033213		10	17. 53	037326	033196	
15	10. 29	038247	033213		15	17. 46	037215	033212	
20	10. 37	038119	033213		20	17. 59	037343	033201	
25	10. 42	038119	033218		25	18. 11	037365	033212	
30	10. 42	038097	033138		30	18. 16	037515	033186	
35	10. 42	038119	033149		35	18. 8	037426	033186	
40	10. 55	038102	033159		40	17. 51	037399	033186	
45	11. 18	038102	033186		45	18. 2	037377	033196	
50	11. 13	038102	033175		50	17. 38	037372	033212	
55	11. 8	038080	033181		55	17. 36	037394	033212	
Oct. 23. 21. 0	23. 11. 5	0·037992	0·033149	L	Oct. 24. 1. 0	23. 17. 37	0·037372	0·033222	H B
5	11. 5	037969	033159		5	17. 30	037239	033228	
10	11. 6	037942	033181		10	17. 33	037217	033238	
15	11. 0	037854	033191		15	17. 5	037128	033274	
20	10. 45	037738	033186		20	17. 5	037057	033280	
25	10. 51	037693	033191		25	16. 49	036968	033290	
30	10. 55	037865	033208		30	16. 55	037145	033327	
35	11. 18	037710	033213		35	17. 3	037212	033327	H B
40	11. 10	037639	033213	L	40	16. 53	037162	033380	L
45	11. 29	037479	033186	D	45	16. 46	037207	033385	
50	11. 29	037496	033160		50	17. 39	037251	033406	
55	11. 31	037513	033144		55	16. 44	037273	033411	

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, 180°.
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, $26^s·5$.

Oct. $24^d. 0^h. 30^m$. The western declination was larger than at any other time during the term.
Oct. $24^d. 1^h. 25^m$. The reading of the Horizontal Force Magnet was the smallest during the term.

Term-Day Observations of October 24.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Oct. 24. 2. 0	23. 16. 59	0·037362	0·033417	L	Oct. 24. 6. 0	23. 10. 54	0·038657	0·033756	D
5	16. 59	037472	033432		5	11. 10	038591	033750	
10	16. 57	037517	033443		10	11. 2	038552	033750	
15	16. 53	037583	033470		15	11. 4	038574	033723	
20	16. 53	037710	033475		20	11. 4	038601	033713	
25	16. 39	037688	033485		25	11. 9	038601	033702	
30	16. 24	037644	033517		30	11. 10	038584	033676	D
35	16. 24	037600	033522		35	11. 10	038656	033671	J M
40	16. 17	037528	033580	L	40	11. 10	038572	033671	
45	16. 21	037683	033658	H B	45	11. 3	038622	033634	
50	16. 10	037683	033669		50	11. 3	038632	033618	
55	16. 19	037639	033669		55	10. 58	038598	033607	
Oct. 24. 3. 0	23. 16. 14	0·037661	0·033596	H B	Oct. 24. 7. 0	23. 10. 58	0·038620	0·033581	J M
5	16. 2	037595	033633		5	10. 58	038620	033581	
10	15. 40	037568	033659		10	10. 58	038681	033581	
15	15. 2	037568	033754		15	11. 2	038681	033571	
20	14. 58	037629	033770		20	10. 58	038698	033555	
25	14. 46	037717	033790		25	10. 58	038698	033555	
30	14. 27	037668	033791		30	10. 58	038693	033555	
35	14. 18	037795	033827		35	10. 58	038737	033555	
40	14. 4	037812	033870		40	10. 58	038754	033529	
45	13. 50	037874	033886		45	10. 58	038754	033529	
50	13. 40	038001	033912		50	10. 58	038749	033519	
55	13. 35	038107	033949		55	10. 58	038749	033503	
Oct. 24. 4. 0	23. 13. 25	0·038107	0·033949	H B	Oct. 24. 8. 0	23. 10. 58	0·038749	0·033503	J M
5	13. 19	038196	033923		5	10. 55	038749	033487	
10	13. 19	038279	033913		10	10. 55	038744	033487	
15	13. 12	038301	033913		15	10. 55	038744	033477	
20	13. 12	038318	033912		20	10. 54	038761	033477	
25	13. 7	038385	033886		25	10 54	038761	033477	
30	12. 54	038402	033886		30	10. 54	038761	033503	
35	12. 47	038424	033876	H B	35	10. 52	038778	033503	
40	12. 35	038529	033881	D	40	10. 52	038778	033492	J M
45	12. 34	038507	033845		45	10. 52	038778	033476	L
50	12. 30	038502	033855		50	10. 52	038817	033482	
55	12. 16	038436	033845		55	10. 49	038729	033471	
Oct. 24. 5. 0	23. 12. 19	0·038569	0·033829	D	Oct. 24. 9. 0	23. 10. 49	0·038773	0·033460	L
5	12. 15	038569	033814		5	11. 3	038751	033455	
10	11. 58	038569	033792		10	11. 3	038795	033450	
15	11. 52	038569	033776		15	11. 1	038773	033450	
20	11. 48	038613	033776		20	11. 1	038817	033450	
25	11. 45	038635	033766		25	11. 1	038817	033450	
30	11. 12	038635	033766		30	11. 4	038834	033450	
35	11. 0	038657	033766		35	11. 4	038812	033445	
40	10. 49	038790	033766		40	11. 4	038834	033445	
45	10. 41	038790	033766		45	11. 7	038768	033445	
50	10. 46	038768	033761		50	11. 10	038746	033445	
55	10. 51	038701	033756		55	11. 5	038724	033450	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, 180°.
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, $26^s·5$.

Oct. $24^d. 3^h. 55^m$ and $4^h. 0^m$. The readings of the Vertical Force Magnet at these times were the same, and were the largest during the term.

Term-Day Observations of November 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 29. 10. 0	23. 10. 10	0 ·038713	0 ·031728	G	Nov. 29. 14. 0	23. 12. 37	0 ·038915	0 ·032228	H B
5	9. 25	038735	031943		5	12. 58	039048	032223	
10	9. 27	038846	031948		10	12. 58	038999	032249	
15	9. 17	038890	031953		15	12. 23	038888	032228	
20	9. 29	039156	031964		20	12. 3	038905	032229	
25	9. 35	039156	031964		25	11. 59	038905	032229	
30	9. 20	039178	031953		30	11. 59	038922	032229	
35	9. 19	039178	031938		35	11. 53	038922	032229	
40	9. 5	039289	031938		40	12. 4	038939	032256	
45	8. 39	039399	031927		45	12. 11	039067	032282	
50	8. 46	039399	031922		50	12. 21	039017	032318	
55	9. 2	039399	031938		55	12. 21	038990	032345	
Nov. 29. 11. 0	23. 9. 38	0 ·039399	0 ·031938	G	Nov. 29. 15. 0	23. 12. 21	0 ·039056	0 ·032335	H B
5	10. 1	039554	031938		5	12. 21	039056	032335	
10	10. 27	039134	031911		10	12. 35	038880	032335	
15	10. 27	039001	031885		15	12. 31	038946	032324	
20	10. 25	038735	031880		20	12. 27	038857	032335	
25	10. 23	038735	031880		25	12. 17	038924	032335	
30	10. 23	038691	031880		30	12. 17	038963	032308	
35	10. 23	038669	031880		35	12. 17	038963	032297	
40	10. 21	038957	031890		40	12. 14	038852	032297	H B
45	10. 48	038957	031890		45	12. 15	038919	032297	L
50	11. 3	038912	031885		50	12. 32	039007	032281	
55	11. 7	038912	031885		55	12. 24	039007	032287	
Nov. 29. 12. 0	23. 11. 13	0 ·038735	0 ·031859	G	Nov. 29. 16. 0	23. 12. 23	0 ·039007	0 ·032255	L
5	11. 31	038779	031885	H B	5	12. 19	039118	032255	
10	11. 19	038575	031938		10	12. 4	039024	032308	
15	11. 23	038575	031953		15	12. 0	039046	032298	
20	11. 11	038725	032017		20	12. 0	039041	032318	
25	11. 11	038769	032048		25	12. 7	039058	032324	
30	11. 19	038830	032059		30	12. 7	039075	032335	
35	11. 19	038786	032106		35	12. 15	039181	032371	
40	11. 19	038847	032133		40	12. 18	039220	032392	
45	11. 47	038847	032159		45	12. 18	039215	032409	
50	11. 42	038864	032191		50	12. 13	039254	032440	
55	11. 42	038820	032176		55	12. 22	039160	032477	
Nov. 29. 13. 0	23. 11. 33	0 ·038864	0 ·032176	H B	Nov. 29. 17. 0	23. 12. 13	0 ·039204	0 ·032483	L
5	11. 33	038909	032186		5	12. 8	039182	032477	
10	11. 34	038886	032176		10	12. 4	039160	032477	
15	11. 34	038837	032202		15	12. 4	039177	032441	
20	11. 23	038881	032223		20	11. 58	039067	032420	
25	11. 33	038881	032212		25	11. 58	039199	032388	
30	12. 7	038854	032229		30	11. 53	039017	032388	
35	11. 52	038898	032239		35	11. 37	038928	032388	
40	12. 7	039031	032239		40	11. 47	038928	032388	
45	12. 14	038915	032260		45	11. 51	038879	032388	
50	12. 4	038849	032244		50	11. 55	038945	032378	
55	12. 8	038915	032228		55	11. 55	038923	032383	

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, 186°.
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, $26^s \cdot 5$.

Nov. $29^d. 10^h. 0^m$. The reading of the Vertical Force Magnet was smaller than at any other time during the term.
Nov. $29^d. 10^h. 45^m$. The western declination was smaller than at any other time during the term.
Nov. $29^d. 11^h. 5^m$. The reading of the Horizontal Force Magnet was larger than at any other time during the term.

Term-Day Observations of November 29 and 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 29. 18. 0	23. 12. 7	0 ·038879	0 ·032372	L	Nov. 29. 22. 0	23. 11. 9	0 ·038286	0 ·032427	G
5	11. 47	038990	032362		5	11. 4	038352	032406	
10	11. 57	038990	032372		10	11. 4	038131	032417	
15	11. 55	038962	032389		15	11. 2	038198	032391	
20	11. 55	038896	032378		20	11. 2	038198	032433	
25	11. 50	039029	032404		25	11. 4	038176	032417	
30	11. 45	038913	032426		30	11. 8	038131	032417	
35	11. 40	038957	032399	L	35	11. 27	038308	032417	
40	11. 31	039019	032420	D	40	11. 34	038087	032391	
45	11. 32	039063	032458		45	11. 36	038087	032391	
50	11. 40	039058	032484		50	11. 44	038109	032391	
55	11. 40	039080	032505		55	11. 47	038109	032391	
Nov. 29. 19. 0	23. 11. 27	0 ·039058	0 ·032505	D	Nov. 29. 23. 0	23. 11. 46	0 ·038042	0 ·032380	G
5	11. 34	039036	032495		5	11. 56	038065	032354	G
10	11. 12	039013	032495		10	11. 49	037976	032354	H B
15	11. 19	039097	032516		15	11. 59	038020	032353	
20	11. 23	039119	032521		20	12. 28	037959	032353	
25	11. 25	039075	032516		25	12. 29	037937	032348	
30	11. 17	039047	032531		30	12. 46	038025	032322	
35	10. 45	039070	032516		35	12. 49	037981	032327	
40	11. 8	039065	032505		40	13. 10	037942	032322	
45	11. 19	039020	032521		45	13. 2	037964	032274	
50	11. 24	039081	032521		50	13. 14	037831	032274	
55	11. 29	038970	032505		55	12. 54	037831	032268	
Nov. 29. 20. 0	23. 11. 31	0 ·038794	0 ·032474	D	Nov. 30. 0. 0	23. 13. 1	0 ·037986	0 ·032268	H B
5	11. 29	038904	032458		5	13. 15	037920	032268	
10	11. 25	038926	032479		10	13. 5	037969	032248	
15	11. 23	038838	032474		15	13. 8	037991	032284	
20	11. 27	038771	032474		20	13. 20	037886	032242	
25	11. 27	038727	032474		25	13. 6	037797	032258	
30	11. 22	038705	032469		30	13. 6	037780	032248	H B
35	11. 20	038683	032464		35	12. 55	037891	032242	L
40	11. 27	038705	032453		40	12. 55	038002	032206	
45	11. 18	038683	032453		45	13. 14	037940	032232	
50	10. 49	038705	032458		50	13. 26	037874	032227	
55	11. 5	038705	032453		55	13. 44	037985	032164	
Nov. 29. 21. 0	23. 11. 15	0 ·038749	0 ·032453	D	Nov. 30. 1. 0	23. 14. 2	0 ·038101	0 ·032180	L
5	10. 36	038683	032453		5	14. 25	038411	032180	
10	10. 31	038683	032448		10	14. 40	038273	032232	
15	10. 31	038634	032443		15	14. 29	038007	032222	
20	10. 35	038590	032458		20	14. 22	038206	032259	
25	10. 35	038590	032458		25	14. 22	038113	032248	
30	10. 42	038518	032453		30	14. 22	038223	032259	
35	10. 42	038518	032416	D	35	14. 27	038130	032264	
40	10. 47	038402	032453	G	40	14 27	038257	032269	
45	10. 47	038358	032464		45	14. 32	038274	032269	L
50	10. 56	038419	032443		50	14. 30	038313	032295	D
55	11. 6	038419	032427		55	14. 23	038269	032311	

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, 186°.
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, $26^s·5$.

Nov. $29^d. 19^h. 30^m$. The reading of the Vertical Force Magnet was the largest during the term.

Nov. $29^d. 19^h. 40^m$ and 45^m. The scale readings of the Horizontal Force at these times were one division less than those used in deducing the above results, which have been used in subsequent calculations: had the observations been correct the results would have been 0 ·036851 and 0 ·036806.

Nov. $30^d. 0^h. 30^m$. The reading of the Horizontal Force Magnet was the smallest during the term.

Nov. $30^d. 1^h. 10^m$. The western declination was larger than at any other time during the term.

Term-Day Observations of November 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Nov. 30. 2. 0	23. 14. 21	0·038308	0·032301	D	Nov. 30. 6. 0	23. 10. 25	0·039182	0·032506	H B
5	14. 17	038313	032306		5	10. 27	039182	032506	
10	14. 17	038313	032311		10	10. 27	039115	032496	
15	14. 4	038274	032284		15	10. 28	039115	032496	
20	13. 59	038301	032258		20	10. 25	039044	032496	
25	13. 50	038262	032231		25	10. 17	039132	032496	
30	13. 38	038290	032210		30	10. 15	039132	032496	
35	13. 28	038206	032189	D	35	10. 14	039177	032496	H B
40	13. 11	038300	032195	L	40	10. 14	039194	032485	G
45	13. 11	038239	032232		45	10. 14	039172	032485	
50	13. 11	038155	032205		50	10. 13	039172	032469	
55	13. 11	038271	032205		55	10. 15	039127	032469	
Nov. 30. 3. 0	23. 13. 11	0·038360	0·032205	L	Nov. 30. 7. 0	23. 10. 10	0·038928	0·032453	G
5	13. 3	038360	032205		5	10. 10	038862	032453	
10	13. 11	038404	032226		10	10. 9	038928	032443	
15	13. 5	038449	032205		15	10. 9	038928	032443	
20	12. 44	038360	032236		20	10. 9	038911	032443	
25	12. 44	038360	032178		25	10. 9	038911	032443	
30	12. 46	038387	032178		30	10. 9	038800	032469	
35	12. 44	038454	032205		35	10. 0	038756	032459	
40	12. 41	038564	032205		40	9. 16	038761	032453	G
45	12. 26	038564	032226		45	9. 11	038695	032453	H B
50	12. 7	038520	032226		50	9. 9	038717	032432	
55	11. 35	038564	032215		55	9. 17	038717	032443	
Nov. 30. 4. 0	23. 11. 29	0·038454	0·032205	L	Nov. 30. 8. 0	23. 9. 17	0·038651	0·032443	H B
5	11. 29	038564	032231		5	9. 17	038673	032432	
10	11. 18	038697	032205		10	9. 23	038673	032432	
15	11. 14	038785	032232		15	9. 25	038673	032401	
20	11. 9	038785	032274		20	9. 17	038695	032401	
25	10. 55	038785	032258		25	9. 13	038673	032379	
30	10. 44	038979	032300		30	9. 8	038695	032385	
35	10. 57	038913	032310	L	35	9. 18	038717	032353	H B
40	10. 52	038935	032310	H B	40	9. 18	038783	032348	D
45	10. 51	039002	032352		45	9. 12	038805	032348	
50	10. 44	039002	032346		50	9. 12	038761	032321	
55	10. 41	039046	032336		55	9. 11	038805	032306	
Nov. 30. 5. 0	23. 10. 37	0·039179	0·032315	H B	Nov. 30. 9. 0	23. 9. 8	0·038850	0·032316	D
5	10. 39	039223	032326		5	9. 3	038850	032321	
10	10. 47	039262	032373		10	8. 57	038877	032311	
15	10. 45	039129	032353		15	8. 57	038899	032295	
20	10. 53	039102	032379		20	9. 13	038882	032280	
25	11. 1	039013	032363		25	9. 23	038860	032280	
30	10. 50	039141	032379		30	9. 32	038821	032285	
35	10. 37	039269	032426		35	9. 40	038754	032280	
40	10. 32	039286	032458		40	9. 28	038826	032259	
45	10. 36	039192	032458		45	9. 28	038826	032254	
50	10. 36	039187	032484		50	9. 28	038809	032259	
55	10. 28	039248	032506		55	9. 19	038787	032259	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, 186°.
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, $26^s·5$.

Term-Day Observations of December 18.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Dec. 18. 10. 0	22. 57. 52	0·039986	0·031941	G
5	57. 49	040075	031930	
10	57. 50	040097	031904	
15	57. 49	040097	031904	
20	57. 49	040030	031883	
25	57. 45	039986	031883	
30	57. 40	039964	031878	
35	57. 25	039920	031872	
40	57. 11	039876	031872	
45	57. 10	039831	031867	
50	56. 52	039831	031862	
55	56. 50	039809	031862	
Dec. 18. 11. 0	22. 56. 44	0·039654	0·031857	G
5	56. 44	039632	031857	
10	56. 41	039605	031857	
15	56. 37	039561	031857	
20	56. 34	039489	031883	
25	56. 25	039357	031878	
30	56. 20	039374	031878	
35	56. 7	039374	031878	
40	56. 7	039169	031905	
45	54. 55	039169	031899	
50	54. 39	039230	031878	
55	54. 32	040448	031878	
Dec. 18. 12. 0	22. 54. 12	0·040625	0·031905	G
5	54. 0	040846	031873	
10	53. 48	040974	031884	
15	53. 44	041124	031846	
20	53. 33	040897	031862	
25	53. 17	040565	031820	
30	53. 30	040472	031826	
35	53. 36	040294	031784	
40	53. 46	040156	031800	G
45	54. 11	040046	031847	L
50	54. 56	039885	031863	
55	55. 15	039620	031889	
Dec. 18. 13. 0	22. 55. 28	0·039620	0·031889	L
5	55. 53	039598	031889	
10	57. 30	039593	031916	
15	57. 1	039460	031916	
20	57. 29	039654	031942	
25	57. 50	039544	031942	
30	58. 4	039561	031943	
35	58. 25	039671	031938	
40	58. 35	039732	031953	
45	58. 46	039799	031969	
50	58. 26	039727	031996	
55	58. 14	039722	032022	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″			
Dec. 18. 14. 0	22. 58. 13	0·039766	0·032006	L
5	58. 6	039833	032006	
10	58. 6	039943	031995	
15	58. 16	039960	031943	
20	58. 0	039960	031986	
25	58. 0	039916	031996	
30	57. 52	039822	031996	
35	57. 52	039778	031986	
40	57. 58	039822	031996	
45	58. 7	039884	031996	
50	58. 30	039884	031980	
55	58. 39	039906	031970	
Dec. 18. 15. 0	22. 58. 32	0·039950	0·031970	L
5	58. 36	039994	031959	
10	58. 36	040011	032022	
15	58. 52	040205	031985	
20	59. 2	040267	031970	
25	59. 2	040284	032022	
30	58. 48	040301	032065	
35	58. 47	040318	032075	L
40	58. 47	040290	032049	H B
45	58. 52	040263	032071	
50	58. 51	040324	032071	
55	59. 6	040319	032103	
Dec. 18. 16. 0	22. 58. 55	0·040208	0·032103	H B
5	59. 2	040341	032076	
10	59. 2	040364	032129	
15	59. 13	040425	032097	
20	59. 3	040469	032102	
25	59. 8	040491	032065	
30	59. 13	040641	032119	
35	59. 13	040552	032160	
40	58. 52	040641	032129	
45	58. 31	040459	032140	
50	58. 32	040481	032119	
55	58. 44	040503	032109	
Dec. 18. 17. 0	22. 58. 51	0·040392	0·032119	H B
5	59. 2	040392	032103	
10	59. 13	040325	032077	
15	59. 8	040276	032103	
20	59. 7	040387	032119	
25	59. 10	040459	032166	
30	59. 5	040471	032166	
35	58. 56	040471	032156	
40	58. 57	040532	032188	
45	59. 1	040532	032219	
50	58. 42	040571	032193	
55	58. 29	040549	032220	

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, 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, 20s·8.
Time of Vibration of Vertical Force Magnetometer in Horizontal Plane, 24s·6; in Vertical Plane, 26s·5.

Dec. 18d. 12h. 15m. The reading of the Horizontal Force Magnet was larger than at any other time during the term.
Dec. 18d. 12h. 25m. The western declination was smaller than at any other time during the term.
Dec. 18d. 12h. 35m. The reading of the Vertical Force Magnet was smaller than at any other time during the term.

Term-Day Observations of December 18 and 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 18. 18. 0	22. 58. 24	0·040549	0·032220	H B	Dec. 18. 22. 0	23. 5. 10	0·039821	0·031963	G
5	58. 22	040549	032209		5	4. 48	039645	031931	
10	58. 26	040549	032209		10	4. 33	039662	031947	
15	58. 23	040544	032193		15	4. 21	039573	031947	
20	58. 23	040522	032219		20	3. 35	039324	031973	
25	58. 23	040544	032209		25	3. 20	039125	031973	
30	58. 14	040539	032209		30	3. 3	039142	031990	
35	58. 19	040539	032193	H B	35	3. 3	039142	032016	
40	58. 22	040511	032236	D	40	3. 6	038938	032043	
45	58. 26	040551	032226		45	3. 6	038893	032074	
50	58. 43	040368	032220		50	3. 6	038777	032105	
55	58. 38	040429	032199		55	3. 6	038777	032132	
Dec. 18. 19. 0	22. 58. 10	0·040341	0·032194	D	Dec. 18. 23. 0	23. 3. 10	0·038844	0·032132	G
5	58. 4	040208	032184		5	3. 10	038738	032105	L
10	58. 1	040297	032173		10	3. 12	038810	032084	
15	57. 52	040385	032168		15	3. 12	038726	032048	
20	57. 54	040385	032157		20	3. 22	038444	032026	
25	57. 54	040407	032157		25	3. 43	038272	032000	
30	57. 54	040407	032157		30	3. 45	038171	031973	
35	57. 56	040341	032157		35	3. 22	038137	031957	
40	58. 8	040275	032152		40	3. 26	038103	031947	
45	58. 19	040230	032141		45	3. 3	038025	031894	
50	58. 19	040252	032131		50	2. 57	037875	031842	
55	58. 19	040208	032122		55	2. 41	037726	031789	
Dec. 18. 20. 0	22. 58. 28	0·040186	0·032122	D	Dec. 19. 0. 0	23. 2. 20	0·037858	0·031810	L
5	58. 25	040142	032106		5	2. 20	037748	031789	
10	58. 29	040031	032089		10	2. 20	037748	031831	
15	58. 59	039987	032079		15	2. 17	037770	031798	
20	59. 17	039965	032079		20	2. 21	037797	031840	
25	59. 29	039876	032084		25	2. 21	037775	031851	
30	22. 59. 49	039859	032068		30	2. 20	037908	031798	
35	23. 0. 0	039793	032074		35	2. 13	038018	031814	
40	0. 34	039726	032084		40	2. 24	038001	031868	
45	0. 32	039594	032089		45	2. 13	038001	031810	
50	0. 46	039549	032079		50	2. 33	038001	031858	
55	1. 7	039483	032079		55	2. 44	038068	031867	
Dec. 18. 21. 0	23. 1. 28	0·039151	0·032052	D	Dec. 19. 1. 0	23. 2. 54	0·038223	0·031877	L
5	2. 1	039151	032031		5	3. 22	038267	031920	H B
10	2. 32	038952	032042		10	3. 0	038240	031977	
15	3. 2	038925	032026		15	3. 18	038240	031988	
20	3. 12	038747	032026		20	3. 21	038323	031987	
25	4. 39	038836	032026		25	3. 37	038279	032014	
30	5. 34	039052	032021		30	3. 36	038495	032009	
35	5. 56	039295	032026		35	3. 33	038318	032019	
40	6. 4	039539	032016		40	3. 37	038512	032051	
45	6. 17	039888	032021		45	3. 48	038352	032061	
50	6. 2	039977	032000	D	50	3. 51	038347	032104	
55	6. 0	039977	031989	G	55	3. 36	038519	032104	

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, $26^s·5$.

Dec. $18^d. 21^h. 45^m$. The western declination was larger than at any other time during the term.

Term-Day Observations of December 19.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m	° ′ ″				d h m	° ′ ″			
Dec. 19. 2. 0	23. 3. 20	0 ·038563	0 ·032062	H B	Dec. 19. 6. 0	22. 58. 42	0 ·038146	0 ·032340	G
5	3. 22	038453	032104		5	58. 49	038146	032329	
10	3. 26	038546	032077		10	58. 58	038018	032319	
15	3. 31	038485	032072		15	59. 6	038018	032297	
20	3. 12	038313	032046		20	59. 1	038001	032297	
25	3. 22	038451	032061		25	58. 14	038112	032297	
30	3. 25	038434	032056		30	58. 26	038317	032297	
35	2. 58	038284	032061	H B	35	59. 0	038250	032297	
40	2. 42	038112	032030	L	40	59. 21	038122	032297	G
45	2. 24	038028	031982		45	59. 32	038039	032303	H B
50	2. 16	038189	031945		50	59. 23	038199	032297	
55	2. 16	038083	031935		55	59. 35	038315	032308	
Dec. 19. 3. 0	23. 1. 56	0 ·038172	0 ·031919	L	Dec. 19. 7. 0	22. 59. 40	0 ·038315	0 ·032297	H B
5	1. 73	038216	031945		5	59. 34	038470	032292	
10	2. 4	038659	031929		10	59. 51	038470	032266	
15	1. 54	038682	032077		15	59. 44	038536	032261	
20	2. 17	038393	032060		20	59. 54	038581	032261	
25	2. 52	038216	032050		25	59. 30	038581	032261	
30	2. 52	038088	032023		30	59. 7	038519	032250	
35	3. 18	038000	032023		35	58. 55	038564	032235	
40	3. 42	037933	031997		40	58. 48	038564	032219	
45	2. 52	037712	031997		45	58. 43	038608	032230	
50	2. 38	037447	032008		50	58. 37	038697	032224	
55	2. 16	036826	031992		55	58. 33	038631	032235	
Dec. 19. 4. 0	23. 1. 52	0 ·036384	0 ·031997	L	Dec. 19. 8. 0	22. 58. 33	0 ·038608	0 ·032224	H B
5	1. 13	036605	032013		5	58. 18	038741	032235	
10	1. 6	036622	032023		10	58. 24	038741	032219	
15	0. 43	036711	032050		15	58. 9	038631	032235	
20	23. 0. 9	036905	032119		20	58. 4	038763	032235	
25	22. 59. 45	037015	032150		25	58. 2	038829	032235	
30	59. 2	037099	032182	L	30	57. 54	038785	032203	
35	57. 59	037337	032208	G	35	57. 41	038741	032176	
40	57. 18	037532	032244		40	57. 38	038741	032187	H B
45	56. 58	037482	032314		45	57. 16	038785	032187	D
50	56. 48	037543	032340		50	57. 12	038807	032187	
55	56. 35	037782	032419		55	57. 12	038829	032192	
Dec. 19. 5. 0	22. 57. 30	0 ·037627	0 ·032419	G	Dec. 19. 9. 0	22. 57. 16	0 ·038741	0 ·032187	D
5	57. 36	037516	032424		5	56. 51	038586	032187	
10	58. 32	037361	032397		10	56. 23	038564	032155	
15	59. 29	037295	032418		15	56. 2	038502	032155	
20	59. 29	037211	032366		20	56. 17	038547	032155	
25	59. 26	037211	032366		25	56. 23	038680	032134	
30	59. 38	037167	032339		30	56. 30	038795	032144	
35	59. 30	037100	032339		35	56. 37	038773	032134	
40	59. 21	037106	032339		40	56. 27	038491	032150	
45	58. 37	037327	032339		45	56. 14	038203	032160	
50	58. 8	037593	032313		50	56. 40	038119	032139	
55	58. 25	038146	032340		55	56. 32	038164	032155	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, 26^s·5.

Dec. $19^d.4^h.0^m$. The reading of the Horizontal Force Magnet was smaller than at any other time during the term.

Dec. $19^d.5^h.55^m$ and at $6^h.0^m$. The readings of the Vertical Force Magnet were larger than at any other time during the term.

ROYAL OBSERVATORY, GREENWICH.

EXTRAORDINARY OBSERVATIONS

OF

MAGNETOMETERS.

1844.

Extraordinary Observations of February 7 and March 4.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Feb. 7. 7. 57. 30			0·038174	G
8. 0. 0	23. 19. 19			
8. 2. 30		0·037229		
9. 4. 0	6. 54	034285	037989	
9. 0	5. 16	034329	037989	
10. 0	4. 14	034485	038018	
11. 0	3. 36	034529	038018	
12. 0	3. 12	034794	038029	
13. 0	3. 11	034971	038018	
14. 0	3. 2	035193	038018	
15. 0	3. 1	035459	038047	
16. 0	3. 20	035747	038076	
17. 0	4. 23	035525	038047	
18. 0	5. 27	036543	038047	
19. 0	6. 29	036721	038105	
20. 0	7. 47	036676	038116	
21. 0	8. 45	036743	038163	
22. 0	9. 28	036521	038163	
23. 0	9. 37	036477	038134	
24. 0	9. 59	036455	038134	
25. 0	10. 25	036322	038105	
26. 0	10. 1	036632	038105	
27. 0	12. 15	036521	038105	
28. 0	12. 28	036521	038105	
32. 0	7. 28	036743	038047	
33. 0	7. 11	036964	038047	
34. 0	5. 42	036787	038047	
36. 0	5. 0	036854	037942	
37. 0	4. 15	036898	037977	
38. 0	4. 15	037008	037977	
39. 0	4. 8	037185	037960	
39. 30	4. 12	037185	037960	
40. 0	4. 16	037185	037960	
41. 0	4. 25	037185	037960	
42. 0	4. 16	037185	037960	
43. 0	4. 13	037008	037884	
44. 0	4. 0	036964	037844	
45. 0	3. 39	036854	037873	
47. 0	3. 26	036632	037844	
48. 0	3. 12	036632	037844	
49. 0	3. 4	036521	037786	
50. 0	3. 4	036521	037786	
51. 0	3. 1	036344	037844	
52. 0	3. 6	036344	037844	
54. 0	2. 57	036256	037757	
55. 0	2. 55	035968	037739	
56. 0	2. 50	035835	037728	
57. 0	2. 44	035680	037728	
57. 30			037728	
58. 0	2. 39	035592	037710	
9. 59. 0	2. 35	035592	037699	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Feb. 7. 10. 0. 0	23. 2. 34	0·035525	0·037699	G
1. 0	2. 27	035414	037699	
2. 0	2. 24	035370	037699	
2. 30		035370		
3. 0	2. 16	035304	037710	
4. 0	2. 26	035304	037710	
7. 0	3. 12	035237	037757	
10. 0	4. 15	035193	037757	
14. 0	5. 3	035082	037757	
19. 0	5. 49	034971	037757	G
10. 29. 0	12. 31	034108	037757	JH
11. 34. 0	12. 28	034219	037774	
47. 0	11. 18	034086	037757	
11. 57. 30			037757	
12. 0. 0	10. 42			
12. 2. 30		034169		JH
Mar. 4. 5. 57. 30			0·039116	HB
6. 0. 0	23. 18. 47			
6. 2. 30		0·035159		
7. 57. 30			039018	
8. 0. 0	2. 0			
2. 30		037646		
23. 25			038868	
23. 50	3. 0			
24. 15		035211		
25. 25			038862	
25. 50	4. 2			
26. 15		035100		
27. 25			038926	
27. 50	4. 54			
28. 15		035211		
29. 25			038937	
29. 50	5. 51			
30. 15		035100		
31. 25			038955	
31. 50	6. 41			
32. 15		035100		
33. 25			038972	
33. 50	7. 30			
34. 15		035006		
35. 25			038926	
35. 50	8. 15			
36. 15		035073		
37. 25			038914	
37. 50	9. 1			
38. 15		035006		
39. 25			038955	
39. 50	9. 18			
40. 15		035139		
40. 25			038955	

Feb. 7^{d} at $9^{h}.4^{m}$. A change of upwards of 12′ having taken place in the position of the Declination Magnet since 8^{h}, extra observations were commenced.

Feb. 7^{d}. During the extra observations the greatest and least western declinations were at $8^{h}.0^{m}$ and $10^{h}.3^{m}$; the greatest and least readings of the Horizontal Force Magnet were at $8^{h}.2^{m}.30^{s}$ and $11^{h}.47^{m}$; and of the Vertical Force Magnet at $7^{d}.57^{m}.30^{s}$, and from $9^{h}.59^{m}$ to $10^{h}.2^{m}$ inclusive.

March 4^{d}. A change of 16′. 47″ having taken place in the position of the Declination Magnet between 6^{h} and 8^{h}, extra observations were commenced.

March 4^{d}. During the extra observations the greatest and least western declinations were at 10^{h} and 8^{h}; the greatest and least readings of the Horizontal Force Magnet were at $8^{h}.2^{m}.30^{s}$ and $9^{h}.24^{m}.15^{s}$; and of the Vertical Force Magnet at $5^{h}.57^{m}.30^{s}$ and $9^{h}.17^{m}.25^{s}$.

Extraordinary Observations of March 4 and 7.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 4. 8. 41. 50	23. 9. 37			
42. 15		0 ·035117		
43. 25			0 ·038966	H B
43. 50	10. 24			
44. 15		035228		
45. 25			038926	
45. 50	11. 17			
46. 15		035311		
47. 25			038955	
47. 50	11. 43			
48. 15		035245		
49. 25			038897	
49. 50	12. 21			
50. 15		035023		
51. 25			038897	
51. 50	12. 56			
52. 15		034979		
53. 25			038895	
53. 50	13. 22			
54. 15		034868		
55. 25			038868	
55. 50	14. 2			
56. 15		034913		
57. 25			038897	
57. 50	13. 45			
58. 15		034996		
59. 25			038839	
8. 59. 50	13. 32			
9. 0. 15		035040		
1. 25			038839	
1. 50	13. 53			
2. 15		034930		
3. 25			038839	
3. 50	14. 13			
4. 15		034996		
5. 25			038821	
5. 50	13. 55			
6. 15		034930		
7. 25			038839	
7. 50	14. 53			
8. 15		034930		
9. 25			038827	
9. 50	14. 41			
10. 15		035040		
11. 25			038850	
11. 50	14. 32			
12. 15		035940		
13. 25			038839	
13. 50	14. 47			
14. 15		034885		
15. 25			038810	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 4. 9. 15. 50	23. 14. 48			H B
16. 15		0 ·034930		
17. 25			0 ·038798	
17. 50	14. 47			
18. 15		034819		
19. 25			038815	
19. 50	14. 41			
20. 15		034774		
21. 25			038827	
21. 50	15. 6			
22. 15		034747		
23. 25			038850	
23. 50	14. 59			
24. 15		034680		
9. 57. 30			038862	
10. 0. 0	19. 39			
10. 2. 30		035960		
Mar. 7. 11. 57. 30			0 ·038236	H B
12. 0. 0	23. 9. 26			
12. 2. 30		0 ·034027		
13. 57. 30			038435	
14. 0. 0	20. 18			
2. 30		032587		
23. 6	21. 35	032587	038464	
24. 6	21. 20	032698	038464	
26. 6	21. 16	032587	038464	
27. 6	21. 10	032587	038464	
32. 6	21. 28	032587	038464	
34. 6	21. 28	032570	038464	
55. 6	28. 41	032858	038319	
57. 6	30. 5	032903	038319	
14. 59. 6	30. 43	033013	038290	
15. 1. 6	30. 45	033124	038261	
3. 6	29. 54	033594	038203	
5. 6	29. 50	033727	038174	
7. 6	29. 58	034037	038145	
11. 6	29. 15	033926	038057	
13. 6	28. 58	033660	038028	
15. 6	28. 39	033643	037970	
17. 6	27. 48	033599	037970	
19. 6	26. 38	033422	037923	
21. 6	25. 36	033157	037912	
23. 6	24. 31	033228	037912	
25. 7	23. 28	033073	037854	
27. 7	22. 10	033118	037854	
29. 7	21. 15	033095	037842	
31. 7	20. 43	033073	037854	
33. 7	20. 2	033477	037894	
35. 7	19. 41	033609	037912	
37. 7	19. 33	033609	037941	

March 7^{d}. A change of $10'. 52''$ having taken place in the position of the Declination Magnet between 12^{h} and 14^{h}, extra observations were commenced.

March 8^{d}. Civil Reckoning. During the time of the extra observations the greatest and least declinations were at $15^{h}. 1^{m}. 6^{s}$ and $15^{h}. 39^{m}. 7^{s}$; the greatest and least readings of the Horizontal Force Magnet were at $15^{h}. 7^{m}. 6^{s}$ and $14^{h}. 34^{m}. 6^{s}$; and of the Vertical Force Magnet at $15^{h}. 57^{m}. 30^{s}$ and $15^{h}. 29^{m}. 7^{s}$.

Extraordinary Observations of March 7 and 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 7. 15. 39. 7	23. 18. 54	0·033565	0·037929	H B
15. 57. 30			038481	
16. 0. 0	20. 31			
16. 2. 30		033101		H B
Mar. 29. 7. 57. 30			0·039530	P
8. 0. 0	23. 17. 34			
8. 2. 30		0·037573		
9. 57. 30			039240	
10. 0. 0	23. 19. 2			
10. 2. 30		033690		P
11. 27. 0	22. 59. 15	031920	038896	D
29. 0	59. 15	031898	038896	
31. 0	59. 17	031898	038896	
33. 0	59. 22	031854	038913	
35. 0	59. 27	031814	038893	
37. 0	59. 27	031837	038893	
40. 0	59. 32	031837	038887	
44. 0	59. 33	031903	038893	
49. 0	59. 46	031859	038899	
52. 0	22. 59. 57	031814	038904	
55. 0	23. 0. 8	031792	038928	
11. 57. 30			038907	
12. 0. 0	0. 29			
2. 0	1. 24	031820	038913	
2. 30		031775		
3. 0	2. 1	031908	038913	
4. 0	2. 44	031975	038907	
5. 0	3. 32	032063	038902	
6. 0	3. 47	032063	038913	
7. 0	4. 12	032240	038936	
8. 0	4. 20	032395	038966	
9. 0	4. 40	032395	038955	
10. 0	4. 59	032506	038936	
11. 0	5. 21	032599	038928	
12. 0	5. 38	032754	038939	
13. 0	5. 50	032843	038939	
14. 0	5. 51	032976	038928	
15. 0	6. 10	033109	038892	
16. 0	6. 10	033241	038880	
17. 0	6. 18	033352	038909	
18. 0	6. 21	033640	038869	
19. 0	6. 22	033729	038840	
20. 0	6. 21	033729	038834	
21. 0	6. 23	033800	038808	
22. 0	6. 11	033910	038825	
23. 0	6. 3	034133	038808	
24. 0	6. 21	034265	038779	
25. 0	6. 3	034331	038773	
26. 0	6. 41	034486	038779	
27. 0	6. 38	034508	038762	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 29. 12. 28. 0	23. 6. 34	0·034552	0·038750	D
29. 0	6. 23	034552	038675	
30. 0	5. 52	034530	038634	
31. 0	5. 29	034597	038605	
32. 0	5. 1	034713	038549	
33. 0	4. 31	034779	038526	
34. 0	4. 3	034979	038474	
35. 0	3. 35	035112	038468	
36. 0	3. 9	035090	038456	
37. 0	2. 36	035134	038427	
38. 0	2. 15	035200	038433	
39. 0	1. 49	035200	038363	
40. 0	1. 21	035289	038346	
41. 0	1. 7	035333	038346	
42. 0	0. 42	035333	038346	
43. 0	0. 18	035316	038291	
44. 0	23. 0. 6	035272	038268	
45. 0	22. 59. 53	035205	038262	
46. 0	59. 26	035161	038245	
47. 0	59. 14	035073	038227	
48. 0	59. 6	035095	038221	
49. 0	58. 58	034984	038204	
50. 0	58. 50	034939	038192	
51. 0	58. 45	034873	038175	
52. 0	58. 45	034895	038175	
53. 0	58. 30	034873	038169	
54. 0	58. 15	034745	038155	
55. 0	57. 59	034812	038178	
56. 0	57. 55	034945	038172	
57. 0	58. 9	034945	038149	
58. 0	58. 33	034945	038149	
12. 59. 0	58. 48	034967	038137	
13. 0. 0	59. 5	034900	038137	
1. 0	59. 22	034878	038137	
2. 0	22. 59. 40	034834	038126	
3. 0	23. 0. 1	034812	038085	
4. 0	0. 13	034790	038068	
5. 0	0. 12	034590	038074	
6. 0	0. 32	034839	038052	
7. 0	0. 50	034773	038035	
8. 0	0. 42	034573	038006	
9. 0	0. 23	034484	037971	
10. 0	23. 0. 10	034374	037960	
11. 0	22. 59. 46	034197	037913	
12. 0	59. 24	034065	037861	
13. 0	59. 4	034087	037826	
14. 0	58. 35	034219	037844	
15. 0	58. 7	034263	037867	
16. 0	57. 56	034506	037826	
17. 0	57. 45	034617	037774	
18. 0	57. 40	034645	037754	

March $29^d. 11^h. 27^m$. A change of 19′. 47″ having taken place in the position of the Declination Magnet since 10^h, extra observations were commenced: there is a strong light in the North, probably auroral; the sky is quite covered with cirro-stratus.

March 29^d. Civil Reckoning. During the extra observations the greatest and least western declinations were at 10^h and $11^h. 27^m$ to 29^m; the greatest and least readings of the Horizontal Force Magnet were at $8^h. 2^m. 30^s$ and $12^h. 2^m. 30^s$; and of the Vertical Force Magnet at $7^h. 57^m. 50^s$ and $11^h. 40^m$.

Extraordinary Observations of March 29.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″				d h m s	° ′ ″			
Mar. 29. 13. 19. 0	22. 57. 41	0 ·034822	0 ·037789	D	Mar. 29. 14. 11. 0	23. 18. 52	0 ·030375	0 ·037412	D
20. 0	57. 42	034556	037771		12. 0	19. 17	030375	037418	
21. 0	58. 6	034645	037731		13. 0	19. 44	030380	037385	
22. 0	58. 46	034711	037620		14. 0	20. 4	030248	037321	
23. 0	59. 14	034600	037609		15. 0	20. 14	030204	037275	
24. 0	22. 59. 52	034489	037609		16. 0	20. 26	030137	037281	
25. 0	23. 0. 35	034092	037568		17. 0	20. 39	030054	037260	
26. 0	1. 21	033737	037544		18. 0	20. 39	030054	037255	
27. 0	2. 29	033848	037399		19. 0	20. 33	030088	037260	
28. 0	3. 12	033383	037405		20. 0	20. 22	030088	037249	
29. 0	3. 40	032985	037434		21. 0	20. 13	030154	037296	
30. 0	4. 12	032857	037418		22. 0	19. 56	030199	037342	
31. 0	4. 25	032591	037355		23. 0	19. 51	030265	037354	
32. 0	4. 35	032503	037308		24. 0	19. 44	030309	037337	
33. 0	4. 46	032259	037314		25. 0	19. 29	030380	037321	
34. 0	5. 9	032148	037337		26. 0	19. 31	030580	037356	
35. 0	5. 30	032038	037349		27. 0	19. 33	030558	037397	
36. 0	5. 57	031506	037337		28. 0	19. 38	030757	037421	
37. 0	6. 25	031285	037302		29. 0	19. 34	030630	037418	
38. 0	7. 1	031262	037285		30. 0	19. 34	030696	037430	
39. 0	7. 28	031085	037297		31. 0	19. 21	030895	037424	
40. 0	8. 0	031152	037366		33. 0	19. 34	031183	037505	
41. 0	8. 17	031085	037424		35. 0	19. 55	031448	037550	
42. 0	8. 27	031130	037418		37. 0	20. 16	031476	037530	
43. 0	8. 38	031024	037381		39. 0	20. 32	031587	037565	
44. 0	8. 47	030670	037352		41. 0	20. 59	031720	037577	
45. 0	9. 1	030626	037387		43. 0	21. 19	031764	037577	
46. 0	9. 6	030448	037410		46. 0	22. 4	031786	037559	
47. 0	9. 16	030426	037404		49. 0	22. 43	031658	037504	
48. 0	9. 19	030404	037334		52. 0	22. 48	031414	037382	
49. 0	9. 27	030316	037323		55. 0	21. 55	030977	037292	
50. 0	9. 26	030272	037352		14. 58. 0	20. 25	031176	037205	
51. 0	9. 18	030250	037375		15. 1. 0	19. 27	031198	037129	
52. 0	8. 58	030382	037346		5. 0	17. 32	031176	037065	
53. 0	8. 52	030205	037334		9. 0	17. 39	031624	037091	
54. 0	9. 12	030272	037358		13. 0	19. 10	031696	037052	
55. 0	8. 39	030365	037366		17. 0	20. 34	031541	037000	
57. 0	11. 32	030011	037390		21. 0	20. 50	030965	036948	
13. 57. 30			037372		25. 0	20. 57	030572	036910	
14. 0. 0	12. 50				29. 0	20. 23	030798	036930	
1. 0	13. 15	030011	037419		34. 0	16. 52	032840	037102	
2. 0	13. 44	030077	037395		36. 0	15. 52	033349	037213	
2. 30		030055			38. 0	14. 3	033908	037192	
3. 0	14. 16	030100	037366		40. 0	12. 28	034351	037279	
4. 0	14. 44	029900	037314		42. 0	11. 12	034373	037313	
5. 0	15. 14	029949	037305		44. 0	9. 28	034506	037313	
6. 0	16. 1	030083	037351		46. 0	8. 26	034777	037398	
7. 0	17. 6	030127	037444		48. 0	7. 11	035175	037450	
8. 0	17. 33	030260	037450		49. 0	7. 5	035463	037456	
9. 0	17. 55	030265	037377		50. 0	7. 2	035706	037467	
10. 0	18. 24	030353	037383		51. 0	6. 44	035751	037479	

Extraordinary Observations of March 29 and 30.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″				d h m s	° ′ ″			
Mar. 29. 15. 53. 0	23. 5. 59	0·035933	0·037493	D	Mar. 30. 4. 11. 0	23. 21. 31	0·035356	0·040755	D
56. 0	5. 38	036022	037499		20. 0	23. 17	035378	040568	
15. 57. 30			037534		34. 0	23. 28	034957	040365	
16. 0. 0	8. 54				4. 47. 0	24. 35	034381	040158	
2. 30		036154			5. 0. 0	23. 58	034515	040032	
3. 0	5. 52	036066	037604		15. 0	24. 54	035339	040054	
8. 0	5. 38	035672	037640		20. 0	25. 7	036091	040057	
15. 0	6. 18	034792	037771		31. 0	23. 29	035848	040011	
24. 0	8. 50	034576	037825		44. 0	20. 20	035117	039969	
34. 0	10. 14	034514	038078		52. 0	8. 10	031442	039986	
45. 0	12. 9	034741	038215		53. 0	4. 53	031376	039987	
16. 56. 0	12. 38	035189	038217		54. 0	3. 35	031359	040085	
17. 12. 0	13. 24	035327	038156		55. 0	2. 22	031646	040091	
29. 0	14. 57	035465	038089		56. 0	23. 1. 15	032156	040143	
43. 0	17. 9	035581	038063		57. 30			040117	
17. 57. 30			038007		5. 58. 0	22. 59. 15	032886	040154	
18. 0. 0	19. 1				6. 0. 0	58. 49			
2. 30		035054			1. 0	58. 54	034060	040221	
18. 34. 0	16. 56	034954	037989		2. 0	59. 3	034458	040244	
19. 57. 30			037935		2. 30		036584		
20. 0. 0	20. 5				3. 0	59. 20	034945	040262	
20. 2. 30		033623		D	4. 0	22. 59. 26	034862	040269	
21. 57. 30			038438	JH	5. 0	23. 0. 4	035571	ʻ040255	
22. 0. 0	27. 12				6. 0	0. 25	035571	040269	
2. 30		030509			7. 0	0. 58	035443	040300	
11. 0	27. 47	031009	038585		8. 0	1. 0	035709	040267	
22. 0	26. 37	030826	038575	JH	9. 0	1. 20	035841	040295	
44. 0	28. 4	030673	038736	G	10. 0	2. 6	035957	040274	
22. 58. 0	27. 37	030884	038818	JH	11. 0	2. 44	036067	040321	
23. 44. 0	23. 53	030848	039319		12. 0	3. 29	036201	040304	
23. 57. 30			039494		13. 0	4. 14	036156	040267	
					14. 0	4. 22	036156	040249	
Mar. 30. 0. 0. 0	29. 8				15. 0	4. 27	035935	040249	
2. 30		030965			16. 0	4. 59	035780	040254	
21. 0	29. 32	030558	039600		17. 0	5. 19	035962	040222	
45. 0	30. 48	033560	039805		18. 0	4. 49	035851	040176	
0. 54. 0	32. 32	033628	039730		19. 0	5. 16	035807	040172	
1. 20. 0	27. 55	033221	039800		20. 0	5. 9	035785	040216	
47. 30			039947		22. 0	5. 19	035613	040191	
50. 0	32. 59				24. 0	5. 34	035569	040148	
52. 30		032832			26. 0	5. 40	035308	040009	
1. 57. 30			040121		28. 0	6. 28	034334	039995	
2. 0. 0	28. 17				29. 0	6. 10	034046	039954	
2. 30		033652			30. 0	5. 35	034002	039921	
7. 30			040116		31. 0	4. 36	033604	039909	
10. 0	28. 43				32. 0	3. 57	033941	039909	
2. 12. 30		034073		JH	33. 0	3. 52	033786	039883	
3. 49. 0	17. 27	ʻ036987	041038	G	35. 0	3. 5	034167	039882	
3. 57. 30			041028		37. 0	2. 55	034566	039882	
4. 0. 0	19. 18				6. 40. 0	2. 51	034632	039856	
2. 30		035843		G	7. 28. 0	9. 0	032708	039431	

March 30^{d}. Civil Reckoning. During the extra observations the greatest and least readings for western declinations were at 1^{h}. 50^{m} and 8^{h}. 37^{m}; the greatest and least readings of the Horizontal Force Magnet were at 8^{h}. 46^{m} and 14^{h}. 4^{m}; and of the Vertical Force Magnet at 3^{h}. 49^{m} and 15^{h}. 25^{m}.

Extraordinary Observations of March 30, and of April 1 and 3.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 30. 7. 31. 0	23. 9. 23	0·032846	0·039431	D
34. 0	9. 24	032741	039387	
39. 0	9. 57	032569	039340	
48. 0	12. 6	032463	039270	
52. 0	12. 35	033508	039278	
55. 0	14. 1	034593	039275	
7. 57. 30			039359	
8. 0. 0	15. 9			
2. 0	23. 7	037056	039255	
2. 30		036569		
4. 0	24. 19	035861	039080	
6. 0	22. 38	034510	038947	
8. 0	18. 15	033802	038819	
9. 0	16. 53	034161	038757	
10. 0	15. 42	034625	038670	
12. 0	15. 30	034781	038682	
14. 0	16. 24	035578	038786	
16. 0	18. 5	036358	038714	
17. 0	19. 36	036092	038731	
18. 0	20. 27	036447	038743	
19. 0	21. 5	036253	038708	
20. 0	21. 41	035943	038611	
21. 0	22. 21	035898	038577	
22. 0	22. 55	035394	038577	
23. 0	23. 17	035084	038580	
24. 0	23. 23	034708	038562	
25. 0	23. 15	034359	038487	
26. 0	22. 53	033628	038423	
27. 0	22. 5	032720	038391	
28. 0	20. 44	031985	038345	
29. 0	18. 43	031209	038269	
30. 0	15. 9	030501	038179	
31. 0	10. 56	030080	038179	
32. 0	6. 25	030036	038190	
33. 0	23. 2. 29	030545	038268	
34. 0	22. 59. 53	031192	038280	
35. 0	58. 25	031835	038315	
36. 0	57. 21	032986	038379	
37. 0	56. 45	033562	038456	
38. 0	56. 50	034182	038479	
39. 0	57. 33	034735	038453	
40. 0	58. 18	035156	038453	
41. 0	22. 59. 29	035576	038505	
42. 0	23. 0. 27	035825	038559	
43. 0	1. 19	036091	038543	
44. 0	1. 52	036290	038543	
45. 0	2. 23	036467	038532	
46. 0	2. 53	038416	038566	
47. 0	3. 9	037136	038561	
48. 0	3. 35	036140	038572	
49. 0	3. 54	035963	038549	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Mar. 30. 8. 50. 0	23. 3. 59	0·035852	0·038543	D
51. 0	4. 8	035786	038528	
52. 0	4. 33	035658	038528	
53. 0	4. 47	035880	038510	
54. 0	4. 56	035591	038517	
55. 0	5. 16	035813	038552	
56. 0	5. 52	035614	038537	
57. 0	6. 14	035591	038538	
58. 0	6. 55	035614	038538	
8. 59. 0	7. 1	035467	038532	
9. 0. 0	7. 16	035525	038538	
2. 0	7. 58	035326	038538	
5. 0	10. 11	035309	038534	
8. 0	9. 53	034822	038512	
11. 0	10. 44	033671	038467	
16. 0	8. 26	032547	038473	
22. 0	6. 47	032640	038469	
29. 0	6. 20	032645	038503	
36. 0	7. 6	033243	038552	
45. 0	10. 59	033591	038532	
52. 0	11. 42	032600	038511	
9. 57. 30			038552	
10. 0. 0	12. 2			
2. 30		032317		
10. 12. 0	11. 46	032172	038517	
11. 57. 30			038315	
12. 0. 0	15. 19			
12. 2. 30		033349		D
April 1. 5. 57. 30			0·040365	JH
6. 0. 0	23. 16. 57			
6. 2. 30		0·035921		
7. 57. 30			039716	
8. 0. 0	18. 57			
2. 30		036176		
15. 0	19. 18	036043	039604	
8. 40. 0	17. 20	035443	039494	
9. 57. 30			038918	
10. 0. 0	17. 39			
2. 30		035034		
10. 40. 0	13. 42	035127	039083	JH
11. 57. 30			039115	G
12. 0. 0	16. 10			
12. 2. 30		035130		G
April 3. 3. 57. 30			0·041088	P
4. 0. 0	23. 25. 39			
4. 2. 30		0·032395		
5. 57. 30			040766	
6. 0. 0	13. 31			

April 1^d. A considerable change having taken place in the position of the Vertical Force Magnet between 6^h and 8^h, a few extra observations were taken.

April 1^d. Civil Reckoning. During the time of the extra observations the greatest and least western declinations were at $8^h. 15^m$ and $10^h. 40^m$; the greatest and least readings of the Horizontal Force Magnet were at $8^h. 2^m. 30^s$ and $10^h. 2^m. 30^s$; and of the Vertical Force Magnet at $5^h. 57^m. 30^s$ and $9^h. 57^m. 30^s$.

April 3^d. A change of 12′. 8″ having taken place in the position of the Declination Magnet between 4^h and 6^h, extra observations were commenced.

April 3^d. Civil Reckoning. During the extra observations the greatest and least western declinations were at 4^h and 6^h; the greatest and least readings of the Horizontal Force Magnet were at $6^h. 2^m. 30^s$ and $6^h. 10^m$; and of the Vertical Force Magnet at $3^h. 57^m. 30^s$ and $7^h. 57^m. 30^s$.

Extraordinary Observations of April 3, 16, 17, May 21, and August 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
April 3. 6. 2. 30		0·036482		P
5. 0	23. 16. 55	035707		
10. 0	19. 12	032496		
6. 15. 0	20. 26			
7. 57. 30			0·039692	
8. 0. 0	16. 6			
8. 2. 30		033153		P
April 16. 19. 57. 30			0·038301	D
20. 0. 0	23. 18. 37			
20. 2. 30		0·035734		
21. 57. 30			038752	H B
22. 0. 0	27. 22			
2. 30		029288		
16. 5	28. 35	029798	038947	
17. 5	28. 42	029859	039001	
19. 5	28. 34	029876	039002	
24. 5	28. 35	029783	039017	
32. 5	29. 14	029534	039140	
37. 5	28. 43	029613	039088	
22. 52. 5	28. 56	030039	039243	
23. 0. 5	30. 57	030251	039239	
5. 5	31. 8	029886	039266	
12. 5	30. 35	029832	039319	H B
21. 0	30. 37	029645	039298	G
35. 0	32. 31	028760	039398	H B
23. 57. 30			039761	
April 17. 0. 0. 0	31. 34			
2. 30		030174		
16. 0	31. 12			
29. 0	30. 25			
0. 43. 0	35. 8			
1. 9. 0	41. 53			
18. 0	38. 44			
47. 30			041614	
50. 0	30. 5			
52. 30		035684		
1. 57. 30			041398	
2. 0. 0	30. 37			
2. 30		036105		
7. 30			041178	H B
10. 0	30. 52			
12. 30		037256		
21. 0	32. 53	038060	041164	G
30. 0	32. 28	037275	041118	
2. 34. 56	32. 28	037087	041125	G
3. 57. 30			041743	D
4. 0. 0	30. 0			
4. 2. 30		036378		
5. 57. 30			041774	
April 17. 6. 0. 0	23. 25. 51			D
6. 2. 30		0·038167		
7. 57. 30			0·040908	
8. 0. 0	13. 28			
2. 30		036043		
14. 0	9. 47	035406	040719	
25. 0	9. 35	035943	040566	
8. 32. 0	9. 24	035987	040519	
9. 57. 30			040133	
10. 0. 0	8. 43			
10. 2. 30		035785		D
May 21. 9. 57. 30			0·039556	G
10. 0. 0	23. 19. 57			
10. 2. 30		0·040410		G
11. 57. 30			039138	H B
12. 0. 0	7. 53			
2. 30		039215		
7. 0	6. 57			
18. 0	5. 30	039004	039034	
34. 0	8. 25	040077	039185	
36. 0	9. 45	040077	039185	
39. 15	11. 26	039412	039067	
41. 15	11. 49	039412	039138	
43. 15	11. 58	039285	039088	
46. 15	12. 14	038953	038984	
12. 48. 15	12. 14	038936	039002	
13. 0. 15	12. 8	038919	038929	
13. 57. 30			038856	
14. 0. 0	14. 20			
14. 2. 30		038551		H B
Aug. 1. 7. 57. 30			0·038332	G
8. 0. 0	23. 12. 35			
2. 30		0·038828		
10. 0	9. 57	037300	038108	
15. 0	6. 51	036857	038173	
20. 0	3. 51	036193	038179	
23. 0	2. 35	036636	038214	
28. 0	3. 34	036968	038226	
30. 0	3. 48	036857	038226	
33. 0	3. 48	036857	038226	
40. 0	3. 44	036414	038167	
45. 0	3. 39	036370	038078	
50. 0	4. 31	035972	038037	
8. 55. 0	6. 5	035795	037990	
9. 0. 0	6. 41	034887	037901	
5. 0	6. 45	034821	037901	
10. 0	6. 5	034865	037901	
15. 0	6. 0	034865	037901	
20. 0	6. 0	034865	037901	

April 16^{d}. A change of 8′. 45″ having taken place in the position of the Declination Magnet between 20^{h} and 22^{h}, extra observations were commenced.

April 17^{d}. Civil Reckoning. During the extra observations the greatest and least western declinations were at 1^{h}. 9^{m} and 10^{h}. 0^{m}; and the greatest and least readings of the Horizontal Force Magnet were at 17^{d}. 6^{h}. 2^{m}. 30^{s} and 16^{d}. 23^{h}. 35^{m}; and of the Vertical Force Magnet at 5^{h}. 57^{m}. 30^{s} and 19^{h}. 57^{m}. 30^{s}.

May 21^{d}. A change of 12′. 4″ having taken place in the position of the Declination Magnet between 10^{h} and 12^{h}, extra observations were commenced, during which the greatest and least western declinations were at 10^{h}. 0^{m} and 12^{h}. 18^{m}; the greatest and least readings of the Horizontal Force Magnet were at 10^{h}. 2^{m}. 30^{s} and 14^{h}. 2^{m}. 30^{s}; and of the Vertical Force Magnet at 9^{h}. 57^{m}. 30^{s} and 13^{h}. 57^{m}. 30^{s}.

Aug. 1^{d}. A considerable change having taken place in the position of the Declination Magnet between 6^{h} and 8^{h}, extra observations were commenced.

Aug. 1^{d}. Civil Reckoning. During the extra observations the greatest and least western declinations took place at 8^{h} and 8^{h}. 23^{m}; the greatest and least readings of the Horizontal Force Magnet were at 8^{h}. 2^{m}. 30^{s} and 10^{h}. 10^{m}; and of the Vertical Force Magnet at 7^{h}. 57^{m}. 30^{s} and 11^{h}. 57^{m}. 30^{s}.

Extraordinary Observations of August 1, 16, 22, and of September 14 and 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Aug. 1. 9. 25. 0	23. 6. 0	0·035750	0·037901	G
30. 0	6. 52	035750	037901	
35. 0	7. 11	035795	037901	
40. 0	7. 11	035994	037766	
45. 0	6. 52	035861	037724	
50. 0	6. 16	035750	037648	
55. 0	5. 13	033529	037606	
9. 57. 30	4. 27	035130	037565	
10. 0. 0	4. 8	034976	037547	
2. 30	4. 1	034909	037536	
5. 0	4. 4	034865	037536	
10. 0	4. 8	034613	037536	
10. 15. 0	4. 13	034754	037530	G
11. 57. 30			036965	H B
12. 0. 0	6. 2			
2. 30		035325		
12. 40. 0	9. 48	035214	036668	
13. 57. 0			036724	
14. 0. 0	8. 33			
14. 2. 30		034124		
15. 5. 0	12. 2	035035	036858	
15. 57. 30			036840	
16. 0. 0	15. 12			
16. 2. 30		034950		H B
Aug. 16. 7. 57. 30			0·037856	H B
8. 0. 0	23. 12. 59			
8. 2. 30		0·038575		
9. 57. 30			037537	
10. 0. 0	23. 5. 38			
2. 30		038115		
20. 0		038524	037590	H B
30. 0	22. 59. 28			G
10. 47. 0	23. 2. 10	038252	037523	
11. 42. 0	10. 33	037690	037364	G
11. 57. 30			037317	D
12. 0. 0	11. 11			
12. 2. 30		038165		D
Aug. 22. 9. 57. 30			0·037001	H B
10. 0. 0	23. 7. 5			
2. 30		0·038100		
13. 30	3. 7	039207	037007	
15. 30	3. 13	039052	037025	
19. 30	3. 35	038809	037036	
22. 30	4. 7	038543	037031	
26. 30	4. 50	038322	037007	
29. 30	5. 28	038211	036989	
10. 33. 30	6. 24	038322	036995	
11. 57. 30			036895	
12. 0. 0	9. 34			

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Aug. 22. 12. 2. 30		0·036440		
12. 32. 28	23. 16. 36	037990	0·037007	H B
13. 57. 30			036428	
14. 0. 0	19. 7			
14. 2. 30		036772		H B
Sep. 14. 5. 57. 30			0·037272	H B
6. 0. 0	23. 14. 24			
6. 2. 30		0·038825		
7. 57. 30			037326	
8. 0. 0	5. 58			
2. 30		039834		
9. 30	8. 12	040034	037291	
14. 30	9. 13	040017	037182	
19. 30	9. 44	040000	037151	
29. 30	10. 46	039983	037121	
40. 30	11. 43	039921	037041	
8. 55. 30	12. 16	039302	037053	
9. 57. 30			036830	
10. 0. 0	12. 23			
10. 2. 30		038958		H B
Sep. 20. 5. 57. 30			0·037525	H B
6. 0. 0	23. 16. 50			
6. 2. 30		0·038866		
7. 57. 30			037433	
8. 0. 0	22. 59. 20			
2. 30		040245		
34. 32	23. 9. 9	040034	036882	
37. 17	11. 16	039658	036924	
39. 17	12. 40	039104	036912	
41. 15	13. 23	038618	036815	
43. 15	13. 29	037825	036797	
45. 15	13. 19	037250	036658	
46. 15	13. 12	036984	036682	
47. 15	12. 46	036542	036782	
48. 15	12. 3	036165	036782	
49. 15	11. 25	036099	036682	
50. 15	10. 30	035877	036593	
51. 15	9. 35	035766	036741	
52. 15	8. 29	035877	036792	
53. 15	7. 31	035877	036744	
54. 15	6. 47	036054	036721	
55. 15	6. 22	036254	036733	
57. 15	5. 57	036480	036862	
58. 15	5. 37	036812	036880	
8. 59. 15	5. 42	037011	036880	
9. 0. 15	5. 42	037255	036862	
4. 15	6. 52	037637	036904	
6. 15	7. 30	037769	036884	
8. 15	8. 0	037836	036884	

Aug. 2d. Civil Reckoning. During the extra observations the greatest and least western declinations took place at 16h and 14h; the greatest and least readings of the Horizontal Force Magnet were at 12h. 40m and 14h. 2m. 30s; and of the Vertical Force Magnet at 15h. 5m and 12h. 40m.

Aug. 16d. A change of 7′. 21″ having taken place in the position of the Declination Magnet between 8h and 10h, a few extra observations were taken.

Aug. 16d. During the extra observations the greatest and least western declinations took place at 8h and 10h. 30m; the greatest and least readings of the Horizontal Force Magnet were at 8h. 2m. 30s and 11h. 42m; and of the Vertical Force Magnet at 7h. 57m. 30s and 11h. 57m. 30s.

Aug. 22d. 10h. 13m. 30s. A change of 3′. 58″ having taken place in the position of the Declination Magnet since 10h, and the magnets having been rather unsteady during the day, some extra observations were taken.

Aug. 22d. During the extra observations the greatest and least western declinations took place at 14h. 0m and 10h. 13m. 30s; the greatest and least readings of the Horizontal Force Magnet were at 10h. 13m. 30s and 14h. 2m. 30s; and of the Vertical Force Magnet at 10h. 19m. 30s and 13h. 57m. 30s.

Sep. 14d. A change of 8′. 26″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Sep. 14. During the time of extra observations the greatest and least western declinations took place at 6h and 8h; the greatest and least readings of the Horizontal Force Magnet were at 8h. 9m. 30s and 6h. 2m. 30s; and of the Vertical Force Magnet at 7h. 57m. 30s and 9h. 57m. 30s.

Sep. 20d. A change of 17′. 30″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced.

Sep. 20d. During the extra observations the greatest and least western declinations took place at 6h and 8h; the greatest and least readings of the Horizontal Force Magnet were at 10h. 19m. 15s and 8h. 51m. 15s; and of the Vertical Force Magnet at 5h 57m. 30s and 11h. 57m. 30s.

Extraordinary Observations of September 20, 25, and 26.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Sep. 20. 9. 10. 15	23. 8. 22	0 ·038057	0 ·036884	H B
11. 15	8. 38	038106	036839	
12. 15	8. 45	038151	036898	
14. 15	9. 4	038106	036872	
35. 15	12. 5	039174	036783	
39. 15	12. 5	038798	036756	
45. 15	11. 16	038577	036727	
47. 15	10. 54	038577	036727	
48. 15	10. 44	038560	036701	
49. 15	10. 35	038449	036671	
51. 15	10. 10	038383	036701	
52. 15	10. 10	038449	036675	
54. 15	10. 10	038432	036704	H B
9. 57. 30			036716	B
10. 0. 0	10. 7			
2. 30		038698		B
19. 15	13. 48	040425	036623	H B
10. 41. 15	13. 37	040374	036452	H B
11. 57. 30			036281	G
12. 0. 0	13. 57			
12. 2. 30		040304		G
Sep. 25. 9. 57. 30			0 ·036496	JH
10. 0. 0	23. 8. 12			
10. 2. 30		0 ·038244		JH
11. 57. 30			035661	L
12. 0. 0	0. 49			
12. 2. 30		038348		L
13. 40. 0	20. 37	037106	035285	G
41. 0	20. 45	037239	035285	
42. 0	20. 59	037262	035344	
43. 0	21. 8	037284	035317	
45. 0	20. 58	037311	035317	
47. 0	20. 57	037311	035287	
49. 0	21. 47	037493	035102	
51. 30	20. 55	037427	035173	
54. 0	20. 18	037427	035173	
55. 0	19. 23	037499	035100	G
13. 57. 30			035147	L
14. 0. 0	18. 20			
2. 30		038118		
5. 0	16. 23	038561	035235	
10. 0	16. 23	038783	035265	
12. 0	15. 33	039336	035120	
17. 0	13. 1	039668	035267	
21. 0	12. 56	040111	035241	
27. 0	11. 50	040332	035241	
31. 0	11. 35	040332	034978	
35. 0	11. 35	040332	035218	
38. 0	13. 11	040332	035192	
41. 0	14. 2	040332	035165	
Sep. 25. 14. 44. 0	23. 14. 2	0 ·040111	0 ·035080	L
14. 47. 0	14. 2	040111	035082	
15. 57. 30			034928	
16. 0. 0	14. 37			
16. 2. 30		039115		
Sep. 26. 5. 57. 30			0 ·038223	L
6. 0. 0	23. 14. 27			
6. 2. 30		0 ·039190		
7. 57. 30			037397	
8. 0. 0	22. 56. 9			L
2. 30		035205		JH
8. 39	52. 30	036737	037576	
12. 0	47. 54	036538	037370	
15. 0	44. 58	036455	037373	
22. 0	50. 36	040229	037362	
23. 0	52. 21	040273	037362	
24. 0	53. 17	040318	037279	
25. 0	53. 48	040096	037220	
26. 0	54. 10	039902	037171	
27. 0	54. 15	039703	037064	
28. 0	54. 20	039703	037188	
29. 0	54. 12	039526	037076	
30. 0	54. 17	039526	036958	
31. 0	54. 20	039371	036917	
32. 0	22. 54. 23	039354	036972	
50. 0	23. 3. 21	037531	036634	
51. 0	3. 2	037487	036616	
8. 13. 0	5. 5	037901	036561	JH
9. 57. 30			036397	L
10. 0. 0	6. 20			
10. 2. 30		037300		L
11. 57. 30			036106	H B
12. 0. 0	12. 1			
12. 2. 30		038244		
13. 57. 30			036176	
14. 0. 0	13. 0			
14. 2. 30		038396		
15. 57. 30			036011	
16. 0. 0	12. 7			
16. 2. 30		038477		
17. 57. 30			035902	
18. 0. 0	14. 22			
18. 2. 30		039083		
19. 57. 30			035687	
20. 0. 0	23. 26			
2. 30		036342		
46. 0	17. 31	036213	035614	
50. 0	16. 59	036324	035614	
52. 0	16. 5	036307	035587	
53. 0	15. 28	036307	035587	

Sep. 25d. A change of 7′. 23″ having taken place in the position of the Declination Magnet between 10h and 12h, extra observations were commenced, during which the greatest and least western declinations took place at 13h. 49m and 12h. 0m; the greatest readings of the Horizontal Force Magnet were from 14h. 27m to 14h. 41m, the position of the magnet being unchanged in this interval; the least reading took place at 13h. 40m; and the greatest and least readings of the Vertical Force Magnet at 9h. 57m. 30s and 15h. 57m. 30s.

Sep. 26d. A change of 18′. 18″ having taken place in the position of the Declination Magnet between 6h and 8h, extra observations were commenced, during which the greatest and least western declinations took place at 20h and 8h. 15m; the greatest and least readings of the Horizontal Force Magnet were at 8h. 24m and 8h. 2m. 30s; and of the Vertical Force Magnet at 5h. 57m. 30s, and from 20h. 52m to 20h. 53m.

Extraordinary Observations of September 26, 27, 30, and October 1.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Sep. 26. 20. 54. 0	23. 15. 1	0·036373	0·035634	H B
56. 0	14. 49	036528	035646	
20. 58. 0	15. 11	036688	035667	
21. 1. 0	15. 22	036622	035708	
4. 0	15. 0	036467	035738	
6. 0	14. 41	036428	035711	
8. 0	14. 36	036450	035729	
9. 0	14. 36	036273	035729	
11. 0	14. 22	036206	035711	
12. 0	14. 22	036256	035685	H B
21. 57. 30			035674	L
22. 0. 0	6. 18			
2. 30		035379		
Sep. 27. 3. 57. 30			0·037839	H B
4. 0. 0	23. 15. 39			
4. 2. 30		0·039359		
5. 57. 30			037938	
6. 0. 0	7. 10			
2. 30		040763		
8. 1	9. 14	040984	037820	
10. 1	9. 43	041096	037820	
12. 1	10. 5	041162	037809	
13. 1	10. 26	041184	037761	
14. 1	10. 41	041250	037770	
15. 1	10. 52	040918	037728	
17. 1	11. 6	041029	037699	
21. 1	11. 14	040984	037652	
24. 1	11. 45	040874	037626	
26. 1	11. 36	040630	037596	
28. 1	11. 19	040414	037567	
31. 1	9. 44	040126	037537	
33. 1	8. 38	040082	037534	
35. 1	7. 48	040347	037516	
38. 1	8. 39	040746	037528	
40. 1	9. 8	040901	037528	
42. 1	9. 47	040746	037504	
44. 1	10. 16	040635	037457	
46. 1	9. 52	040347	037454	
6. 58. 1	8. 10	039196	037354	
7. 0. 1	7. 43	038997	037366	
2. 1	7. 14	038864	037354	
4. 1	6. 42	038892	037380	
6. 1	6. 32	038892	037380	
8. 1	6. 32	039002	037392	
10. 1	6. 21	039157	037392	
12. 1	6. 13	039113	037418	
14. 1	6. 8	039179	037418	
20. 1	5. 47	039489	037418	
22. 1	6. 18	039622	037418	
26. 1	7. 25	039556	037418	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Sep. 27. 7. 47. 1	23. 10. 1	0·039511	0·037297	H B
7. 57. 30			037238	
8. 0. 0	9. 55			
2. 30		038714		
Sep. 30. 15. 57. 30			0·034385	H B
16. 0. 0	23. 12. 15			
16. 2. 30		0·040992		
17. 57. 30			033840	
18. 0. 0	31. 19			
2. 30		037508		
14. 0	33. 13	036118	033765	
15. 0	33. 49	036024	033813	
16. 0	33. 49	035813	033813	
17. 0	34. 26	035702	033787	
22. 0	35. 23	035260	033683	
27. 0	34. 38	035260	033760	
42. 0	30. 2	035375	034009	
43. 0	29. 35	035198	033932	
44. 0	29. 17	035309	033891	
49. 0	28. 13	035154	033991	
18. 51. 0	27. 52	035003	033977	
19. 1. 0	26. 44	035115	034083	
10. 0	27. 56	034987	034177	
21. 0	24. 26	035148	034354	
19. 57. 30			034688	
20. 0. 0	26. 46			
2. 30		034017		
20. 37. 0	25. 17	034936	034482	
21. 7. 0	24. 19	031854	035337	
8. 0	25. 9	031743	035337	
9. 0	24. 21	031676	035337	
10. 0	23. 42	031676	035355	
11. 0	23. 6	031676	035367	
12. 0	23. 36	031743	035396	
13. 0	23. 26	031810	035426	
14. 0	23. 43	031854	035444	
15. 0	23. 46	031898	035485	
17. 0	24. 1	032142	035514	
18. 0	24. 17	032075	035544	
19. 0	24. 19	032075	035532	
20. 0	24. 26	032031	035562	
21. 0	24. 32	031965	035544	
24. 0	22. 43	031915	035556	
26. 0	23. 0	032712	035573	
29. 0	24. 32	032911	035615	H B
21. 57. 30			035780	L
22. 0. 0	24. 11			
2. 30		036001		L
Oct. 1. 5. 57. 30			0·038759	H B

Sep. 27^d. A change of $8'. 29''$ having taken place in the position of the Declination Magnet between 4^h and 6^h, extra observations were commenced.

Sep. 27^d. Civil Reckoning. The greatest and least readings of the western declinations during the extra observations were at 4^h and $7^h. 20^m. 1^s$; the greatest and least readings of the Horizontal Force Magnet were at $6^h. 14^m. 1^s$ and $8^h. 2^m. 30^s$; and of the Vertical Force Magnet at $5^h. 57^m. 30^s$ and $7^h. 57^m. 30^s$.

Sep. 30^d. A change of $19'. 4''$ having taken place in the position of the Declination Magnet between 16^h and 18^h, extra observations were commenced.

Oct. 1^d. Civil Reckoning. During the time of extra observations the greatest and least western declinations took place at $18^h. 22^m$ and $16^h. 0^m$; the greatest and least readings of the Horizontal Force Magnet were at $16^h. 2^m. 30^s$, and from $21^h. 9^m$ to $21^h. 11^m$; and of the Vertical Force Magnet at $21^h. 57^m. 30^s$ and $18^h. 22^m$.

Oct. 1^d. A change of $7'. 59''$ having taken place in the position of the Vertical Force Magnet between 6^h and 8^h, extra observations were commenced.

Oct. 1^d. Civil Reckoning. During the extra observations the greatest and least western declinations took place at $6^h. 0^m$ and $8^h. 18^m$; the greatest and least readings of the Horizontal Force Magnet were at $12^h. 2^m. 30^s$ and $8^h. 2^m. 30^s$; and of the Vertical Force Magnet at $5^h. 57^m. 30^s$ and $10^h. 36^m$.

Extraordinary Observations of October 1 and 20.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Oct. 1. 6. 0. 0	23. 11. 17			H B
6. 2. 30		0·037068		
7. 57. 30			0·037446	
8. 0. 0	23. 3. 18			
2. 30		034080		
18. 0	22. 57. 30	035275	037381	
19. 0	58. 33	035231	037369	
22. 0	58. 36	035187	037369	
24. 0	58. 13	035231	037369	
26. 0	58. 26	035120	037357	
28. 0	57. 53	035076	037310	
31. 0	57. 53	035076	037280	
33. 0	57. 53	034942	037269	
35. 0	58. 15	035009	037269	
37. 0	22. 58. 15	035076	037269	
43. 0	23. 0. 6	035120	037269	
8. 57. 0	22. 59. 28	035518	037192	
9. 5. 0	23. 0. 52	035385	037121	
20. 0	23. 4. 8	035297	036897	
42. 0	22. 58. 31	035895	036779	
9. 57. 30			036561	
10. 0. 0	23. 9. 35			
2. 30		037511		
11. 0	8. 41	036072	035941	
13. 0	8. 37	036005	035924	
15. 0	7. 51	035385	035770	
17. 0	5. 56	034942	035741	
19. 0	3. 44	034898	035729	
21. 0	23. 1. 13	035076	035770	
24. 0	22. 59. 41	035988	035823	
26. 0	22. 59. 50	036608	035823	
28. 0	23. 0. 34	036874	035805	
30. 0	1. 24	036830	035778	
32. 0	2. 0	036210	035708	
34. 0	2. 10	035900	035708	
36. 0	1. 56	035197	035702	
38. 0	1. 42	035086	035749	
40. 0	1. 33	034908	035897	
42. 0	23. 0. 33	034643	035897	
44. 0	22. 59. 50	034421	035926	
46. 0	59. 10	034754	035944	
50. 0	58. 50	035153	036032	
52. 0	59. 5	035224	036056	
54. 0	59. 5	035290	036065	
56. 0	59. 5	035688	036095	
10. 58. 0	22. 59. 31	035999	036207	
11. 0. 0	23. 0. 13	036397	036272	
2. 0	1. 27	036662	036372	
4. 0	2. 49	036951	036390	
6. 0	3. 55	036845	036372	
9. 0	5. 12	036779	036390	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Oct. 1. 11. 12. 0	23. 6. 16	0·036712	0·036404	H B
14. 0	6. 34	036823	036433	
16. 0	7. 23	036889	036433	
18. 0	7. 51	036934	036463	
20. 0	8. 12	037088	036475	
24. 0	9. 0	037044	036463	
26. 0	9. 16	037044	036492	H B
11. 57. 30			036543	L
12. 0. 0	10. 59			
12. 2. 30		037913		L
Oct. 20. 13. 57. 30			0·032906	H B
14. 0. 0	23. 9. 44			
14. 2. 30		0·037220		
15. 57. 30			031104	
16. 0. 0	16. 9			
2. 30		040835		
6. 0	15. 41	040392	030857	
8. 0	14. 25	039552	030815	
10. 0	14. 51	038489	030684	
12. 0	16. 5	037338	030673	
14. 0	17. 5	036939	030684	
16. 0	17. 55	036187	030579	
18. 0	19. 41	035788	030552	
20. 0	22. 5	034902	030526	
26. 0	29. 4	034792	030542	
28. 0	29. 34	034255	030526	
30. 0	30. 47	033940	030431	
32. 0	34. 31	033386	030421	
34. 0	38. 10	033430	030447	
36. 0	38. 3	035003	030410	
38. 0	36. 42	035335	030431	
40. 0	35. 21	035866	030279	
42. 0	34. 4	036221	030305	
44. 0	32. 42	037372	030400	
46. 0	31. 30	037549	030384	
48. 0	30. 6	037969	030394	
50. 0	29. 0	038434	030421	
52. 0	28. 28	038434	030384	
54. 0	27. 33	038479	030358	
56. 0	26. 14	038479	030279	
16. 58. 0	24. 11	037925	030237	
17. 0. 0	22. 0	037814	030226	
2. 0	20. 51	037500	030290	
4. 0	19. 56	037234	030353	
6. 0	19. 46	036724	030395	
19. 0	20. 48	035064	030684	
17. 57. 30			031251	
18. 0. 0	24. 32			
18. 2. 30		031932		
19. 57. 30			032338	

Oct. 20^d. A considerable change having taken place in the position of the Vertical Force Magnet between 14^h and 16^h, extra observations were commenced.

Oct. 20^d. Civil Reckoning. During the time of extra observations the greatest and least western declinations took place at 16^h. 34^m and 14^h. 0^m; the greatest and least readings of the Horizontal Force Magnet were at 16^h. 2^m. 30^s and 22^h. 2^m. 30^s; and of the Vertical Force Magnet at 21^h. 57^m. 30^s and 17^h. 0^m.

Extraordinary Observations of October 20, and of November 2 and 16.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Oct. 20. 20. 0. 0	23. 15. 41			H B
2. 30		0·035950		
14. 0	16. 37	036105	0·032538	
15. 0	16. 10	036238	032496	
16. 0	16. 30	036282	032558	
17. 0	16. 18	036082	032558	
18. 0	15. 54	036215	032548	
19. 0	16. 14	036144	032574	
20. 0	16. 9	036033	032553	
22. 0	16. 20	036077	032564	
24. 0	16. 3	035745	032522	
26. 0	15. 54	035811	032721	
28. 0	16. 29	035856	032522	
30. 0	16. 58	035789	032653	
32. 0	16. 31	035430	032695	
34. 0	15. 53	035474	032721	
42. 0	15. 50	035275	032705	
49. 0	16. 33	035209	032800	
54. 0	15. 18	035320	032800	
56. 0	14. 24	034987	032758	
20. 59. 0	14. 29	035386	032758	
21. 9. 0	12. 5	034672	032758	
11. 0	12. 57	034561	032784	
14. 0	13. 43	034163	032758	
17. 0	14. 42	034119	032836	
24. 0	14. 57	033853	032836	H B
21. 57. 30			032984	L
22. 0. 0	18. 51			
22. 2. 30		029775		L
Nov. 2. 7. 57. 30			0·033532	G
8. 0. 0	23. 12. 46			
8. 2. 30		0·039563		
9. 57. 30			033285	G
10. 0. 0	3. 53			
2. 0	3. 7			H B
2. 30		038921		G
3. 0	2. 16			H B
5. 0	2. 9	039142	033312	
6. 0	1. 57	039142	033312	
7. 0	1. 26	039142	033312	
8. 0	1. 10	039142	033312	
9. 0	0. 51	039253	033312	
10. 0	23. 0. 19	039364	033312	
11. 0	22. 59. 56	039475	033312	
12. 0	59. 41	039585	033285	
13. 0	59. 23	039585	033285	
14. 0	59. 35	039790	033285	
15. 0	59. 20	040011	033285	
16. 0	59. 11	040011	033285	
Nov. 2. 10. 17. 0	22. 59. 8	0·040011	0·033285	H B
18. 0	59. 10	040122	033285	
19. 0	59. 11	040232	033285	
20. 0	59. 11	040454	033285	
21. 0	59. 2	040454	033285	
22. 0	59. 10		033285	
23. 0	59. 10		033285	
24. 0	59. 12		033259	
10. 25. 0	22. 59. 15		033259	H B
11. 57. 30			032848	L
12. 0. 0	23. 2. 28			
12. 2. 30		038858		
Nov. 15. 19. 57. 30			0·032463	L
20. 0. 0	23. 11. 44			
20. 2. 30		0·040384		L
21. 57. 30			032611	H B
22. 0. 0	22. 15			
2. 30		040128		
12. 30	20. 40			
20. 15	19. 23			
30. 30	20. 30			
22. 54. 10	18. 36			
23. 25. 20	19. 50			
23. 57. 30			032662	
Nov. 16. 0. 0. 0	25. 11			
2. 30		037167		
16. 0	26. 0	036525	032820	
31. 0	24. 56	035988	032862	
45. 0	32. 52	037267	033067	
0. 53. 0	32. 10	036271	033030	
1. 1. 0	32. 35	036221	033425	
21. 0	19. 48	035513	033388	
23. 0	20. 55	036238	033488	
25. 0	21. 49	036261	033451	
27. 0	21. 40	036079	033461	
30. 0	22. 10	036272	033440	
34. 0	24. 1	036245	033440	H B
39. 0	25. 37	036262	033505	D
47. 30			033488	H B
50. 0	30. 9			
52. 30		035355		
1. 57. 30			033567	
2. 0. 0	23. 40			
2. 30		035377		
7. 30			033572	
10. 0	18. 58			
12. 30		036306		H B
24. 0	19. 31	037148	033709	D
33. 0	18. 56	038919	033871	G

Nov. 2d. A change of 8′. 53″ having taken place in the position of the Declination Magnet between 8h and 10h, extra observations were commenced.

Nov. 2d. Civil Reckoning. During the time of extra observations the greatest and least western declinations took place at 8h. 0m and 10h. 21m; the greatest and least readings of the Horizontal Force Magnet were at 10h. 20m and 21m and 12h. 2m. 30s; and of the Vertical Force Magnet at 7h. 57m. 30s and 11h. 57m. 30s.

Nov. 15d. A change of 10′. 31″ having taken place in the position of the Declination Magnet between 20h and 22h, extra observations were commenced.

Nov. 16d. Civil Reckoning. During the extra observations the greatest and least western declinations took place at 0h. 45m and at 9h. 3m. 22s; the greatest and least readings of the Horizontal Force Magnet were at 20h. 2m. 30s and 4h. 58m. 19s; and of the Vertical Force Magnet at 4h. 58m. 19s and 19h. 57m. 30s.

Extraordinary Observations of November 16 and 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Nov. 16. 2. 38. 0	23. 19. 37	0·039130	0·033735	L
3. 57. 30			034528	
4. 0. 0	18. 26			
2. 30		036126		
15. 19	18. 58	036015	034528	
20. 19	19. 14	036015	034460	
23. 19	18. 4	036015	034465	
28. 19	21. 43	035794	034350	
33. 19	14. 52	035794	034366	
38. 19	17. 17	035904	034334	
43. 19	18. 44	036901	034328	
48. 19	23. 0	037233	034518	
53. 19	28. 18	035794	034754	
4. 58. 19	21. 53	033690	034974	
5. 3. 20	13. 4	036109	034628	
8. 20	18. 20	035732	034528	
13. 20	19. 15	035445	034538	
18. 20	16. 4	034559	034633	
33. 20	10. 2	036552	034686	
38. 20	12. 38	036994	034607	
40. 50	14. 34	037310	034602	
43. 20	15. 36	037354	034581	
45. 50	17. 42	037199	034554	
48. 20	20. 38	036756	034607	
50. 50	22. 1	035870	034554	
5. 57. 30			034696	
6. 0. 0	15. 35			
2. 30		034542		
6. 8. 20	17. 55	034321	034791	
7. 57. 30			034213	
8. 0. 0	2. 12			
2. 30		035029		
10. 52	9. 51	034143	034056	
13. 22	8. 35	034099	034071	
15. 52	7. 18	034099	034108	
18. 22	6. 35	034321	034213	
20. 52	6. 14	034653	034213	
23. 22	5. 35	034985	034213	
25. 52	5. 1	035411	034213	
28. 22	5. 53	036186	034213	
33. 22	9. 42	036252	034098	
35. 52	10. 14	036230	034092	
38. 22	10. 43	036296	034098	
40. 52	10. 31	036340	034082	
43. 22	9. 39	036501	033951	
45. 52	4. 25	036501	033819	
48. 22	23. 0. 12	036833	033846	
8. 50. 52		038050	033819	
9. 3. 22	22. 52. 39	039622	033310	
5. 52	52. 41	039777	033294	
8. 22	54. 29	039694	033251	

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Nov. 16. 9. 10. 52	22. 56. 53	0·039805	0·033204	L
13. 22	22. 59. 19	039473	033136	
15. 52	23. 2. 6	038831	033084	
18. 22	4. 37	038033	033005	
20. 52	4. 30	037374	032963	
23. 53	3. 14	037330	032926	
25. 53	3. 36	037840	032968	
28. 23	5. 0	037994	032958	
30. 53	6. 24	037707	032926	
33. 23	6. 16	036914	032874	
35. 53	6. 17	036693	032863	
38. 23	4. 49	036671	032831	
40. 53	3. 33	036875	032831	
43. 23	2. 19	036875	032811	
45. 53	1. 6	037296	032811	
48. 23	0. 20	037429	032811	
9. 57. 30			032811	
10. 0. 0	3. 10			
10. 2. 30		037761		L
Nov. 22. 5. 57. 30			0·032907	D
6. 0. 0	23. 11. 59			
6. 2. 30		0·037638		D
7. 57. 30			033306	G
8. 0. 0	22. 49. 35			
2. 30	48. 57	035289	033253	
4. 30	49. 12	034647	033227	
9. 0	50. 50	034204	033096	
12. 0	53. 25	033762	032991	
13. 0	53. 3	033718	032991	
14. 0	53. 22	033496	032975	
15. 0	52. 57	033274	032948	
15. 30	52. 27	032876	032933	
16. 0	51. 45	032411	032886	
16. 45	51. 6	032411	032896	
17. 15	50. 44	032367	032928	
17. 45	50. 21	032256	032943	
18. 15	49. 34	032234	032933	
18. 45	50. 8	032411	032948	
19. 15	50. 10	032411	032943	
19. 45	49. 53	032433	032943	
20. 15	49. 56	032389	032948	
20. 45	50. 4	032367	032948	
21. 15	50. 15	032234	032964	
21. 45	48. 47	033319	033043	
22. 15	48. 28	033430	033069	
22. 45	49. 3	033540	033132	
23. 15	50. 45	034448	033200	
23. 45	51. 19	035976	033305	
24. 15	51. 52	037083	033332	

Nov. 22. A change of 22′. 24″ having taken place in the position of the Declination Magnet between 6^h and 8^h, extra observations were commenced.

Nov. 22^d. Civil Reckoning. During the extra observations the greatest and least western declinations took place at $8^h. 28^m. 45^s$ and $8^h. 22^m. 15^s$; the greatest and least readings of the Horizontal Force Magnet were at $10^h. 47^m$ and $8^h. 31^m. 15^s$; and of the Vertical Force Magnet at $8^h. 24^m. 15^s$ and $11^h. 52^m$.

Extraordinary Observations of November 22.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″			
Nov. 22. 8. 24. 45	22. 55. 14	0 ·037194	0 ·033227	G
25. 15	56. 39	037304	033122	
25. 45	22. 59. 5	036844	032912	
26. 15	23. 2. 56	035959	032764	
26. 45	6. 9	035516	032597	
27. 15	9. 2	035737	032502	
27. 45	11. 41	034453	032387	
28. 15	12. 49	033563	032282	
28. 45	14. 5	032859	032282	
29. 15	13. 54	032859	032177	
29. 45	13. 21	032239	032177	
30. 15	11. 28	031863	032234	
30. 45	9. 45	031132	032187	
31. 15	8. 24	030689	032166	
31. 45	6. 16	031044	032187	
32. 15	5. 2	030866	032213	
32. 45	4. 2	031044	032229	
33. 15	3. 10	031132	032187	
33. 45	2. 45	031531	032282	
34. 15	2. 47	031531	032282	
34. 45	1. 36	031863	032308	
35. 45	1. 21	032195	032360	
36. 45	1. 1	032416	032386	
37. 15	1. 7	032638	032455	
37. 45	1. 27	032859	032455	
38. 15	1. 50	033080	032465	
38. 45	2. 3	032970	032439	
39. 15	2. 17	033191	032413	
39. 45	2. 33	033124	032386	
40. 15	3. 25	033124	032360	
40. 45	3. 38	033257	032360	
41. 15	3. 38	033257	032360	
41. 45	4. 2	033191	032360	
42. 15	4. 2	033063	032350	
42. 45	4. 2	033063	032360	
43. 15	3. 50	033019	032360	
43. 45	3. 42	032886	032360	
44. 15	3. 24	032842	032360	
44. 45	3. 14	032842	032360	
45. 15	3. 2	032842	032360	
45. 45	2. 44	032665	032360	
46. 15	2. 24	032842	032440	
46. 45	2. 4	032886	032466	
47. 15	1. 59	032953	032492	
47. 45	1. 48	033107	032555	
48. 15	1. 40	033285	032597	
48. 45	1. 20	033396	032629	
49. 15	1. 1	033728	032650	
49. 45	0. 34	034170	032760	
50. 15	0. 34	034392	032760	
50. 45	0. 34	034591	032760	
Nov. 22. 8. 51. 15	23. 0. 39	0 ·034613	0 ·032760	G
51. 45	0. 54	034680	032807	
52. 15	1. 15	034835	032807	
52. 45	1. 16	034835	032807	
53. 15	1. 30	034835	032807	
53. 45	1. 31	034835	032807	
54. 15	1. 43	034835	032833	
54. 45	2. 8	034946	032807	
55. 45	2. 16	034835	032807	
56. 45	2. 24	034724	032823	
57. 45	2. 34	034835	032807	
58. 45	2. 46	034946	032807	
8. 59. 45	3. 1	035056	032807	
9. 0. 45	3. 5	035056	032807	
1. 45	3. 23	035167	032886	
2. 45	3. 27	035277	032886	
3. 45	3. 27	035277	032886	
4. 45	3. 17	033063	032886	
5. 45	3. 18	033063	032886	
6. 5		035277		
6. 45	3. 18	033063	032886	
7. 5		035277		
7. 45	3. 16	033063	032886	
8. 5		035277		
8. 45	3. 57	035742	032886	
9. 5		035277		
9. 45	4. 4	035720	032843	
10. 45	3. 43	035898	032833	
11. 45	4. 4	035925	032833	
12. 45	4. 49	036102	032886	
13. 45	5. 50	036146	032886	
14. 45	5. 45	036102	032886	
15. 45	6. 10	035703	032886	
16. 45	6. 19	035881	032860	
18. 45	6. 51	036191	032818	
21. 45	6. 59	036257	032808	G
46. 0	9. 24	037585	032703	H B
52. 0	11. 12	037474	032676	
54. 0	11. 14	037143	032613	
55. 0	11. 1	037076	032613	
56. 0	10. 48	037032	032598	
57. 0	10. 41	037032	032598	
9. 57. 30			032598	
10. 0. 0	10. 19			
2. 30		036766		
8. 0	5. 41	036589	032493	
9. 0	4. 43	036810	032472	
10. 0	3. 55	037209	032440	
12. 0	2. 23	037364	032440	
13. 0	1. 59	037651	032482	
14. 0	1. 36	037895	032493	

Extraordinary Observations of November 22 and December 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″				d h m s	° ′ ″			
Nov. 22. 10. 15. 0	23. 1. 19	0·038139	0·032503	H B	Nov. 22. 11. 57. 30			0·031143	L
16. 0	1. 11	038250	032456		12. 0. 0	22. 54. 8			
17. 0	1. 15	038404	032419		2. 30		0·038443		
18. 0	1. 30	038692	032456		21. 0	23. 1. 33	038377	031206	
20. 0	1. 55	038803	032440		24. 0	1. 43	037934	031201	
21. 0	2. 32	038869	032440		26. 0	1. 23	037552	031180	
22. 0	2. 52	039024	032388		28. 0	0. 57	037309	031149	
23. 0	3. 19	039024	032377		29. 0	23. 0. 33	037127	031149	
24. 0	3. 41	038736	032351		32. 0	22. 59. 27	036883	031143	
25. 0	3. 52	038537	032319		34. 0	58. 47	036878	031143	
26. 0	4. 5	038360	032298		37. 0	58. 13	036768	031143	
28. 0	3. 56	038183	032240		39. 0	57. 51	036613	031175	
29. 0	3. 24	038094	032246		42. 0	57. 28	036613	031175	
30. 0	2. 45	038426	032214		44. 0	57. 18	036452	031180	
32. 0	1. 44	038250	032230		47. 0	57. 16	036452	031222	
33. 0	1. 35	038847	032230		49. 0	57. 46	036231	031232	
34. 0	1. 22	038758	032220		52. 0	58. 11	036138	031242	
35. 0	0. 59	038781	032230		12. 54. 0	57. 43	036071	031274	
37. 0	0. 11	039357	032230		13. 12. 0	22. 51. 9	036725	031522	
38. 0	0. 8	039533	032220		14. 0	23. 2. 48	036924	031574	
40. 0	0. 52	040131	032204		17. 0	5. 19	037057	031627	
42. 0	1. 59	040485	032178		19. 0	6. 46	037185	031627	
44. 0	4. 18	041017	032167		22. 0	8. 45	037600	031663	
45. 0	5. 32	041504	032178		24. 0	9. 57	037688	031695	
46. 0	6. 13	041527	032157		27. 0	11. 17	037883	031668	
47. 0	7. 9	042568	032167		29. 0	11. 37	037883	031626	
49. 0	8. 27	042301	032204		32. 0	11. 37	038121	031600	
50. 0	9. 16	042341	032130		34. 0	11. 37	038121	031548	
51. 0	9. 55	042296	032020		37. 0	11. 55	038188	031537	
52. 0	10. 43	042186	031983		13. 57. 30			031286	
53. 0	11. 9	042142	031904		14. 0. 0	23. 2. 58			
54. 0	11. 41	041698	031889		14. 2. 30		038802		L
55. 0	11. 52	041654	031878						
10. 59. 0	11. 34	040635	031679						
11. 1. 0	10. 46	040370	031668		Dec. 21. 3. 57. 30			0·031908	H B
2. 0	10. 1	040370	031668		4. 0. 0	22. 50. 14			
5. 0	7. 20	040126	031584		2. 30		0·035380		
6. 0	6. 14	040126	031574		10. 0	51. 27		031945	
7. 0	5. 16	039927	031547		14. 0	53. 15	033933	031981	
9. 30	3. 32	040103	031511		16. 0	54. 12	034088	031970	
12. 0	0. 52	040812	031589		17. 0	54. 56	034133	031997	
14. 0	0. 26	041698	031589		19. 0	55. 53	034266	031955	
15. 0	0. 12	041742	031574	H B	21. 0	57. 15	034376	032007	
22. 0	0. 9	041742	031574	L	23. 0	58. 22	034376	031970	
42. 0	7. 18	039905	031731		25. 0	59. 4	034266	031970	
45. 0	8. 45	039263	031784		27. 0	22. 59. 52	034354	031912	
47. 0	9. 5	038377	031086		29. 0	23. 0. 26	034133	031859	
48. 0	8. 11	037713	031049		31. 0	1. 24	034110	031865	
50. 0	6. 10	037049	031001		33. 0	2. 31	034110	031849	
52. 0	23. 3. 12	036384	030996		35. 0	2. 33	033822	031839	
54. 0	22. 59. 38	036384	031049		37. 0	3. 8	033822	031828	

Nov. 23^{d}. Civil Reckoning. During the time of extra observations the greatest and least western declinations took place at 13^{h}. 37^{m} and 13^{h}. 12^{m}; the greatest and least readings of the Horizontal Force Magnet were at 14^{h}. 2^{m}. 30^{s} and 12^{h}. 54^{m}; and of the Vertical Force Magnet at 13^{h}. 24^{m}, and from 12^{h}. 32^{m} to 12^{h}. 37^{m}.

Dec. 21^{d}. A change of 13′. 26″ having taken place in the position of the Declination Magnet between 2^{h}. 10^{m} and 4^{h}, extra observations were commenced.

Dec. 21^{d}. Civil Reckoning. During the time of extra observations the greatest and least western declinations took place at 4^{h}. 49^{m} and 4^{h}. 0^{m}; the greatest and least readings of the Horizontal Force Magnet were at 4^{h}. 2^{m}. 30^{s}. and 4^{h}. 43^{m}; and of the Vertical Force Magnet at 4^{h}. 21^{m} and 6^{h}. 27^{m}.

Extraordinary Observations of December 21.

Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.	Göttingen Mean Time (Astronomical Reckoning) of Declination Observation.	Western Declination.	Horizontal Force Reading in parts of the whole Hor. Force corrected for Temperature.	Vertical Force Reading in parts of the whole Vert. Force corrected for Temperature.	Observers.
d h m s	° ′ ″				d h m s	° ′ ″			
Dec. 21. 4. 39. 0	23. 3. 55	0·033711	0·031812	H B	Dec. 21. 6. 0. 0	22. 59. 18			H B
41. 0	4. 9	033424	031797		2. 30		0·034977		
43. 0	3. 50	033247	031787		11. 0	59. 1	035022	0·031517	
45. 0	3. 47	033358	031734		6. 27. 0	57. 33	034889	031391	
47. 0	4. 10	033490	031744		7. 57. 30			031508	
4. 49. 0	23. 4. 31	033711	031728		8. 0. 0	22. 59. 45			
5. 57. 30			031538		8. 2. 30		035238		H B

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

THE MAGNETIC DIP.

1844.

DAY and APROXIMATE HOUR, 1844.	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.	(3) West. Circle Reading Upper.	Lower.	Marked Side of Needle West. Graduated Face of Circle (4) East. Circle Reading Upper.	Lower.	(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.	(2) West. Circle Reading Upper.	Lower.	Marked Side of Needle East. Graduated Face of Circle (1) East. Circle Reading Upper.	Lower.	(3) West. Circle Reading Upper.	Lower.	Resulting Dip.	Observer.
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Jan. 4. 3	A 1		68. 61	58	56	54	68. 63	65	55	58	68. 65	67	60	57	68. 64	67	47	51	68. 59·25	D
	A 2		69. 5	5	9	8	68. 80	80	55	57	68. 64	65	56	55	68. 55	55	40	41	69. 0·50	D
Jan. 4. 21	A 2	Not moved									68. 75	77	53	53	68. 58	56	35	37		JH
Jan. 7. 21	A 1		68. 60	58	60	60	68. 66	66	67	68	68. 75	72	55	53	68. 50	50	45	47	68. 59·00	
	A 2		68. 70	72	65	65	68. 58	57	62	62	68. 74	74	60	61	68. 46	48	45	43	69. 0·00	JH
Jan. 8. 3	A 2	Not moved	68. 78	77	57	50	68. 70	68	45	47										P
Jan. 11. 3	A 1		69. 20	20	25	27	68. 48	50	35	35	69. 20	22	2	2	68. 50	50	28	28	68. 59·00	J H
	A 2		68. 70	69	54	54	68. 70	70	55	57	68. 65	66	50	50	68. 50	50	48	50	68. 58·00	
Jan. 11. 21	A 2	Not moved									68. 60	60	50	52	69. 20	22	2	5		J H
Jan. 14. 21	A 1		68. 56	60	53	56	68. 68	72	58	62	68. 53	55	44	48	69. 2	0	0	2	68. 58·00	D
	A 2		68. 62	63	56	55	69. 12	14	10	12	68. 64	64	45	45	68. 66	67	58	59	69. 2·00	D
Jan. 15. 3	A 2	Not moved	68. 60	60	50	50	69. 12	12	15	12										J H
Jan. 18. 3	A 1		68. 70	63	50	52	68. 50	60	48	55	69. 5	13	10	5	68. 60	67	40	45	68. 58·25	P
	A 2		68. 65	65	50	53	69. 25	25	0	3	69. 15	15	5	10	68. 60	62	22	25	69. 1·25	
Jan. 19. 21	A 2	Not moved									68. 73	72	57	55	68. 62	62	43	45		P
Jan. 21. 21	A 1		69. 15	17	10	12	68. 62	63	56	56	69. 15	15	0	0	68. 50	52	35	35	69. 1·00	J H
	A 2		68. 60	58	60	60	69. 8	8	8	6	69. 16	15	0	2	68. 50	50	38	40	69. 0·00	J H
Jan. 22. 3	A 2	Not moved	69. 10	8	0	1	69. 7	7	9	11										D
Jan. 28. 21	A 1		68. 65	65	50	52	68. 55	55	50	52	69. 30	28	0	0	68. 30	28	50	53	68. 56·25	J H
	A 2		69. 20	20	4	4	69. 10	10	0	2	68. 57	58	47	47	68. 63	62	52	52	69. 1·75	
Jan. 29. 3	A 2	Not moved									68. 85	85	30	35	68. 82	82	55	58		J H

Jan. 11^{d}. 21^{h}. The observations with the marked side of the needle East differ so much from the corresponding readings at 3^{h}, as to cause a doubt of the correctness of the observations on this day.

DAY and APPROXIMATE HOUR, 1844.	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 Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Feb. 1. 3	A 1		68. 56	53	85	83	68. 48	46	35	37	68. 61	60	60	58	68. 58	61	47	51	68. 56 ·25	D
	A 2		68. 61	62	27	28	69. 30	30	12	12	68. 63	62	58	59	68. 49	51	61	62	69. 0 ·50	D
Feb. 4. 20	A 1		69. 20	20	11	13	68. 83	90	40	42	69. 10	8	0	2	68. 48	50	33	32	69. 1 ·50	P
	A 2		68. 44	45	38	40	69. 32	38	20	22	68. 85	88	50	50	68. 50	50	40	45	69. 1 ·00	
Feb. 5. 3	A 2	Not moved									69. 25	26	5	5	68. 35	35	60	60		
Feb. 8. 3	A 1		68. 45	50	25	33	69. 15	10	2	2	68. 60	68	12	25	69. 20	20	23	33	68. 57 ·00	
	A 2		68. 57	57	42	45	68. 75	77	48	50	68. 67	60	49	53	68. 80	80	48	50	68. 59 ·25	P
Feb. 8. 21	A 2	Not moved	68. 75	75	55	53	68. 51	50	75	72										JH
Feb. 11. 20	A 1		68. 53	53	90	92	68. 50	60	44	52	68. 70	68	50	50	68. 57	62	35	40	68. 58 ·00	P
	A 2		68. 86	83	25	25	69. 22	26	0	5	69. 8	8	0	2	68. 98	99	23	28	69. 4. 25	L
Feb. 12. 3	A 2	Not moved									69. 15	16	15	15	68. 17	18	70	70		JH
Feb. 15. 3	A 1		69. 13	10	11	8	68. 53	57	54	58	68. 70	69	58	55	68. 68	71	41	45	69. 1 ·25	D
	A 2		68. 36	36	62	62	69. 30	29	18	19	69. 11	11	12	12	68. 50	50	31	33	69. 1 ·25	P
Feb. 15. 20	A 2	Not moved	68. 60	62	48	52	69. 4	2	4	5										P
Feb. 18. 21	A 1		69. 30	28	0	0	68. 62	59	28	28	68. 83	85	45	45	68. 65	67	50	50	69. 0 ·50	JH
	A 2		68. 75	75	30	30	68. 90	92	50	51	68. 80	80	50	50	68. 57	59	32	32	68. 58 ·50	JH
Feb. 19. 3	A 2	Not moved									68. 70	71	53	52	68. 52	53	57	59		D
Feb. 22. 3	A 1		69. 20	20	15	14	68. 50	52	47	50	68. 62	60	45	44	68. 74	76	45	47	69. 0 ·00	JH
	A 2		68. 60	60	40	42	69. 12	14	33	32	68. 70	72	45	45	68. 50	50	45	45	68. 59 ·75	JH
Feb. 22. 20½	A 2	Not moved	68. 69	69	50	50	69. 15	17	20	25										P
Feb. 25. 21	A 1		69. 16	15	11	9	68. 57	60	37	41	69. 40	38	8	9	68. 30	35	34	38	69. 0 ·00	D
	A 2		68. 68	69	48	48	69. 15	16	13	15	68. 60	60	55	55	68. 60	61	59	60	69. 2 ·50	D

Feb. 8d. 3h. The readings at this observation differ so much from corresponding readings with both needles, and particularly those of A 1, as to cause a doubt of their correctness: the readings of A 1 in the position with its unmarked end pointing downwards, marked side of needle and graduated face of circle both West, depart very much from corresponding readings. Feb. 12d. 3h. The readings differ from their usual readings. Feb. 18d. 21h, Feb. 22d. 3h, and Feb. 25d. 21h. The observations with the marked end of the needle pointing downwards, and with its marked side to the East, are larger than usual: on Feb. 25d. 21h, with the marked end of the needle pointing downwards, and with its face to the West, the readings are large; and with its face to the East they are smaller than usual.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (3) West.			
			Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.		
d h			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Feb. 29. 3	A 1		68. 12	13	17	25	69. 24	21	0	0	68. 70	78	40	45	69. 23	22	10	10	68. 55 ·75	P
	A 2		68. 60	62	20	27	68. 60	61	38	40	68. 82	83	58	62	68. 73	73	50	50	68. 56 ·00	P
Mar. 3. 21	A 1		68. 72	69	60	58	68. 57	61	41	44	69. 29	26	10	8	68. 46	42	34	38	68. 58 ·50	D
	A 2		68. 73	72	54	55	68. 59	60	67	69	68. 67	66	54	55	68. 72	72	48	50	69. 2 ·00	D
Mar. 7. 3	A 1		69. 18	22	10	10	68. 56	58	30	32	69. 35	33	16	15	68. 35	35	50	52	69. 1 ·50	JH
	A 2		69. 0	0	10	9	68. 82	82	55	58	68. 72	72	45	45	68. 50	50	35	35	68. 59 ·00	JH
Mar. 7. 21	A 2	Not moved	69. 8	8	5	6	69. 5	5	4	6										D
Mar. 10. 21	A 1		69. 10	10	12	10	68. 57	56	45	45	69. 25	23	25	27	68. 28	28	50	53	69. 1 ·50	JH
	A 2		68. 80	80	47	50	68. 68	68	52	54	69. 5	6	20	20	68. 50	50	50	50	69. 1 ·75	JH
Mar. 11. 3	A 2	Not moved									68. 78	79	54	55	68. 65	67	48	49		D
Mar. 14. 3	A 1		69. 10	8	20	22	68. 78	76	45	45	69. 33	31	17	15	68. 45	48	25	30	69. 4 ·25	G
	A 2		69. 12	12	0	0	69. 5	5	7	5	68. 71	67	55	55	68. 74	71	56	55	69. 4 ·25	
Mar. 14. 21	A 2	Not moved	68. 58	60	55	52	69. 10	9	1	1										G
Mar. 17. 21	A 1		69. 11	9	7	5	68. 40	38	34	38	69. 25	24	0	3	68. 60	63	37	40	68. 57 ·00	D
	A 2		69. 5	5	0	0	69. 12	11	4	5	69. 7	8	2	2	68. 52	53	34	36	68. 59 ·75	D
Mar. 18. 3	A 2	Not moved									69. 10	11	17	20	68. 85	90	22	25		P
Mar. 24. 21	A 1		69. 10	7	16	13	68. 64	61	40	44	69. 23	20	10	7	68. 32	36	20	24	68. 56 ·75	D
	A 2		68. 63	63	50	50	69. 20	21	9	10	68. 79	79	54	52	68. 33	33	35	37	68. 58 ·00	D
Mar. 25. 3	A 2	Not moved	68. 62	60	47	47	69. 10	10	20	20										JH
Mar. 28. 3	A 1		69. 3	0	7	4	68. 50	54	24	28	69. 14	12	2	0	68. 45	49	37	39	68. 53 ·00	D
	A 2		68. 52	50	47	46	69. 17	18	8	8	68. 44	45	52	51	68. 75	75	50	51	68. 58 ·00	D

Feb. 29ᵈ. 3ʰ. The readings with both needles in all positions differ from their usual readings.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (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			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Mar. 28. 21	A 2	Not moved									68. 70	72	25	25	69. 12	12	18	20		D
Mar. 31. 21	A 1		68. 50	50	30	35	68. 66	60	52	52	68. 65	67	48	53	69. 8	3	5	8	68. 55 ·75	P
	A 2		68. 85	83	55	60	68. 82	82	26	30	69. 26	24	10	15	69. 10	10	0	2	69. 7 ·50	P
Apr. 1. 3	A 2	Not moved	68. 62	62	55	55	69. 12	12	5	5										JH
Apr. 4. 3	A 1		68. 65	66	60	57	68. 80	83	30	32	69. 3	0	5	6	68. 50	52	50	50	68. 58 ·00	
	A 2		68. 60	60	48	48	68. 80	78	58	60	68. 80	80	55	56	68. 78	78	50	50	69. 3 ·75	
Apr. 4. 21	A 2	Not moved									68. 55	55	78	76	68. 70	71	54	55		JH
Apr. 7. 21	A 1		69. 13	11	0	3	68. 54	56	40	44	68. 55	52	55	52	68. 53	57	44	48	68. 55 ·00	D
	A 2		68. 56	57	40	39	68. 59	61	68	68	69. 17	16	10	11	68. 62	62	49	50	69. 0 ·25	D
Apr. 8. 3	A 2	Not moved	68. 55	53	40	40	68. 80	80	40	43										P
Apr. 11. 3	A 1		69. 12	10	5	5	68. 50	50	62	62	69. 15	14	8	8	68. 50	50	59	62	69. 2 ·50	JH
	A 2		68. 55	58	35	37	69. 8	8	12	14	69. 27	25	0	0	68. 43	46	60	60	69. 0 ·50	
Apr. 11. 21	A 2	Not moved									68. 86	86	20	20	68. 80	81	53	55		JH
Apr. 14. 21	A 1		69. 15	13	14	12	68. 51	53	33	37	68. 69	67	52	49	68. 55	59	53	56	68. 58 ·00	D
	A 2		68. 44	43	50	51	68. 73	74	42	40	68. 72	72	48	47	68. 67	68	50	51	68. 55 ·75	D
Apr. 15. 3	A 2	Not moved	69. 15	16	18	21	68. 18	20	60	60										JH
Apr. 18. 3	A 1		69. 10	8	10	9	68. 56	58	39	43	68. 74	71	57	56	68. 52	55	44	41	68. 57 ·75	D
	A 2		68. 49	48	60	60	69. 2	2	0	1	69. 6	6	0	0	69. 6	7	10	11	69. 1 ·75	
Apr. 18. 21	A 2	Not moved									68. 80	80	48	48	68. 71	71	55	57		D
Apr. 21. 21	A 1		69. 5	5	10	10	68. 53	53	50	47	69. 33	31	10	8	68. 45	45	30	30	68. 59 ·00	JH
	A 2		68. 55	54	33	33	68. 56	56	50	52	68. 80	80	55	58	68. 68	68	58	60	68. 58 ·00	JH

March 28^{d}. 21^{h}. The readings differ from the corresponding readings at 3^{h}.

March 31^{d}. 21^{h}. The readings of A 2 differ from their usual readings, and so much so as to cause a doubt of their correctness; the readings of A 1 also differ from their usual readings, but to a less amount.

April 15^{d}. 3^{h}. The readings differ so much from the corresponding readings at 14^{d}. 21^{h}, as to cause a doubt of their correctness.

DAY and APPROXIMATE HOUR, 1844.	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			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Apr. 22. 3	A 2	Not moved	68. 63	63	43	43	68. 56	57	33	34										D
Apr. 28. 21	A 1		69. 7	4	6	7	68. 51	55	44	48	69. 7	5	7	4	68. 58	61	50	55	68. 59·25	
	A 2		68. 52	52	43	43	68. 57	57	68	69	68. 19	19	52	50	69. 8	8	1	2	69. 0·00	D
May 2. 3	A 1		69. 18	20	16	16	68. 55	56	45	48	68. 68	68	50	50	68. 73	75	47	50	69. 2·00	JH
	A 2		68. 45	43	63	63	68. 50	48	37	37	68. 75	75	57	56	68. 75	76	53	55	68. 57·00	
May 2. 21	A 2	Not moved	68. 63	65	57	58	68. 50	50	50	50										JH
May 4. 21	A 1		69. 18	18	2	1	68. 58	62	12	20	68. 59	58	102	102	68. 40	40	55	60	68. 59·25	P
	A 2		68. 67	68	40	40	68. 47	50	20	25	68. 77	75	54	57	68. 80	85	43	48	68. 55·25	
May 5. 4	A 2	Not moved									68. 90	88	25	26	69. 5	5	5	7		
May 9. 3	A 1		66. 175	180	20	25	68. 180	179	23	23	68. 45	48	37	44	68. 58	58	52	51	68. 49·80	
	A 2		68. 80	83	25	28	68. 127	128	50	50	68. 44	48	45	48	68. 75	75	33	27	69. 0·25	P
May 9. 21	A 2		68. 49	49	48	48	68. 52	52	58	57										G
May 12. 21	A 1		69. 22	22	5	6	68. 50	53	40	42	69. 12	10	5	8	68. 57	60	68	70	69. 3·25	JH
	A 2		68. 95	93	40	40	68. 58	58	33	35	69. 30	32	7	7	69. 10	8	2	2	69. 4·50	JH
May 13. 3	A 2	Not moved									68. 65	63	30	33	68. 83	85	59	60		P
May 19. 21	A 1		69. 21	18	45	47	68. 30	30	22	20	69. 35	33	10	10	68. 45	47	60	62	69. 3·50	JH
	A 2		68. 107	105	50	48	68. 50	48	50	50	68. 30	32	80	80	68. 72	72	47	47	69. 0·50	
May 22. 3	A 1		69. 38	35	10	11	68. 40	39	53	60	68. 107	104	53	51	68. 17	13	67	73	69. 3·25	
	A 2		68. 74	80	10	15	68. 70	71	33	38	69. 43	43	0	2	68. 80	83	41	45	69. 0·50	JH
May 26. 20	A 1		68. 67	70	7	15	68. 100	100	58	58	68. 60	63	45	51	69. 10	19	18	19	69. 2·50	P
	A 2		68. 70	70	50	52	69. 38	37	0	0	68. 50	52	39	43	68. 79	78	38	40	69. 1·00	P

May 9^{d}. 3^{h}. The readings of both needles differ from their usual readings, particularly those with A 1.
May 13^{d}. 3^{h}. The readings differ from the corresponding readings at 12^{d}. 21^{h}, and there is some doubt of their correctness.
May 19^{d}. 21^{h} and 22^{d}. 3^{h}. The readings differ considerably from corresponding readings, some being larger and others smaller.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (3) West.			
			Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.		
d h			° '	'	'	'	° '	'	'	'	° '	'	'	'	° '	'	'	'	° '	
May 30. 3	A 1		69. 10	7	18	18	68. 47	45	42	44	69. 15	12	5	7	68. 60	60	60	57	69. 1·50	JH
	A 2		68. 83	83	42	42	68. 56	54	57	57	68. 72	74	45	43	68. 67	67	46	50	68. 58·75	JH
June 2. 20	A 1		68. 23	29	52	60	69. 33	30	2	0	68. 60	67	28	35	69. 10	7	10	10	68. 58·50	P
	A 2		68. 98	100	40	45	68. 63	65	48	50	68. 70	72	50	54	68. 79	80	37	38	69. 2·00	P
June 3. 3	A 2	Not moved	68. 93	95	35	35	69. 2	2	0	0										JH
June 6. 3	A 1		69. 33	32	3	2	68. 63	65	50	50	69. 21	18	7	4	68. 48	52	23	27	69. 1·00	D
	A 2		68. 89	90	52	52	68. 77	78	53	54	69. 16	15	1	0	68. 58	59	44	45	69. 4·00	D
June 6. 20	A 2	Not moved									68. 81	81	41	43	68. 79	80	52	55		P
June 9. 21	A 1		68. 72	74	55	53	68. 70	70	35	37	68. 85	83	37	40	69. 15	17	12	12	69. 3·00	JH
	A 2		68. 70	72	45	42	68. 50	52	60	58	69. 25	25	2	2	68. 95	97	23	23	69. 1·00	JH
June 10. 3	A 2	Not moved	68. 71	71	44	46	69. 0	1	0	1										D
June 13. 3	A 1		69. 15	16	0	2	68. 60	62	42	43	68. 75	72	55	56	68. 78	82	35	37	69. 0·50	JH
	A 2		68. 60	60	45	45	68. 85	82	55	57	69. 12	10	3	2	69. 5	5	3	3	69. 3·00	
June 13. 21	A 2	Not moved									68. 76	75	60	58	68. 80	82	55	55		JH
June 16. 21	A 1		68. 47	51	56	64	69. 46	42	0	·0	68. 62	67	28	35	68. 82	81	57	57	69. 3·50	P
	A 2		68. 81	81	49	50	68. 70	69	50	51	68. 72	72	50	54	68. 66	67	20	22	68. 58·50	P
June 23. 21	A 1		69. 10	12	10	11	68. 64	64	45	45	69. 28	27	17	16	68. 46	48	38	38	69. 2·00	JH
	A 2		68. 65	63	35	35	68. 70	70	55	58	69. 22	22	0	1	68. 72	72	58	57	69. 2·00	JH
June 24. 3	A 2	Not moved									68. 85	86	43	45	68. 70	72	50	55		P
June 27. 3	A 1		69. 27	27	30	31	68. 33	34	35	34	69. 33	33	20	22	68. 35	35	33	35	69. 1·00	JH
	A 2		68. 58	61	58	58	68. 56	57	56	58	68. 78	78	50	52	68. 76	79	45	45	69. 0·50	JH

June 16d. 21h. With the marked end of A 1 pointing downwards, the mean of the readings with the face West is greater than the mean of those with the face East; and with the unmarked end pointing downwards, the mean of the readings with the face East is greater than the mean of those with the face West: this is unusual in both cases, and it is possible that the readings have been wrongly inserted.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (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			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
June 27.21	A 2	Not moved	69. 9	10	8	10	68. 56	57	52	52										D
June 30.21	A 1		69. 28	26	35	35	68. 47	51	32	40	68. 88	85	53	53	68. 43	47	12	20	68. 58 ·50	P
	A 2		68. 69	70	34	37	68. 70	72	40	45	68. 78	80	52	58	68. 85	90	45	49	69. 1 ·00	P
July 1. 3	A 2	Not moved									69. 16	15	0	0	68. 75	76	48	49		D
July 4. 3	A 1		68. 56	62	35	40	68. 71	70	54	51	68. 60	67	30	32	68. 72	72	55	53	68. 55 ·00	P
	A 2		68. 90	94	45	47	68. 95	97	50	51	68. 15	20	42	42	68. 95	95	30	32	68. 58 ·75	P
July 7.21	A 1		69. 15	13	6	8	68. 72	70	49	53	68. 70	68	61	59	68. 32	36	36	40	68. 58 ·00	D
	A 2		68. 51	51	43	44	68. 58	59	55	57	68. 92	91	43	44	68. 77	78	56	58	68. 59 ·75	D
July 8. 3	A 2	Not moved									68. 95	100	28	30	68. 90	91	40	40		P
July 11. 3	A 1		68. 85	85	30	33	68. 75	76	26	28	68. 70	72	50	53	68. 58	60	50	53	68. 56 ·50	JH
	A 2		68. 46	46	28	31	68. 78	77	45	47	69. 15	16	10	10	69. 25	25	12	13	69. 3 ·75	JH
July 11.21	A 2	Not moved	68. 70	75	15	20	68. 80	82	40	43										P
July 14.21	A 1		68. 55	59	54	57	68. 79	81	65	65	68. 41	45	42	46	68. 84	81	59	63	69. 1 ·00	D
	A 2		68. 66	66	41	41	68. 81	82	56	57	69. 10	10	7	7	68. 73	74	40	41	69. 2 ·00	D
July 15. 3	A 2	Not moved									68. 71	72	54	57	69. 10	12	8	10		P
July 18. 3	A 1		69. 28	25	16	18	68. 62	64	43	47	68. 85	83	61	58	68. 54	58	54	58	69. 5 ·75	D
	A 2		68. 51	50	58	56	68. 52	53	34	35	69. 30	30	7	7	69. 28	28	4	6	69. 3 ·00	
July 18.21	A 2	Not moved	68. 56	56	58	58	69. 28	28	2	3										D
July 29.21	A 1		69. 33	30	10	10	68. 63	70	45	53	68. 0	0	82	80	69. 12	20	56	56	69. 8 ·25	P
	A 2		68. 70	70	50	50	68. 70	72	40	43	69. 30	31	23	28	68. 71	74	50	50	69. 6 ·50	P

July 29d. 21h. The readings of both needles are discordant with observations in corresponding positions at other times.

DAY and APPROXIMATE HOUR, 1844.	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			° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	
Aug. 1. 3	A 1		69. 20	15	12	10	68. 62	66	33	35	69. 26	24	4	5	68. 48	51	33	37	69. 0·00	D
	A 2		68. 38	39	59	59	68. 80	81	56	57	68. 96	97	44	44	68. 45	47	49	50	68. 59·00	D
Aug. 1. 21	A 2	Not moved	68. 60	60	52	50	68. 70	70	54	54										G
Aug. 4. 21	A 1		69. 50	50	3	3	68. 58	63	20	27	69. 43	40	7	7	68. 60	65	48	52	69. 7·25	P
	A 2		68. 53	53	40	40	68. 110	113	49	50	68. 40	42	70	71	68. 103	108	54	55	69. 5·75	P
Aug. 5. 3	A 2	Not moved									68. 107	107	49	49	69. 0	0	34	35		D
Aug. 8. 3	A 1		68. 62	59	65	62	68. 61	65	47	51	69. 24	22	20	17	68. 35	40	53	57	69. 1·25	
	A 2		68. 78	79	53	52	68. 73	53	51	52	69. 17	16	6	8	69. 5	7	5	7	69. 6·50	
Aug. 11. 21	A 1		68. 92	89	36	33	68. 78	82	49	53	69. 20	17	5	4	68. 63	67	43	46	69. 3·50	
	A 2		68. 59	58	57	56	69. 27	27	0	1	68. 86	87	52	52	68. 63	64	55	55	69. 5·00	
Aug. 15. 3	A 1		68. 61	58	80	77	68. 84	87	38	42	69. 20	16	3	0	69. 6	9	9	11	69. 7·50	
	A 2		68. 93	93	43	44	69. 32	32	8	9	69. 3	3	10	10	68. 64	63	52	52	69. 8·25	D
Aug. 15. 21	A 2	Not moved	68. 82	82	55	55	68. 60	60	48	48										G
Aug. 18. 21	A 1		69. 42	40	12	14	68. 90	95	48	45	68. 38	38	72	72	67. 158	155	40	40	69. 5·00	
	A 2		68. 90	88	40	42	69. 6	5	15	15	68. 77	77	58	58	68. 30	30	95	95	69. 6·00	
Aug. 22. 3	A 1		68. 50	50	63	66	69. 32	28	7	7	68. 80	80	45	45	68. 58	55	75	75	69. 6·00	
	A 2		69. 33	33	12	12	69. 0	0	3	4	68. 70	70	38	38	68. 53	53	60	60	69. 4·00	
Aug. 22. 21	A 2	Not moved	69. 25	25	12	12	68. 35	35	62	63										G
Aug. 25. 21	A 1		68. 66	64	55	52	68. 60	64	48	52	68. 67	65	54	58	69. 4	8	7	10	69. 1·00	D
	A 2		68. 68	68	51	50	68. 67	68	49	51	69. 14	15	12	12	68. 90	91	30	31	69. 3·00	D

Aug. 18d. 21h. The readings of A 1 differ from their usual readings.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (3) West.				
				Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.			
d h		°		° '	'	'	'	° '	'	'	'	° '	'	'	'	° '	'	'	'	° '	° '	
Aug. 29. 3	A 1			69. 32	32	7	5	69. 0	0	20	20	68. 30	30	67	67	68. 65	65	50	50		69. 3 ·75	G
	A 2			69. 0	0	35	38	68. 68	68	55	55	68. 80	80	50	50	68. 55	58	35	40		69. 2 ·75	
Aug. 29. 21	A 2		Not moved	69. 25	25	3	4	68. 55	55	60	60											G
Sep. 8. 21	A 1			68. 55	58	52	49	68. 75	79	51	53	68. 92	91	32	35	68. 82	85	45	47		69. 1 ·50	L
	A 2			68. 65	66	51	50	68. 65	64	55	56	68. 75	76	50	50	68. 50	50	47	48		68. 57 ·50	D
Sep. 12. 3	A 1			68. 62	62	58	58	69. 30	30	5	4	68. 67	69	45	48	68. 63	67	43	45		69. 2 ·25	G
	A 2			68. 49	50	40	40	69. 25	25	7	8	68. 45	48	59	58	68. 55	58	55	55		68. 57 ·00	G
Sep. 15. 21	A 1			68. 75	73	47	50	68. 67	71	48	52	68. 60	63	23	26	68. 84	89	45	42		68. 57 ·25	D
	A 2			68. 42	42	47	48	68. 81	83	57	59	68. 58	59	58	57	68. 57	57	64	66		68. 58 ·50	D
Sep. 22. 21	A 2	30		71. 45	48	35	40	71. 35	35	15	15	71. 10	10	20	20	71. 30	30	25	25	71. 27¼	68. 52½	G
		120		79. 10	10	5	5	79. 12	15	10	8	79. 8	4	15	11	79. 6	3	10	10	79. 9		
Sep. 26. 3	A 1	30		71. 56	60	16	14									70. 83	83	50	52	71. 21¾	68. 44	J H
		120						79. 2	6	15	15	78. 28	31	70	72					79. 0		
Sep. 26. 3	A 2	30		71. 10	13	43	45									71. 46	48	33	35	71. 34	68. 56½	J H
		120						79. 12	13	8	6	79. 4	2	0	1					79. 5¼		
Sep. 29. 21	A 1	30		71. 64	62	52	55									71. 65	70	15	15	71. 49¾	69. 9	D
		120						79. 15	17	20	23	78. 55	60	46	41					79. 4¼		
Sep. 29. 21	A 2	30		71. 25	25	28	27									71. 33	32	20	20	71. 26¼	68. 52	D
		120						78. 60	58	73	75	78. 88	89	58	56					79. 9½		

August 29d. 21h. After this time both the needles were sent to Mr. Berrow for repair; on Sep. 7d they were received from him repaired.

DAY and APPROXIMATE HOUR, 1844.	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. Marked Side of Needle East. Graduated Face of Circle (1) East. Circle Reading Upper.	Lower.	(3) West. Circle Reading Upper.	Lower.	Marked Side of Needle West. Graduated Face of Circle (4) East. Circle Reading Upper.	Lower.	(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.	(2) West. Circle Reading Upper.	Lower.	Marked Side of Needle East. Graduated Face of Circle (1) East. Circle Reading Upper.	Lower.	(3) West. Circle Reading Upper.	Lower.	Mean for each Azimuthal Angle.	Resulting Dip.	Observer.
d h		°		° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	° ′	
Oct. 3. 3	A 2	30		71. 25	25	40	40	71. 12	13	31	30	71. 32	32	43	40	71. 25	23	30	32	71. 29½	68. 59—	G
		120		79. 18	15	40	40	79. 5	5	15	16	79. 9	9	15	16	79. 30	28	25	20	79. 19¼		
Oct. 3. 21	A 2	120	Not moved									79. 12	13	11	13	79. 14	12	6	5	79. 10¾	68. 54	D
		30										71. 18	18	30	29	71. 23	24	41	42	71. 28¼		
Oct. 6. 21	A 2	30		71. 30	27	35	36	71. 5	7	26	25	71. 30	32	21	21	71. 28	29	34	33	71. 26¼	68. 52	
		120		79. 10	8	5	5	79. 5	5	8	10	79. 14	15	5	3	79. 18	17	19	17	79. 10¼		
Oct. 10. 3	A 2	30		71. 30	28	33	32	71. 30	28	30	31	71. 47	48	23	23	71. 41	41	32	30	71. 32¾	69. 1	
		120		79. 12	9	22	19	79. 7	5	24	23	79. 21	20	9	7	79. 31	31	22	20	79. 17¾		
Oct. 13. 21	A 2	30		71. 25	23	33	32	71. 18	19	38	40	71. 45	44	30	29	71. 39	39	20	18	71. 30¾	68. 58	
		120		79. 10	8	23	23	79. 3	3	25	23	79. 34	34	8	6	78. 82	85	59	55	79. 15		
Oct. 17. 3	A 2	30		71. 31	29	51	50	71. 30	28	38	40	71. 37	38	35	35	71. 51	50	32	30	71. 38	69. 6	
		120		79. 21	19	12	11	79. 12	10	20	20	79. 18	18	20	18	79. 30	30	28	27	79. 19½		
Oct. 20. 21	A 2	30		71. 14	12	39	39	71. 13	11	55	56	71. 47	47	36	35	71. 28	27	44	43	71. 34¾	69. 3	
		120		79. 12	10	21	20	79. 4	2	28	28	79. 11	11	10	8	79. 36	34	38	39	79. 19½		
Oct. 27. 21	A 2	30		71. 5	3	42	42	71. 9	9	46	49	71. 41	43	22	21	71. 35	33	27	25	71. 28¼	68. 59	
		120		79. 19	16	46	48	78. 57	55	88	88	79. 16	18	15	15	79. 37	35	14	13	79. 21½		
Oct. 31. 3	A 2	40		73. 33	32	41	40	73. 32	31	41	42	73. 41	42	28	28	73. 42	42	46	44	73. 37¾+	69. 6½	
		130		76. 14	12	14	16	76. 6	3	37	37	76. 27	28	9	11	76. 22	21	18	17	76. 18¼+		
Nov. 3. 21	A 2	40		73. 25	22	16	15	73. 22	23	21	20	73. 27	29	24	23	73. 38	38	10	9	73. 22¾	68. 52	
		130		76. 11	9	5	4	75. 58	56	88	87	76. 8	7	21	20	76. 16	15	20	18	76. 12½		

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (3) West.				
				Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.	Circle Reading Upper.	Lower.			
d h		°		° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	° ′	
Nov. 7. 3	A 2	40		73. 40	39	42	42	73. 21	20	38	38	73. 42	42	24	23	73. 38	38	32	31	73. 34½	69. 1	D
		130		76. 22	20	15	16	76. 6	4	20	22	76. 18	17	0	2	75. 83	84	57	55	76. 12½		
Nov. 10. 21	A 2	40		73. 20	22	38	38	73. 22	22	40	40	73. 30	30	28	28	73. 65	65	20	20	73. 33	68. 59	G
		130		76. 28	30	42	42	75. 55	55	82	82	75. 50	50	40	40	76. 14	14	20	20	76. 11½		
Nov. 11. 3	A 2	130	Not moved									76. 17	16	11	9	76. 30	30	30	31	76. 21¾	69. 9	D
		40										73. 40	40	36	35	73. 46	47	32	30	73. 38¼		
Nov. 14. 3	A 2	40		73. 23	21	32	32	73. 16	16	34	33	73. 33	31	31	30	73. 31	30	35	34	73. 28¾	68. 53	
		130		76. 3	3	2	2	76. 1	1	8	8	75. 74	74	56	58	76. 10	10	17	16	76. 6½		
Nov. 17. 21	A 2	40		73. 23	23	32	33	73. 35	34	41	40	73. 27	28	40	39	73. 23	22	30	28	73. 31	68. 57	
		130		76. 6	8	21	19	76. 6	5	0	0	76. 22	22	3	1	76. 12	12	15	14	76. 10¼		
Nov. 24. 21	A 2	40		73. 28	28	32	31	73. 42	41	41	41	73. 28	29	38	37	73. 70	68	22	20	73. 37½	68. 57	D
		130		76. 18	17	10	10	76. 5	3	24	23	75. 54	53	49	48	75. 62	62	47	47	76. 3¼		
Dec. 5. 3	A 1	40		73. 55	55	67	66	74. 10	12	5	5	74. 10	12	30	30	74. 22	22	50	50	74. 16½	69. 29	G
		130		76 ·20	20	22	22	75. 15	15	120	120	75. 45	47	52	53	76. 28	30	12	10	76. 9½		
Dec. 5. 21	A 1	130	Not moved	76. 13	11	27	28	75. 48	46	55	55									76. 5½	68. 59	D
		40		73. 43	43	10	10	73. 13	12	25	27									73. 38		
Dec. 8. 21	A 1	40		73. 25	27	73	75	73. 18	17	27	29	73. 15	17	24	27	73. 25	28	36	34	73. 33	68. 54	D
		130		76. 12	10	8	7	75. 50	48	61	61	75. 39	42	58	55	76. 22	25	15	13	76. 3		
Dec. 12. 3	A 1	40		73. 50	50	78	78	73. 42	42	50	50	72. 50	50	115	114	73. 95	95	25	25	73. 48	69. 1	G
		130		75. 55	55	85	85	75. 30	32	70	70	75. 55	55	55	53	75. 37	37	68	68	75. 57		
Dec. 12. 21	A 1	130	Not moved	76. 10	8	1	4	75. 29	26	59	61									75. 54¾	69. 7	D
		40		74. 11	10	14	16	73. 42	40	45	43									73. 57½		

Dec. 5d. 3h. The result with the angle 40° appears to be too large: it seems probable that the instrument was set by inadvertence to a larger angle than 40°: no use has been made of the Resulting Dip.

DAY and APPROXIMATE HOUR, 1844.	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.		Graduated Face of Circle (3) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (4) East.		Graduated Face of Circle (2) West.		Graduated Face of Circle (1) East.		Graduated Face of Circle (3) West.				
				Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.	Circle Reading Upper.	Circle Reading Lower.			
d h		°		° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	′	′	′	° ′	° ′	
Dec. 15. 21	A 1	40		73. 44	41	69	71	73. 25	24	52	54	73. 20	22	39	36	73. 45	45	42	43	73. 42	69. 4	D
		130		76. 22	20	29	31	75. 56	54	63	65	75. 52	54	63	61	75. 60	57	82	83	76. 8¼		
Dec. 22. 21	A 1	40		73. 11	11	40	42	73. 20	20	30	30	73. 30	30	38	40	73. 19	20	32	32	73. 27¾	69. 1	G
		130		76. 43	42	22	20	76. 32	32	10	10	76. 2	3	20	20	76. 5	5	35	35	76. 21		
Dec. 23. 3	A 1	130	Not moved	75. 43	41	15	14	76. 6	3	14	12									76. 3½	69. 0	D
		40		73. 19	17	41	42	73. 42	42	60	62									73. 40½		

ROYAL OBSERVATORY, GREENWICH.

ORDINARY

METEOROLOGICAL OBSERVATIONS.

1844.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 0. 14	29·528	46·5	45·2	1·3	..	..	47·7	S by W	3 to 4	..	..	S	1½	..	..	..	10	..
16	29·485	45·0	44·5	0·5	43·5	1·5	33·2	S by W	3 to 5	SSW	1·00	S	1½	..	..	..	10	..
18	29·422	46·4	45·7	0·7	..	..		S W	1 to 4	..	..	S	1½	..	..	..	10	..
20	29·444	47·0	47·0	0·0	..	..	52·5	NNW	..	N	1·95	N by W	¼	..	..	..	10	..
22	29·476	32·5	32·7	-0·2	32·5	0·0	34·1	WNW	..	NW	1·17	Calm	..	0·25	0·33	0·360	10	..
Jan. 1. 0	29·466	33·3	33·4	-0·1	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	10	..
2	29·447	34·1	34·1	0·0	..	..	..	SW	..	..	..	W	¼	..	..	..	10	..
4	29·458	34·4	34·2	0·2	33·8	0·6	..	SSW	..	..	..	SW	¼	..	..	..	½	..
6	29·456	33·5	32·8	0·7	..	..		SW	..	..	..	SW	¼	..	..	..	½	..
8	29·457	33·5	32·2	1·3	..	..	35·1	SW	..	..	..	WSW	¼	..	..	..	½	..
10	29·476	31·5	30·7	0·8	29·8	1·7	30·2	SW	..	SSW	3·06	WSW	¼–	..	..	..	0	Transit
12	29·454	30·0	29·6	0·4	..	..		Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·392	31·6	30·7	0·9	..	..	35·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·305	32·7	31·7	1·0	30·5	2·2	26·2	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·248	32·4	32·2	0·2	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..
20	29·313	32·1	32·2	-0·1	..	..	..	NNW	..	..	..	N by W	¼	..	..	..	10	..
22	29·409	32·1	31·7	0·4	28·6	3·5	..	NNW	..	N	0·76	N by W	½	0·32	0·31	0·630	6	..
Jan. 2. 0	29·497	32·7	30·9	1·8	..	..	..	NNW	½ to 1	NNW	0·58	NNW	¾	..	..	..	3	..
2	29·550	34·0	31·7	2·3	..	..	..	WNW	½ to 1½	NW	0·41	NNW	¾	..	..	..	3	..
4	29·620	32·4	31·2	1·2	28·0	4·4	..	W	..	..	..	W	½	..	..	..	3	..
6	29·677	29·5	29·1	0·4	..	..		W by S	..	..	..	W	¼	..	..	..	0	..
8	29·731	28·6	28·0	0·6	..	..	34·3	WNW	..	WNW	0·39	WNW	¼	..	..	..	0	..
10	29·806	25·5	25·2	0·3	23·0	2·5	18·8	SW	..	..	..	W	¼	..	..	..	0	Transit
12	29·834	23·7	23·3	0·4	..	..		SW	..	..	..	WSW	¼	..	..	..	¼	..
14	29·851	22·0	22·0	0·0	..	..	34·9	SSW	..	..	..	WSW	¼	..	..	..	2	..
16	29·854	21·0	21·0	0·0	18·0	3·0	11·3	SSW	..	..	..	WSW	¼	..	..	..	2	..
18	29·851	18·6	18·2	0·4	..	..	..	S by W	..	..	..	WSW	¼	..	..	..	0	..
20	29·842	19·6	19·2	0·4	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	3	..
22	29·848	21·7	21·6	0·1	19·5	2·2	..	Calm	..	SW	1·74	Calm	..	0·32	0·00	0·630	7	..
Jan. 3. 0	29·818	32·7	30·6	2·1	..	..	..	Calm	..	SSW	1·44	Calm	..	..	..	..	2	..
2	29·783	37·3	32·4	4·9	..	..	..	S by E	..	..	..	Calm	..	..	..	..	10	Greatest declination N.
4	29·762	37·0	35·7	1·3	34·5	2·5	..	S	..	..	..	SW	½	..	..	..	10	..
6	29·743	36·5	35·5	1·0	..	..		S	..	..	..	SSW	½	..	..	..	10	..
8	29·711	37·5	36·8	0·7	..	..	44·5	S by E	..	..	..	SW	½	..	..	..	10	..
10	29·669	37·0	37·0	0·0	35·5	1·5	22·4	S by E	..	..	..	SW	½	..	..	..	10	..
12	29·584	38·0	37·9	0·1	..	..		S	..	..	..	SSW	¼	..	..	..	10	Transit
14	29·502	40·5	40·7	-0·2	..	..	45·2	S	0 to ½	..	..	SW	½	..	..	..	10	..
16	29·422	41·5	41·4	0·1	40·0	1·5	19·0	S	..	..	..	SW	½	..	..	..	10	..
18	29·371	42·0	42·0	0·0	..	..	..	S	..	S	2·17	SW	¼	..	..	..	10	..
20	29·346	44·0	44·2	-0·2	..	..	..	SSW	..	..	..	SW	¼	..	..	..	10	..
22	29·419	43·5	43·6	-0·1	43·0	0·5	..	WSW	..	SW	0·97	W	¼	0·44	0·20	0·835	10	..
Jan. 4. 0	29·476	47·2	46·8	0·4	..	..	..	W by S	..	..	..	W by S	¼	..	..	..	10	..
2	29·529	49·5	48·7	0·8	..	..	..	W	..	..	..	W	¼	..	..	..	10	..
4	29·580	49·7	48·7	1·0	48·0	1·7	..	W	..	W	1·87	WSW	¼	..	..	..	10	..
6	29·616	49·8	48·2	1·6	..	..	52·2	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·649	45·5	45·6	-0·1	..	..	43·7	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·646	43·3	43·3	0·0	43·0	0·3		Calm	..	..	..	Calm	..	..	..	..	8	..
12	29·638	45·4	45·2	0·2	..	..	52·0	Calm	..	..	..	S by W	¼	..	..	..	10	Transit
14	29·589	47·1	47·2	-0·1	..	..	40·7	Calm	..	..	..	Calm	..	..	..	..	10	..

The day referred to in the foot-notes is always to be understood as that of Civil Reckoning, unless the time of observation be mentioned, and then it is referred to Astronomical Reckoning.
The comparisons in the foot-notes are limited to the month and to the ordinary observations, unless the contrary is expressed: for the values referred to, see the pages on which the notes appear, or [the Abstracts.
Jan. 1d and 2d. Every part of each instrument was minutely examined, and found to be in perfectly good order.

BAROMETER.—Jan. 2d. The daily range was the greatest in the month.

DRY THERMOMETER.—Jan. 0d. 22h, 1d. 0h, and 20h. The readings were lower than those of the Wet Thermometer. The reading at 0d. 22h was 14°·5 less than that at the preceding observation.
Jan. 2d. 18h. The reading was the lowest in the year: that of the Minimum Thermometer as read at 22h was the lowest in the year.
Jan. 3d. The mean daily temperature was the least in the month. Jan. 3d. The daily range was the greatest in the month.
Jan. 3d and 4d. The greatest difference for the year in the mean daily temperatures for consecutive days occurred.
Jan. 3d. 14h, 20h, and 22h; and 4d. 8h and 14h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.—Jan. 1d and 2d. The difference in the mean daily values was considerable.
Jan. 2d. 16h. The observed Dew Point was the lowest in the year; the same reading occurred on Dec. 5d at 22h. Jan. 3d. The mean daily temperature was the least in the month.
Jan. 3d and 4d. The difference in the mean daily values was the greatest in the month; it was also the greatest in the year.

REMARKS.	Observer.
Overcast: cirro-stratus and scud: the wind in gusts to 2.	P
,, ,, the wind in gusts to $2\frac{1}{2}$: lulls frequent: large drops of rain falling.	
,, ,, ,, ,, no rain.	
,, ,, rain falling rather heavily: the wind suddenly decreased a short time after the last observation.	P
,, snow falling: at $20^h. 40^m$ sleet, mixed with rain, began to fall, and continued to do so until $21^h. 40^m$, when snow first [began to lie on the ground: the temperature has decreased $14^\circ{\cdot}5$ since 20^h.	D
Overcast: snow falling.	
,, no snow has fallen since $0^h. 30^m$.	D
A few clouds scattered around the horizon in the W. and S.: generally hazy in the horizon.	P
A few patches of scud only scattered here and there.	
A few clouds in the W. horizon: scud in rather large quantities have occasionally passed over since the last observation.	
Cloudless.	P
Thin clouds scattered about the sky.	D
Overcast: the Moon's place is just visible: a very perfect lunar halo appeared at $12^h. 10^m$; the diameter was 46°.	
,, cirro-stratus.	
,, snow commenced falling immediately after the last observation, and still continues.	
,, no snow falling.	D
Cirro-stratus and scud.	J H
Vapour, principally S. of the zenith.	
,,	J H
Vapour in the horizon.	D
Cloudless: hazy.	
,, ,,	
,, ,,	D
Nearly cloudless.	J H
Light clouds W. of the zenith.	
Nearly cloudless.	
Cloudless.	
Cirro-stratus and scud.	J H
Cirri and undefined clouds.	P
Cirri and undefined clouds, chiefly in the S. and S. E.	
Scud covering the sky with the exception of a trifling break or two about the zenith: the clouds move slowly from S. by W.	P
Cirro-stratus and scud: snow gradually disappearing.	J H
,, ,,	
,, ,, the thaw continues.	
Cirro-stratus: rain falling.	J H
Cirro-stratus and scud.	P
Cirro-stratus: rain falling.	
,, a thin rain is falling.	P
,, the clouds are much lighter.	D
Cirro-stratus,	
Overcast: cirro-stratus. [the preceding observation: a rather dense fog.	D
,, ,, the cirro-stratus is in many parts of the sky very thin, and breaks have been more than once visible since	P
Cirro-stratus and scud (there being an upper current from the W. N. W.): a thick fog.	
Cirro-stratus and scud: the clouds are occasionally broken about the Moon.	
Breaks in the zenith, and in other parts of the sky.	P
Overcast: cirro-stratus.	D
,, ,,	

ELASTIC FORCE OF VAPOUR, AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.—Jan. 3^d. The mean daily values were the least in the month.

MINIMUM FREE THERMOMETER.—Jan. $0^d. 22^h$. The reading is the temperature of the air at this time, but it is higher than that of the Dry Thermometer.
Jan. $1^d. 22^h$. The reading is higher than that of the Dry Thermometer at 12^h.
Jan. $2^d. 22^h$. The reading is higher than that of the Dry Thermometer at 18^h.
Jan. $3^d. 22^h$. This reading is the temperature of the air at $2^d. 22^h$, and it is higher than that of the Dry Thermometer at the same time. The temperature of the air was constantly increasing from $2^d. 22^h$ to $5^d. 2^h$, with slight exceptions.

OSLER'S ANEMOMETER.—Jan. $0^d. 17^h. 45^m$, the direction was S.S.W.; at $18^h. 35^m$ the direction was S.W.; and at $18^h. 40^m$ it was N.N.W. After 18^h the pressure gradually decreased.
Jan. $1^d. 0^h. 18^m$. The direction suddenly changed from N.N.W. to S.S.E.; at $0^h. 40^m$ the direction was S.; and at 1^h, S.S.W.

WHEWELL'S ANEMOMETER.—Jan. $0^d. 16^h$. The amount of the descent of the pencil, between $0^d. 12^h$ and $0^d. 16^h$, is estimated.

CLOUDS.—Jan. $2^d. 0^h$ to 20^h. The amount of cloud during this period was small.
Jan. $3^d. 2^h$ to $5^d. 16^h$. The sky during this period was covered with cloud, with the exception of a small interval of time, about $4^d. 10^h$; it is the longest period of cloudy weather in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 4. 16	29·576	49·0	49·2	–0·2	49·0	0·0	..	SSW	..	..	..	SSW	¼	..	..	..	10	..
18	29·539	50·3	49·8	0·5	..	..	..	SW	0 to ½	..	..	SW	½	..	..	..	10	..
20	29·536	49·8	49·1	0·7	..	..	..	SSW	0 to ½	..	..	SSW	½	..	..	..	10	..
22	29·530	51·6	50·7	0·9	49·2	2·4	..	SW	½ to 1	SW	2·63	WSW	¾	0·44	0·00	0·865	10	..
Jan. 5. 0	29·510	52·5	51·4	1·1	..	..	..	SSW	0 to 1½	SW	0·75	WSW	¾	..	..	..	10	..
2	29·468	52·8	51·1	1·7	..	..	..	SW	0 to 1	WSW	0·63	WSW	¾	..	..	..	10	..
4	29·432	51·6	50·8	0·8	50·0	1·6	..	SSW	½ to 1½	SW	0·92	SSW	¾	..	..	..	10	..
6	29·384	51·1	50·4	0·7	..	..	53·7	SW	½ to 2½	..	..	SSW	1	..	..	..	10	Full
8	29·352	50·4	50·2	0·2	..	..	45·8	SW	1 to 3	SSW	3·60	SSW	1	..	..	..	10	..
10	29·310	50·3	49·8	0·5	49·0	1·3		WSW	1 to 2½	SW	0·40	SSW	1	..	..	..	10	..
12	29·269	50·8	50·3	0·5	..	..	52·2	WSW	½ to 3½	..	..	SW	1½	..	..	..	10	Transit
14	29·214	49·8	49·3	0·5	..	..	44·0	WSW	½ to 4½	SSW	1·02	SW	1½	..	..	..	10	..
16	29·152	48·8	47·8	1·0	46·0	2·8		WSW	2 to 4½	..	..	SW	2½	..	..	..	10	..
18	29·110	49·0	47·0	2·0	..	..	..	W	½ to 1½	..	..	SW	1+	..	..	..	7	..
20	29·108	47·0	45·5	1·5	..	..	..	W	½ to 1½	SW	2·01	SW	1	..	..	..	0	..
22	29·111	46·9	45·8	1·1	45·0	1·9	..	WSW	0 to ½	SSW	0·50	SSW	¼+	0·64	0·39	1·240	7	..
Jan. 6. 0	29·109	48·0	46·2	1·8	..	..	..	SW	½ to 3	..	..	SSW	½	..	..	..	3	..
2	29·094	49·6	47·0	2·6	..	..	..	SW	0 to ½	..	..	SW	¼	..	..	..	9	..
4	29·120	47·3	44·9	2·4	42·0	5·3	..	SW	0 to ½	..	..	SW	¼	..	..	..	1	..
6	29·135	44·1	42·4	1·7	..	..	50·8	SW	..	..	..	SW	¾	..	..	..	3	..
8	29·151	42·4	41·3	1·1	..	..	37·8	SW	0 to 1	..	..	SW	¾	..	..	..	1	..
10	29·178	42·6	41·8	0·8	41·0	1·6		W S W	...	WSW	3·58	SW	¾	..	..	..	4	..
12	29·222	44·7	43·4	1·3	..	..	53·6	W by S	0 to ½	..	..	SSW	½	..	..	..	10	..
14	...	..	..	..	..	..	36·2	W	0 to 1	..	..	..	..	..	..	..	..	Transit
16	...	..	..	..	..	..		W	0 to 1½	W	2·62	..	..	..	..	..	..	..
18	...	..	..	..	..	..	..	W by S	0 to ½	..	..	..	..	..	..	..	..	..
20	...	..	..	..	..	..	..	W by S	..	..	..	..	..	..	..	..	..	..
22	29·461	40·0	38·2	1·8	..	..	..	WSW	..	WSW	0·70	WSW	½	0·64	0·00	1·240	0	..
Jan. 7. 0	...	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
2	29·460	44·8	41·2	3·6	..	..	..	W	..	..	..	WSW	½	..	..	..	7	..
4	...	..	..	..	..	..	..	WSW	..	W	2·23	..	..	..	..	..	..	..
6	...	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
8	...	..	..	..	..	..	45·5	SW	..	..	..	..	..	..	..	..	..	..
10	...	..	..	..	..	..	33·2	WSW	..	..	..	..	..	..	..	..	..	..
12	...	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	..
14	29·605	33·1	32·5	0·6	..	..	51·0	SW	..	..	..	Calm	..	..	..	..	2	Transit
16	29·621	34·5	34·0	0·5	33·5	1·0	29·0	SW	..	SW	0·74	Calm	..	..	..	..	10	..
18	29·643	33·5	33·2	0·3	..	..	..	WSW	..	..	..	Calm	..	..	..	..	0	..
20	29·694	33·2	32·9	0·3	..	..	..	W by S	..	..	..	Calm	..	..	..	..	0	..
22	29·752	34·5	33·4	1·1	31·0	3·5	..	WSW	..	WSW	1·01	WSW	¼	0·64	0·00	1·240	5	..
Jan. 8. 0	29·778	39·6	37·4	2·2	..	..	..	NNW	..	..	..	NNW	½	..	..	..	0	..
2	29·803	41·1	39·8	1·3	..	..	..	N by W	..	..	..	NNW	½	..	..	..	7	..
4	29·858	40·6	40·6	0·0	39·3	1·3	..	N	..	NNW	1·60	N by W	¼	..	..	..	10	..
6	29·928	40·2	39·5	0·7	..	..	42·1	NNE	..	..	..	N by W	¼	..	..	..	10	..
8	29·995	38·8	37·8	1·0	..	..	34·2	NNE	..	..	..	N by W	¼	..	..	..	10	..
10	30·038	37·8	36·9	0·9	36·5	1·3		NE	..	..	..	N by W	¼	..	..	..	10	..
12	30·099	37·4	36·2	1·2	..	..	48·0	NE	..	..	..	NE	¼	..	..	..	10	..
14	30·135	36·6	35·6	1·0	..	..	32·4	NE	..	NE	0·62	NE	¼	..	..	..	10	..
16	30·173	36·3	34·8	1·5	33·5	2·8		ENE	..	..	..	ENE	¼	..	..	..	10	Transit

BAROMETER.—Jan. 6d. The mean daily height was the least in the month.
Jan. 6d. 2h. The reading at this time was the lowest in the month.
Jan. 8d and 9d. Between these days the greatest difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.—Jan. 4d. 16h. The reading was higher than that of the Wet Thermometer.
Jan. 5d. The mean daily temperature was the highest in the month. Jan 5d. 2h. The reading was the highest in the month.

TEMPERATURE OF THE DEW POINT.—Jan. 5d. The mean daily temperature was the highest in the month.
Jan. 5d. 4h. The observed Dew Point was the highest in the month.
Jan. 5d and 6d; 8d and 9d. The difference in the mean daily values was considerable.

REMARKS.	Observer.
Overcast: cirro-stratus: a thin rain is falling.	D
,, ,, the Moon's place is visible.	
,, ,,	D
Cirro-stratus and scud.	J H
Overcast: cirro-stratus and scud.	
,, ,,	J H
,, ,,	D
,, ,, the wind in gusts: rain falling.	
,, ,, the rain has continued until within a few minutes of this observation.	
,, ,,	D
,, ,, scud flying rapidly over: the gusts of wind are very strong at intervals: the night is exceedingly	J H
,, ,, [mild for the time of the year.	
,, ,, rain falling.	
White fleecy clouds and scud.	
Cloudless.	J H
Scud and undefined clouds scattered in every direction: the wind occasionally increases to $\frac{1}{2}$.	P
Dark scud principally S. and S.W. of the zenith: the wind blowing in moderate gusts to about $\frac{3}{4}$.	
An extensive break in the western horizon, the rest of the sky being covered with dark scud; cirri are also seen in the break.	P
Cumuli and fleecy clouds.	J H
Scud principally N. of the zenith.	
Scud and light fleecy clouds.	
,, the clouds move from the W.N.W.	J H
Dark and broken scud: the clouds move from the W.N.W.: the wind in gusts to $\frac{3}{4}$.	P
Cloudless.	J H
Vapour and light clouds.	J H
[about four times her own diameter.	P
A compact mass of cloud S. and S.E. of the zenith, moving slowly from W.N.W.: a small coloured corona around the Moon,	
Overcast: cirro-stratus and scud: the sky became overcast at $14^h.40^m$, and has remained so until the present time.	
Cloudless.	
,, a small glory round the Moon.	P
Cirro-stratus and thick haze.	D
Cloudless: hazy.	
Cumul scattered equally over the sky.	D
Cirro-stratus and scud.	P
,, ,,	
,, ,,	
,, ,, a thin rain falling.	P
,, ,,	D
,, ,,	
,, ,,	

ELASTIC FORCE OF VAPOUR, AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

Jan. 5^d. The mean daily values were the greatest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

Jan. 5^d. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.

Jan. $4^d.22^h$. The reading was higher than that of the Dry Thermometer at 10^h.

Jan. $7^d.22^h$. The reading was higher than that of the Dry Thermometer at 14^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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 8. 18	30·189	36·0	34·3	1·7	..	..	..	ENE	..	ENE	0·85	ENE	¼	..	..	..	10	..
20	30·218	35·6	33·4	2·2	..	..	..	E by N	..	..	..	ENE	¼	..	..	..	10	..
22	30·259	35·5	33·2	2·3	29·0	6·5	..	ENE	..	E	0·55	ENE	¼	0·64	0·00	1·245	10	..
Jan. 9. 0	30·259	36·0	32·9	3·1	..	..	..	ESE	..	..	..	ESE	¼	..	..	..	10	..
2	30·252	35·7	32·0	3·7	..	..	..	SE	..	SE	0·89	SSE	½	..	..	..	4	..
4	30·259	33·6	30·7	2·9	26·0	7·6	..	E	..	..	..	ESE	¼	..	..	..	7	..
6	30·246	33·3	30·6	2·7	..	..		E by S	..	..	..	ESE	¼	..	..	..	10	..
8	30·234	33·1	31·2	1·9	..	..	43·6	SE	..	ESE	1·73	ESE	¼	..	..	..	10	..
10	30·226	32·9	31·7	1·2	28·0	4·9	30·7	SE	..	..	..	SE	¼	..	..	..	10	..
12	30·192	33·2	31·5	1·7	..	..		SSE	..	..	..	SE	½	..	..	..	10	..
14	30·163	34·5	33·4	1·1	..	..	43·6	SSE	..	..	..	SE	½	..	..	..	10	..
16	30·127	37·2	36·6	0·6	34·5	2·7	30·5	SSE	..	..	..	SSE	½	..	..	..	10	Transit
18	30·081	41·1	40·8	0·3	..	..	..	S	..	S	0·33	SSE	½	..	..	..	10	..
20	30·083	42·3	41·6	0·7	..	..	..	S	..	..	..	SSE	½	..	..	..	10	..
22	30·127	43·4	43·6	−0·2	43·5	−0·1	..	WNW	..	SSW	0·66	Calm	..	0·68	0·05	1·315	10	..
Jan. 10. 0	30·161	42·4	42·2	0·2	..	..	..	NNW	..	..	..	N by W	¼	..	..	..	7	In Equator
2	30·166	43·2	42·3	0·9	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
4	30·193	41·6	41·2	0·4	40·0	1·6	..	Calm	..	..	..	NNW	½	..	..	..	10	..
6	30·220	39·0	38·8	0·2	..	..		Calm	..	..	..	NNW	¼	..	..	..	10	..
8	30·227	39·0	38·7	0·3	..	..	44·2	SW	..	..	..	NNW	¼	..	..	..	4	..
10	30·222	41·0	40·2	0·8	39·0	2·0	36·4	WSW	..	..	..	Calm	..	..	..	..	10	..
12	30·232	40·7	39·8	0·9	..	..		SW	..	WSW	1·05	N	very light	..	..	..	10	..
14	30·237	38·8	38·9	−0·1	..	..	46·5	SSW	..	..	..	Calm	..	..	..	..	5	..
16	30·252	38·8	38·4	0·4	37·0	1·8	34·5	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·245	37·2	37·0	0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
20	30·251	36·8	36·7	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	30·272	40·4	40·1	0·3	39·5	0·9	..	SW	..	W	1·45	WSW	¼	0·68	0·00	1·320	9½	..
Jan. 11. 0	30·257	42·7	42·3	0·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	30·241	43·4	42·7	0·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	30·248	43·8	43·2	0·6	42·5	1·3	..	Calm	..	..	..	Calm	..	..	..	..	10	..
6	30·249	41·2	41·2	0·0	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
8	30·255	38·5	38·2	0·3	..	..	44·3	Calm	..	..	..	Calm	..	..	..	..	10	..
10	30·243	40·0	39·7	0·3	39·0	1·0	37·7	Calm	..	..	..	Calm	..	..	..	..	10	..
12	30·215	39·5	39·4	0·1	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·193	37·5	37·2	0·3	..	..	44·5	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·183	38·2	38·2	0·0	38·0	0·2	34·4	Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·153	38·0	38·0	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
20	30·147	37·5	37·6	−0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	7	..
22	30·137	38·7	38·5	0·2	38·0	0·7	..	Calm	..	SW	1·11	S	¼	0·68	0·00	1·320	9	..
Jan. 12. 0	30·107	41·9	41·4	0·5	..	..	..	S	..	..	..	S	¼	..	..	..	9	..
2	30·045	42·6	41·7	0·9	..	..	..	S by E	..	..	..	S	¼	..	..	..	9	..
4	29·997	42·0	41·8	0·2	41·5	0·5	..	SSE	..	..	..	S by E	¼	..	..	..	10	..
6	29·945	42·6	42·2	0·4	..	..		SSE	..	..	..	Calm	..	..	..	..	10	..
8	29·933	42·6	42·4	0·2	..	..	43·3	SSE	..	..	..	S	¼	..	..	..	10	..
10	29·891	42·1	41·2	0·9	40·5	1·6	39·2	SSE	..	..	..	S	¼	..	..	..	10	Last Quar.
12	29·881	41·6	41·2	0·4	..	..		SSE	..	..	..	S by E	¼	..	..	..	10	..
14	29·874	41·2	40·8	0·4	..	..	44·0	SSE	..	..	..	S by E	¼	..	..	..	10	..
16	29·868	40·7	40·4	0·3	40·0	0·7	42·0	SSE	..	SSE	2·39	S by E	¼	..	..	..	10	..
18	29·866	40·2	39·9	0·3	..	..	..	Calm	..	..	..	SSE	¼	..	..	..	10	Transit

BAROMETER.—Jan. 9d. 0h. The reading has been altered conjecturally from 30in·359, on the supposition that it was read 0in·1 in error.
Jan. 10d. 22h. The reading was the highest in the month.
Jan. 11d. The daily range was the least in the month.
Jan. 11d. The mean daily height was the greatest in the month.

DRY THERMOMETER.—Jan. 9d. 22h, 10d. 14h, and 11d. 20h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.—Jan. 9d and 10d. The difference in the mean daily values was considerable.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Jan. 11d and 12d. The mean daily values were the least in the month.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	D
,, ,,	D
,, ,,	J H
Overcast: cirro-stratus and scud.	
Scud and light clouds.	J H
Cirro-stratus and light fleecy clouds.	D
Overcast: cirro-stratus.	
,, ,,	
,, ,,	D
,, ,,	J H
,,	
,, damp air.	
,, drizzling rain.	
,, the rain has ceased: the clouds move from N. W.	J H
,, a thick misty air.	D
A thick film of cloud covers a large portion of the sky, the zenith being generally clear.	P
Cloudless, but very hazy in the horizon.	P
Stratus: hazy.	J H
Hazy: a thin cirro-stratus.	
Cirro-stratus and vapour: the sky was nearly clear about twenty minutes before the time of this observation.	
Cirro-stratus: a few stars are occasionally visible in the S. E. and zenith: there appears to exist but a thin cirro-stratus.	J H
Overcast: cirro-stratus.	P
It is cloudy all around the horizon, the cloud being a thin white stratus: the zenith is cloudless, and for a large space round it.	G
Cloudless. [of the Moon being visible: the changes are frequent.	
The sky has been alternately clear and cloudy since 16^h; it is at present cloudy, but the clouds are high and thin, the outline	
The sky is wholly covered with scud, but has at times been partially clear since 18^h.	G
Small breaks between the clouds, the small portions of blue sky together being equal to one-half of the sky.	P
Cirro-stratus and scud.	
Cirro-stratus: foggy.	P
,, ,,	G
,, ,,	
,, ,, a few stars are visible near the zenith.	
,, no fog: very dark indeed.	G
,, foggy: a thin rain is falling.	P
Cloudless.	
Overcast: a thin cirro-stratus.	
,, the cirro-stratus is more dense: foggy.	
Breaks in many directions, but chiefly S. and E. of the zenith: foggy.	P
Cirro-stratus and fleecy clouds.	D
Cirro-stratus and fleecy clouds.	
,,	D
Cirro-stratus: rain falling.	P
,, ,,	P
,, ,,	D
Overcast: rain falling.	J H
,, ,,	D
,, ,,	
,, ,,	
,, ,,	

WEIGHT OF A CUBIC FOOT OF AIR.—Jan. 10^d. The mean daily value was the greatest in the year.

Jan. 10^d and 11^d. The greatest difference in the mean daily values for consecutive days in the month occurred. This was also the greatest difference that occurred between any two daily values in the year.

DEGREE OF HUMIDITY.—Jan. 12^d. The mean daily value was the greatest in the month.

MINIMUM FREE THERMOMETER.—Jan. $11^d. 22^h$. The reading was higher than that of the Dry Thermometer at 14^h and 20^h.

OSLER'S ANEMOMETER.—Jan. $9^d. 20^h$. At this time the direction was S.; at $20^h. 50^m$ it was S.W.; at 21^h it was nearly W.; from $21^h. 40^m$ to $22^h. 30^m$ it was W.N.W.; and at $22^h. 40^m$ it was N.N.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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1. (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3. (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 12. 20	29·895	39·5	38·8	0·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·927	39·8	39·5	0·3	38·0	1·8	..	NNW	..	NNW	0·40	N	½	1·23	0·76	2·050	10	..
Jan. 13. 0	29·933	40·1	39·3	0·8	..	..	..	NNW	..	..	..	NNW	½	..	..	..	10	..
2	29·903	41·6	39·9	1·7	..	..	..	NNW	0 to ½	..	..	NNW	½	..	..	..	10	..
4	29·913	41·7	39·8	1·9	37·0	4·7	..	NNW	..	..	..	N by W	½	..	..	..	8	..
6	29·909	39·8	37·7	2·1	..	..		NNW	0 to 1	..	..	N by W	½	..	..	..	9	..
8	29·913	38·6	36·8	1·8	..	..	41·7	NNW	0 to 1	..	..	N by W	½	..	..	..	10	..
10	29·903	37·5	36·8	0·7	35·5	2·0	32·7	N	½ to 2	NNW	2·60	N by W	½	..	..	..	10	..
12	29·928	35·5	35·3	0·2	..	..		NE	..	..	..	NNE	½	..	..	..	10	..
14	..	..	..	..	..	..	42·0	ENE	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	34·5	NE	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	NE	..	NE	0·40	..	..	..	..	..	..	Transit
22	30·068	34·4	34·2	0·2	..	..	..	ESE	..	E	0·10	W	¼	1·43	0·25	2·275	10	..
Jan. 14. 0	..	..	..	..	..	..	..	ENE	..	NNE	0·41	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	NE	0 to 1	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NE	0 to ½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		NE	0 to 1	NE	1·12	..	..	..	..	..	..	..
8	..	..	..	..	..	..	38·1	ENE	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	28·3	NE	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		ENE	..	ENE	0·67	..	..	..	..	..	..	..
14	30·186	31·8	30·5	1·3	..	..	43·2	NE	..	..	..	NE	½	..	..	..	9	..
16	30·224	31·0	29·2	1·8	28·0	3·0	21·0	Calm	..	..	..	NE	½	..	..	..	0	..
18	30·238	30·7	29·4	1·3	..	..	..	NNE	..	..	..	NE	½	..	..	..	10	..
20	30·265	30·1	29·2	0·9	..	..	..	Calm	..	..	..	NE	½	..	..	..	9	Transit
22	30·265	30·1	31·9	–1·8	26·0	4·1	..	NNE	..	NE	0·39	NE	¼	1·43	0·00	2·275	0	..
Jan. 15. 0	30·260	34·0	31·6	2·4	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
2	30·233	34·2	31·9	2·3	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	Perigee
4	30·244	33·5	31·7	1·8	26·0	7·5	..	NE	..	..	..	NE	¼	..	..	..	9	..
6	30·249	33·0	31·7	1·3	..	..		ENE	..	..	..	NE	½	..	..	..	9	..
8	30·249	31·3	30·8	0·5	..	..	34·3	NE	..	..	..	ENE	½	..	..	..	7	..
10	30·244	30·0	30·1	–0·1	28·0	2·0	25·4	NE	..	NE	0·76	ENE	½	..	..	..	2	..
12	30·241	28·0	28·7	–0·7	..	..		NE	..	..	..	Calm	..	..	..	..	0	..
14	30·218	28·5	28·5	0·0	..	..	37·0	NNE	..	..	..	Calm	..	..	..	..	0	..
16	30·212	27·2	27·2	0·0	26·8	0·4	17·7	NNE	..	..	..	Calm	..	..	..	..	0	..
18	30·178	26·3	26·4	–0·1	..	..	..	NNE	..	..	..	Calm	..	..	..	..	0	..
20	30·196	26·5	26·4	0·1	..	..	..	N by E	..	..	..	Calm	..	..	..	..	10	..
22	30·196	26·8	26·7	0·1	26·0	0·8	..	Calm	..	NNE	0·61	Calm	..	1·43	0·00	2·275	1	Transit
Jan. 16. 0	30·179	30·5	29·8	0·7	..	..	..	N	..	..	..	Calm	..	..	..	..	0	..
2	30·132	34·0	31·8	2·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
4	30·111	32·5	31·9	0·6	31·5	1·0	..	Calm	..	..	..	Calm	..	..	..	..	0	..
6	30·093	33·0	31·8	1·2	..	..		Calm	..	..	..	Calm	..	..	..	..	9	..
8	30·096	34·1	32·7	1·4	..	..	36·8	NNW	..	..	..	Calm	..	..	..	..	8	Greatest declination S.
10	30·094	32·0	31·8	0·2	31·0	1·0	27·6	Calm	..	..	..	Calm	..	..	..	..	8	..
12	30·087	34·4	32·4	2·0	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·068	34·6	33·8	0·8	..	..	38·3	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·071	34·8	34·0	0·8	33·0	1·8	23·0	N	..	..	..	Calm	..	..	..	..	10	..
18	30·064	35·2	34·4	0·8	..	..	..	N	..	..	..	Calm	..	..	..	..	10	..

DRY THERMOMETER.
Jan. 14d. 22h, and 15d. 10h, 12h, and 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
Jan. 16d and 17d. The difference in the mean daily values was considerable.

WEIGHT OF A CUBIC FOOT OF AIR.
Jan. 15d and 16d. The least difference in the mean daily values for consecutive days in the month occurred.

REMARKS.	Observer.
Overcast: rain falling.	D
,, the rain has ceased.	J H
Overcast.	
Cirro-stratus and scud.	J H
,,	D
,,	
,,	
Scud: a thin rain is falling.	D
,, ,,	J H
Cirro-stratus and scud.	
	G
Cirro-stratus.	J H
Cloudless: hazy in the horizon: the stars are generally dim.	
Cirro-stratus and scud.	
,,	J H
Cloudless.	P
Overcast: thick scud: no upper cloud, the scud is broken in many parts, shewing small patches of blue sky.	
,, scud only, broken in many directions.	P
Detached clouds of no definite modification.	J H
Scud in dark masses.	
Vapour and scud: the amount of cloud varies instantaneously: at intervals three-fourths of the sky are without cloud.	
Vapour in the horizon, principally in N. and N. E.: the southern part of the sky is beautifully clear.	J H
Cloudless, but the stars look dim and small.	P
,,	
,,	
,, hoar frost.	
A thin film of cloud covers the whole of the sky: hoar frost.	P
A few light clouds: hazy.	D
Cloudless: hazy.	
,, ,,	D
,, ,,	P
Scud and stratus.	J H
The stars are shining only in the zenith: stratus.	D
The stars are principally seen in the S. and S. E.: vapour generally prevalent.	J H
Overcast: stratus.	D
,,	
,,	
,,	

OSLER'S ANEMOMETER.

Jan. 12^d. At 21^h. 20^m the wind suddenly changed from E. S. E. to N. N. W.

WIND BY ESTIMATION.

Jan. 13^d. 22^h. The direction by the Anemometer differs from that by Estimation.

CLOUDS.

Jan. 16^d. The mean daily value was the least in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 16. 20	30·081	33·5	33·2	0·3	..	..	..	N	..	..	..	Calm	..	..	..	..	1	..
22	30·107	36·4	35·2	1·2	34·5	1·9	..	N	..	NNE	0·82	Calm	..	1·43	0·00	2·275	10	Transit
Jan. 17. 0	30·110	39·0	37·6	1·4	..	..	..	N by W	..	..	..	N by E	¼	..	..	..	10	..
2	30·081	42·4	40·2	2·2	..	..	..	NNW	..	..	..	N by E	¼	..	..	..	10	..
4	30·086	42·6	41·3	1·3	40·0	2·6	..	N by W	..	..	..	N	¼	..	..	..	10	..
6	30·094	41·1	39·8	1·3	..	..	42·7	NNW	..	NNW	0·92	N	¼	..	..	..	8	..
8	30·100	41·5	40·7	0·8	..	..	36·5	WNW	..	..	..	NNW	¼	..	..	..	10	..
10	30·114	40·2	39·8	0·4	39·0	1·2		W	..	..	..	Calm	..	..	..	..	10	..
12	30·130	39·7	39·5	0·2	..	..	45·8	Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·119	39·3	38·9	0·4	..	..	36·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·121	39·6	39·0	0·6	39·0	0·6		Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·104	39·8	39·5	0·3	..	..	..	W	..	..	..	Calm	..	..	..	..	10	..
20	30·108	41·5	40·0	1·5	..	..	..	WNW	..	..	..	W	¼	..	..	..	10	..
22	30·117	41·8	40·0	1·8	39·0	2·8	..	W	..	WNW	1·70	Calm NNW	¼—	1·43	0·00	2·280	10	..
Jan. 18. 0	30·108	42·0	40·2	1·8	..	..	..	W	0 to ½	..	..	WNW	½	..	..	..	10	Transit
2	30·075	42·7	40·9	1·8	..	..	..	W	..	..	..	W	½	..	..	..	10	..
4	30·049	42·8	41·2	1·6	40·2	2·6	..	W	..	WNW	1·10	W	¼	..	..	..	10	..
6	30·052	42·7	40·5	2·2	..	..	43·4	W	..	..	..	WNW	½	..	..	..	10	..
8	30·060	41·7	39·9	1·8	..	..	39·2	W	..	..	..	WNW	½	..	..	..	10	..
10	30·057	42·5	40·2	2·3	38·0	4·5		W	..	NW	0·90	WNW	½	..	..	..	10	..
12	30·033	41·5	39·4	2·1	..	..	44·0	WSW	..	..	..	WNW	½	..	..	..	10	..
14	30·010	41·0	39·5	1·5	..	..	36·5	WSW	0 to ½	..	..	W	½	..	..	..	10	..
16	29·969	39·5	38·2	1·3	37·0	2·5		WSW	0 to ½	..	..	W	¾	..	..	..	3	..
18	29·955	39·3	38·2	1·1	..	..	..	WSW	0 to ½	..	..	W by S	¾	..	..	..	9	..
20	29·907	39·2	38·2	1·0	..	..	..	WSW	..	..	..	W by S	½	..	..	..	3	..
22	29·901	43·0	42·0	1·0	41·2	1·8	..	WSW	0 to ½	WSW	3·30	W by S	¼	1·43	0·00	2·280	9¾	..
Jan. 19. 0	29·871	46·1	44·0	2·1	..	..	..	WSW	1 to 2	..	..	WSW	1	..	..	..	10	..
2	29·817	46·5	43·9	2·6	..	..	..	W by N	½ to 4½	W	0·68	W	1	..	..	..	10	..
4	29·801	45·0	41·2	3·8	40·5	4·5	..	W	1½ to 2½	..	..	NW	¾	..	..	..	9	..
6	29·796	44·1	41·1	3·0	..	..	46·2	W	1 to 3	WNW	1·82	NW	1	..	..	..	10	New
8	29·819	42·8	39·4	3·4	..	..	37·4	WNW	½ to 3½	..	..	NW	2	..	..	..	5	..
10	29·847	41·2	38·6	2·6	36·5	4·7		W by N	0 to 2½	NW	1·52	NW	2	..	..	..	2	..
12	29·846	40·5	38·7	1·8	..	..	48·0	W	0 to 3	..	..	NW	¾	..	..	..	8	..
14	29·831	39·8	38·1	1·7	..	..	33·5	W	0 to 1	WNW	0·96	NW	1	..	..	..	10	..
16	29·832	41·5	39·8	1·7	..	..		NW	1½ to 3	..	..	NW	1½	..	..	..	10	..
18	29·857	39·8	36·5	3·3	..	..	..	NNW	0 to 1½	..	..	NW	1½	..	..	..	7	..
20	29·877	38·2	35·0	3·2	..	..	..	NW	..	..	..	NW	¼	..	..	..	10	..
22	29·916	37·7	34·8	2·9	31·5	6·2	..	NW	..	NW	2·03	NNW	¼	1·43	0·00	2·280	8	..
Jan. 20. 0	29·920	39·1	36·5	2·6	..	..	..	NNW	½ to 1	NW	0·30	NNW	¾	..	..	..	8	..
2	29·922	40·3	36·2	4·1	..	..	..	NNW	0 to ½	NNW	0·23	NNW	½	..	..	..	3	Transit
4	29·940	38·5	34·7	3·8	33·0	5·5	..	NNW	..	..	..	N	¼	..	..	..	0	..
6	29·958	37·6	34·2	3·4	..	..	43·3	NW	..	..	..	NNW	¼	..	..	..	10	..
8	29·960	34·5	32·7	1·8	..	..	33·2	Calm	.	N	0·76	Calm	..	..	..	..	8	..
10	29·961	32·7	31·5	1·2	31·0	1·7		SSW	..	..	..	NNW	½	..	..	..	8	..
12	29·913	34·6	33·8	0·8	..	..	49·0	WSW	..	..	..	W	¼	..	..	..	10	..
14	..	..	..	..	..	..	27·0	SW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	SW	..	WSW	1·97	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
22	29·806	42·5	40·6	1·9	..	..	..	W by S	..	W	0·44	W by S	½	1·43	0·00	2·280	10	..

BAROMETER.
Jan. 17d and 18d. The least difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.
Jan. 18d. The daily range was the least in the month.

TEMPERATURE OF THE DEW POINT.
Jan. 19d. 16h. The observation was inadvertently omitted.
Jan. 19d and 20d. The difference of the mean daily values was considerable.

REMARKS.	Observer.
Stratus in the horizon; with this exception the sky is now clear.	D
Scud: hazy.	J H
Scud : hazy.	
Light clouds : hazy.	J H
Overcast: cirro-stratus.	D
Cirro-stratus and haze.	
Overcast: cirro-stratus and vapour.	
,, very dark.	D
,, ,,	G
,, ,,	
,, ,,	
,, ,,	
,, ,, no change whatever throughout the night.	G
,, ,, hazy.	J H
Overcast: cirro-stratus: hazy.	
,, ,, ,,	J H
Cirro-stratus.	P
Cirro-stratus and scud.	G
,,	
,,	G
,,	J H
Overcast: cirro-stratus.	
Scud and vapour.	
Cirro-stratus and scud.	
,,	J H
The clouds broken in every direction, and small patches of blue sky visible.	P
Cirro-stratus and scud.	
,,	P
,, hazy: the wind blowing in gusts.	J H
,, ,, strong gusts of wind.	
Scud and heavy vapour.	
Heavy vapour: strong gusts of wind.	J H
Vapour obscuring all but the larger stars: wind in gusts to 1.	P
Overcast: gusts to 1½, and at times greater.	
,, gusts to 2: a few drops of rain are falling.	
The stars which are visible appear small and dim: lulls in the wind of some duration: gusts to 1½ and 2.	
Overcast: scud.	P
Cirro-stratus and scud.	D
Scud and vapour.	J H
Cumuli and loose fragments of scud.	D
Hazy in the horizon.	P
A thin film of cloud covers the whole sky, though but a few minutes since there were breaks in every direction: foggy.	
The larger stars are visible in and about the zenith, but appear faint, and are visible in other parts of the sky, from which it [would seem that they are chiefly obscured by vapour: a very dense fog prevalent.	
Heavy vapour.	J H
Overcast.	D
Overcast: cirro-stratus and scud: hazy: about twenty minutes before the observation breaks were visible in every direction.	P

MAXIMUM THERMOMETER.

Jan. $19^d.22^h$. The reading was lower than that of the Dry Thermometer at 2^h.

MINIMUM THERMOMETER.

Jan. $20^d.22^h$. The reading was higher than that of the Dry Thermometer at 10^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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 21. 0	..	..	..	..	..	..	..	W	0 to ½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	W	0 to ½	..	..	..	..	..	..	..	..	Transit
4	29·817	45·3	42·7	2·6	..	..	..	W	..	..	..	W by N	¼	..	..	..	10	..
6	29·829	43·8	42·1	1·7	..	..	45·7	WSW	..	WNW	1·08	WNW	¼	..	..	..	10	..
8	..	..	..	..	..	..	39·2	SW	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	48·0	Calm	..	..	..	..	..	..	..	..	..	..
14	29·849	40·6	39·8	0·8	..	..	35·6	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·830	39·7	39·3	0·4	38·5	1·2		Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·818	39·6	39·3	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·810	38·9	38·4	0·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·800	39·6	39·3	0·3	38·0	1·6	..	Calm	..	W	1·02	Calm	..	1·43	0·00	2·280	5	..
Jan. 22. 0	29·793	40·9	40·5	0·4	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	10	..
2	29·759	41·2	40·9	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·762	43·0	41·3	1·7	38·0	5·0	..	Calm	..	..	..	Calm	..	..	..	..	8	Transit
6	29·770	40·6	39·4	1·2	..	..	45·7	Calm	..	..	..	NE	¼	..	..	..	8	..
8	29·796	37·0	36·9	0·1	..	..	31·4	Calm	..	..	..	Calm	..	..	..	..	2	..
10	29·823	35·5	35·6	–0·1	35·5	0·0		Calm	..	..	..	Calm	..	..	..	..	0	..
12	29·842	33·5	33·7	–0·2	..	..	43·0	Calm	..	..	..	Calm	..	..	..	..	5	..
14	29·855	33·7	33·3	0·4	..	..	26·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·871	35·0	35·0	0·0	34·0	1·0		Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·877	35·0	34·7	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	8	..
20	29·912	33·7	33·5	0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·953	36·3	36·3	0·0	35·0	1·3	..	NNW	..	NW	0·13	Calm	..	1·43	0·00	2·285	10	..
Jan. 23. 0	29·971	39·7	39·4	0·3	..	..	..	N	..	..	..	NNW	¼	..	..	..	9	In Equator
2	29·964	40·9	39·5	1·4	..	..	..	NNE	..	..	..	NE	¼	..	..	..	10	..
4	29·993	40·8	38·4	2·4	36·5	4·3	..	NNE	..	..	..	NE	¼	..	..	..	10	Transit
6	30·012	40·0	37·8	2·2	..	..	43·3	Calm	..	..	..	Calm	..	..	..	..	10	..
8	30·034	39·1	36·9	2·2	..	..	36·2	Calm	..	..	..	Calm	..	..	..	..	10	..
10	30·051	38·8	36·7	2·1	35·0	3·8		Calm	..	..	..	Calm	..	..	..	..	10	..
12	30·064	38·2	36·1	2·1	..	..	52·3	Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·068	37·5	35·4	2·1	..	..	33·8	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·070	36·5	35·2	1·3	34·0	2·5		Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·074	36·2	34·7	1·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	30·090	35·8	34·7	1·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	30·106	36·5	35·3	1·2	34·0	2·5	..	Calm	..	..	0·00	ENE	¼	1·43	0·00	2·285	10	..
Jan. 24. 0	30·112	38·5	36·7	1·8	..	..	..	Calm	..	..	..	ENE	¼	..	..	..	3	..
2	30·107	39·5	36·5	3·0	..	..	..	Calm	..	..	..	ENE	¼	..	..	..	10	..
4	30·105	39·2	36·7	2·5	34·0	5·2	..	Calm	..	..	..	Calm	..	..	..	..	4	Transit
6	30·112	36·0	34·5	1·5	..	..	40·5	Calm	..	..	..	S by W	¼	..	..	..	1	..
8	30·137	32·5	31·7	0·8	..	..	30·5	Calm	..	..	..	S by W	¼	..	..	..	9	..
10	30·147	31·0	30·4	0·6	29·0	2·0		Calm	..	..	..	SSW	¼	..	..	..	2	..
12	30·169	30·2	29·6	0·6	..	..	45·5	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·168	32·8	31·7	1·1	..	..	24·5	Calm	..	..	..	Calm	..	..	..	..	5	..
16	30·178	31·6	30·9	0·7	30·5	1·1		SSW	..	..	..	Calm	..	..	..	..	3	..
18	30·166	32·7	32·2	0·5	..	..	..	SSW	..	..	..	Calm	..	..	..	..	0	..
20	30·179	32·0	31·8	0·2	..	..	..	SSW	..	..	..	Calm	..	..	..	..	1	..
22	30·183	35·6	34·7	0·9	33·5	2·1	..	SSW	..	SSW	1·22	W	¼	1·43	0·00	2·285	10	..

DRY THERMOMETER.

Jan. 22d. 10h and 12h. The readings were lower than those of the Wet Thermometer.

MINIMUM THERMOMETER.

Jan. 23d. 22h. The reading was higher than that of the Dry Thermometer at 20h.

Jan. 24d. 22h. The reading was higher than that of the Dry Thermometer at 12h.

REMARKS.	Observer.
Overcast: cirro-stratus and scud: a thin rain has, at intervals, been frequently falling since this morning's observation.	P
,, cirro-stratus: a gloomy day.	D
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
Light clouds and vapour: hazy.	J H
Stratus: foggy.	
,, ,,	J H
Cirro-stratus and light clouds: hazy.	D
,, ,,	
Vapour S. W. of zenith; the sky is otherwise clear.	
Cloudless.	D
Heavy vapour: a thick misty air.	J H
Overcast: a thick misty air.	
,, ,,	
Cirro-stratus and scud: the air clearer than at the last observation.	
Thin stratus.	J H
Cirro-stratus: a thick fog: damp and cold.	P
Light scud, broken in every direction: no fog.	
Cirro-stratus and scud.	
,,	P
,,	J H
,, a misty air.	
,, several flashes of lightning have been seen in the S. E. since $8^h. 55^m$.	J H
,,	P
Cirro-stratus.	
,,	
,,	
,,	P
Cirro-stratus and scud.	J H
Vapour: hazy: the clouds gradually disappeared about $22^h. 30^m$.	J H
,, ,, light clouds.	P
Vapour and thin cloud generally prevalent.	
A few clouds in the W. horizon: haze generally prevalent.	
A few stars faintly shining in and about the zenith: very hazy.	P
Near the horizon, all around, there are a few clouds: vapour prevalent.	G
Cloudless.	G
One half of the sky is now covered with cirro-stratus: vapour prevalent.	D
The stars are generally dim.	J H
Cloudless: very hazy.	J H
A few clouds only in the western horizon: hazy.	P
Thin and small cumuli cover the sky, with small patches of blue sky between them to no numerical amount: the upward rays of light from the Sun are marked on the clouds above him as they pass between the points of connexion of the cumuli: no upper cloud.	G

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 25. 0	30·165	39·1	37·8	1·3	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
2	30·106	43·0	41·3	1·7	..	..	..	SW	..	..	..	SW	¼	..	..	..	8	..
4	30·088	43·0	41·4	1·6	40·0	3·0	..	SW	..	..	..	SW	¼	..	..	..	10	..
6	30·074	41·7	40·0	1·7	..	..	44·0	SW	0 to ½	..	..	W	½	..	..	..	10	Transit
8	33·040	42·1	40·5	1·6	..	..	35·3	SW	..	..	..	W	½	..	..	..	8	..
10	30·032	41·1	41·0	0·1	39·5	1·6		SW	..	WSW	3·15	WSW	¾	..	..	..	10	..
12	30·028	41·0	40·7	0·3	..	..	47·2	W by S	..	..	..	W by S	¼	..	..	..	0	..
14	30·045	43·5	42·2	1·3	..	..	33·7	NNW	..	WNW	0·75	NW	¼	..	..	..	10	..
16	30·078	42·1	40·4	1·7	39·0	3·1		NNW	..	..	..	NNW	¼	..	..	..	10	..
18	30·093	41·6	41·0	0·6	..	..	..	NW	..	..	..	NW	¼	..	..	..	8	..
20	30·128	40·6	39·3	1·3	..	..	..	NW	..	..	..	NW	¼	..	..	..	10	..
22	30·152	39·8	37·7	2·1	35·5	4·3	..	NW	..	NW	0·65	NNW	¼	1·43	0·00	2·290	8	..
Jan. 26. 0	30·141	41·6	39·6	2·0	..	..	..	NW	..	WNW	0·22	NW	¼	..	..	..	10	..
2	30·132	44·1	40·9	3·2	..	..	..	NW	½ to 1	..	..	NW	¾	..	..	..	4	..
4	30·139	45·3	41·2	4·1	36·0	9·0	..	NW	0 to ½	..	..	NW	½	..	..	..	7	..
6	30·157	42·6	39·7	2·9	..	..	45·7	NW	..	..	..	NW	½	..	..	..	1	Transit
8	30·180	42·5	39·7	2·8	..	..	35·2	NW	..	NNW	2·18	NNW	½	..	..	..	0	..
10	30·190	42·0	39·8	2·2	37·0	5·0		NW	..	NW	0·28	NW	½	..	..	..	0	..
12	30·193	40·7	39·3	1·4	..	..	48·0	WNW	..	..	..	NW	½	..	..	..	1	..
14	30·193	36·7	36·2	0·5	..	..	33·0	Calm	..	W	0·32	W	½	..	..	..	2	..
16	30·170	36·5	36·1	0·4	..	..		SW	..	..	..	WSW	½	..	..	..	9	..
18	30·160	36·1	35·7	0·4	..	..	..	SW	..	..	..	WSW	½	..	..	..	10	..
20	30·160	39·2	38·2	1·0	..	..	..	SW	..	..	..	WSW	½	..	..	..	10	..
22	30·172	42·0	40·7	1·3	39·0	3·0	..	SW	..	WSW	1·59	WSW	¼	1·43	0·00	2·290	10	..
Jan. 27. 0	30·147	44·4	42·4	2·0	..	..	..	SW	..	..	..	WSW	¼	..	..	..	10	..
2	30·103	46·4	44·0	2·4	..	..	..	SW	..	SW	0·96	WSW	¼	..	..	..	10	1st Qr.
4	30·086	47·4	45·2	2·2	41·0	6·4	..	SW	..	..	..	WSW	¼	..	..	..	10	Apogee
6	30·093	46·8	44·8	2·0	..	..		SW	..	SSW	0·54	W	¼	..	..	..	10	Transit
8	30·081	46·1	44·5	1·6	..	..	48·0	SW	..	..	..	W	½	..	..	..	10	..
10	30·040	45·7	44·3	1·4	44·0	1·7	40·6	SW	..	..	..	W	½	..	..	..	10	..
12	30·041	44·2	43·5	0·7	..	..		SW	..	..	..	W	¼	..	..	..	10	..
14	...	..	..	..	..	..	51·0	SW	..	..	..	..	..	..	..	..	..	..
16	...	..	..	..	..	..	38·5	SW	..	..	..	..	..	..	..	..	..	..
18	...	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	..
20	...	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..	..
22	29·792	46·6	46·7	-0·1	46·5	0·1	..	SW	½ to 2½	SW	2·41	SW	1	1·43	0·02	2·325	10	..
Jan. 28. 0	...	..	..	..	..	..	..	WSW	0 to 1	WSW W	0·81 0·47	..	..	..	..	..	..	..
2	...	..	..	..	..	..	..	NW	1½ to 6	..	..	..	..	..	..	..	..	..
4	...	..	..	..	..	..	..	NW	1½ to 4	NW	2·39	..	..	..	..	..	..	..
6	...	..	..	..	..	..		WNW	..	..	..	..	..	..	..	..	..	..
8	29·770	43·6	40·3	3·3	..	..	52·3	WSW	..	..	..	WSW	¼	..	..	..	6	Transit
10	...	..	..	..	..	..	37·3	W	..	..	..	..	..	..	..	..	..	..
12	...	..	..	..	..	..		W	..	..	..	..	..	..	..	..	..	..
14	29·813	41·8	39·2	2·6	..	..	56·5	W	..	..	..	W	½	..	..	..	10	..
16	29·823	40·0	38·4	1·6	37·8	2·2	31·7	W	..	W	1·05	W	½	..	..	..	1	..
18	29·841	38·0	37·0	1·0	..	..	..	WSW	..	..	..	W	¼	..	..	..	4	..
20	29·861	37·5	36·5	1·0	..	..	..	SW	..	..	..	W	¼	..	..	..	0	..
22	29·895	38·8	37·7	1·1	36·0	2·8	..	SW	..	WSW	0·95	WSW	¼	1·43	0·00	2·330	2	..

DRY THERMOMETER.
Jan. 27d. 22h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
Jan. 26d. 16h. The observation was inadvertently omitted.

REMARKS.	Observer.
Overcast: cirro-stratus.	D
Cirro-stratus and fleecy clouds.	D
Overcast: thin cirro-stratus.	P
Cirro-stratus and scud.	G
Light fleecy clouds and scud.	J H
Overcast: cirro-stratus: rain falling slightly.	J H
Since the last observation the sky has been alternately clear and cloudy; at present it is cloudless.	D
Overcast: cirro-stratus.	
,, ,,	
Overcast, except near the zenith, where the stars are shining.	
Overcast: cirro-stratus.	D
Fleecy clouds and cirro-stratus.	J H
Cirro-stratus and scud: hazy.	
Vapour and light clouds: hazy.	J H
Cirro-stratus and light clouds: hazy.	D
Clouds in the horizon: hazy.	
Cloudless.	
,,	D
Light cirri: hazy: clouds appear to be coming up from the N. W.	J H
Vapour: stars appear dim.	
Cirro-stratus and scud.	
Overcast: cirro-stratus and scud.	J H
Cirro-stratus and scud.	P
,,	
Cirro-stratus and scud.	
,,	P
,,	J H
,,	
,,	
,, the Moon is visible between the clouds, or rather between the masses of scud, through a thin cirro-stratus.	J H
,, the clouds frequently disperse, and leave extensive breaks.	P
Overcast: cirro-stratus and scud: a thin rain falling.	D
Cirro-stratus and fleecy clouds: the afternoon has been generally clear.	D
Dark scud covering the whole sky: wind in gusts to $\frac{3}{4}$ or 1.	P
Clouds coming up from the West; the amount of cloud is very variable, for a short time it was clear, when it became suddenly overcast: gusts to $\frac{3}{4}$, the lulls being prolonged.	
The southern portion of the sky is nearly covered with cloud, the remainder being clear.	P
Cloudless: misty.	
Light clouds and vapour.	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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Jan. 29. 0	29·918	44·8	42·9	1·9	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	0	..
2	29·859	48·0	44·7	3·3	..	..	..	SW	..	WSW	0·80	WSW	¼	..	..	..	10	..
4	29·825	45·6	43·5	2·1	41·8	3·8	..	SSW	..	..	..	WSW	¼	..	..	..	10	..
6	29·755	45·8	44·0	1·8	..	..		SSW	½ to 1	SSW	1·10	SW	¾	..	..	..	10	..
8	29·683	47·4	46·2	1·2	..	..	50·4	SW	1 to 3½	SW	0·40	SW	1	..	..	..	10	Transit
10	29·655	48·9	47·8	1·1	46·2	2·7	39·7	SW	1½ to 4	..	..	SW	1½	..	..	..	10	..
12	29·631	49·2	48·2	1·0	..	..		SW	1 to 3	..	..	WSW	1	..	..	..	10	..
14	29·632	50·1	48·2	1·9	..	..	61·4	WSW	½ to 1	..	..	WSW	1	..	..	..	10	..
16	29·621	47·7	45·8	1·9	44·0	3·0	35·8	WSW	0 to ½	WSW	3·42	WSW	½	..	..	..	9½	..
18	29·656	48·0	44·7	3·3	..	..	..	WNW	0 to 3½	..	..	WNW	1½	..	..	..	8	..
20	29·791	47·0	42·3	4·7	..	..	..	WNW	0 to 1	..	..	W by N	¾	..	..	..	2	..
22	29·725	46·1	42·5	3·6	39·5	6·6	..	W	0 to 1½	WNW	1·42	WNW	1	1·43	0·00	2·340	2	..
Jan. 30. 0	29·744	48·3	42·9	5·4	..	..	..	WNW	1 to 4½	NW	0·83	WNW	1½	..	..	..	10	..
2	29·741	48·1	42·8	5·3	..	..	..	WNW	0 to 3½	NNW	0·37	WNW	1½	..	..	..	9	..
4	29·714	47·5	41·4	6·1	31·0	16·5	..	WNW	0 to 1½	NW	0·69	W by N	¾	..	..	..	1	..
6	29·667	43·6	39·8	3·8	..	..	..	WSW	0 to 1	W	0·14	WSW	½	..	..	..	0	..
8	29·549	43·1	40·7	2·4	..	..		WSW	0 to 3½	WSW	1·17	WSW	1½	..	..	..	10	..
10	29·522	39·2	39·2	0·0	39·0	0·2	48·5	WNW	1 to 4	WNW	1·22	W	1½	..	..	..	10	Transit
12	29·541	40·3	38·4	1·9	..	..	32·3	NW	2 to 7	..	..	WNW	2	..	..	..	10	..
14	29·583	38·8	36·4	2·4	..	..	56·5	NW	2 to 6	NW	1·00	WNW	2	..	..	..	9	..
16	29·644	37·0	33·7	3·3	31·0	6·0	32·6	WNW	0 to 3	WNW	1·33	W by N	1½	..	..	..	1	..
18	29·639	36·7	34·0	2·7	..	..	..	W by N	0 to 2½	W	0·15	W by N	1½	..	..	..	0	..
										WNW	0·32							
20	29·653	36·3	34·9	1·4	..	..	..	WNW	0 to 1½	W	0·04	W by N	1	..	..	..	10	..
										WNW	0·14							
22	29·699	34·2	33·3	0·9	31·0	3·2	..	NW	3 to 6	NNW	0·33	NW	1½	1·44	0·01	2·350	1	..
										NW	0·57							
Jan. 31. 0	29·697	37·0	35·7	1·3	..	..	..	NW	1 to 4	NW	2·45	NW	2	..	..	..	10	..
2	29·705	36·0	34·9	1·1	..	..	..	NW	0 to 5	NNW	2·30	NW	2	..	..	..	10	..
4	29·702	36·1	33·9	2·2	31·0	5·1	..	NW	0 to 1½	N	0·75	NW	1½	..	..	..	10	..
6	29·710	35·3	33·9	1·4	..	..	38·3	WNW	0 to 1	..	..	NW	1½	..	..	..	10	..
8	29·716	33·5	33·2	0·3	..	..	27·7	WNW	0 to 1½	..	..	NW	1	..	..	..	10	..
10	29·712	34·0	32·3	1·7	31·0	3·0		WNW	0 to 1	WNW	3 05	NW	1½	..	..	..	10	Transit
12	29·720	34·0	31·8	2·2	..	..	40·0	NW	0 to 1	..	..	NNW	½	..	..	..	10	..
14	29·743	32·0	30·0	2·0	..	..	23·8	NW	0 to 1	..	..	NNW	1	..	..	..	2	..
16	29·759	30·5	28·2	2·3	25·0	5·5	..	NW	0 to 1½	..	..	NNW	1½	..	..	..	0	..
18	29·781	29·2	27·9	1·3	..	..	..	NW	0 to 1½	..	..	NNW	1½	..	..	..	0	..
20	29·824	28·2	26·2	2·0	..	..	..	NW	0 to 1½	..	..	NNW	½	..	..	..	0	..
22	29·877	30·5	28·7	1·8	21·0	9·5	..	NNW	..	NW	1·20	NNW	¼	1·46	0·00	2·390	0	..
Feb. 1. 0	29·910	33·4	31·4	2·0	..	..	..	WNW	..	..	..	NNW	¼	..	..	..	0	..
2	29·924	34·8	32·2	2·6	..	..	..	WNW	..	NW	0·37	NNW	¼	..	..	..	0	..
4	29·926	35·2	33·6	1·6	25·5	9·7	..	W	..	..	..	WNW	½	..	..	..	0	..
6	29·920	32·5	30·7	1·8	..	..	35·4	W	..	W	0·34	W	¼	..	..	..	0	..
8	29·914	30·0	29·2	0·8	..	..	27·2	WSW	..	WSW	0·14	W	¼	..	..	..	0	..
10	29·867	28·2	27·7	0·5	24·0	4·2		S by W	..	..	..	W	¼	..	..	..	3	Transit
12	29·783	27·5	26·8	0·7	..	..	45·6	Calm	..	..	..	S	¼	..	..	..	10	..
14	29·670	29·8	28·7	1·1	..	..	20·8	Calm	..	SW	0·11	S by W	¼	..	..	..	10	..

BAROMETER.
Jan. 29d. 20h. This reading is undoubtedly 0in·1 too high; it should be 29in·691: the reading as taken has been inadvertently used in the Abstracts.

DRY THERMOMETER.
Jan. 30d. 4h. The greatest difference between its reading and that of the Wet Thermometer occurred: this is the greatest difference that has taken place since 1843, Oct. 18d. 4h.

TEMPERATURE OF THE DEW POINT.
Jan. 30d. 4h. The difference between the temperature of the air and the observed Dew Point was greater than at any other time during the month.
Jan. 30d, 31d, and Feb. 1d. The difference of the mean daily values was considerable.
Feb. 1d. The mean daily temperature was the least in the month; the same reading occurred also on the 13th day.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Feb. 1d. The mean daily value was the least in the month: the same values also occurred on the 13th and 20th days.

REMARKS.	Observer.
Cloudless: hazy.	D
Overcast: cirro-stratus and haze.	D
,, cirro-stratus: a few minutes before the observation a thin rain was falling.	P
,, ,, wind in gusts to 1.	
,, ,, wind in gusts to 1½, and increasing.	
Cirro-stratus and scud: wind in gusts to 2.	P
,, strong gusts of wind: a very mild night.	D
,,	
,,	
,, in the zenith the stars are shining.	
A few light clouds are scattered over the sky, and cirro-stratus in the S. and E. horizon.	D
Light clouds: scud passing rapidly over from the W. N. W.	J H
Scud in dark masses: strong gusts of wind: hazy, especially in the N. and N. E.	
Cirro-stratus and scud: the wind blowing in strong gusts.	J H
Small fragments of scud passing over rapidly: the wind in gusts to 1+.	D
Cloudless. [very unsettled: strong gusts of wind.	
Overcast: cirro-stratus and scud: the sky became cloudy soon after the last observation; at present the appearance of the sky is	
,, scud: rain falling, and gusts of wind to 2.	D
At this moment the sky is overcast with masses of scud; its appearance is very variable: at intervals the amount of cloud is not more than 3 or 4: several violent gusts of wind at about 11h. 45m: wind in strong gusts, but there are frequent lulls of short	J H
Scud in masses spread generally over the sky. [duration.	
At present the sky is nearly cloudless.	
No absolute cloud, though the stars appear dim: the gale continues.	
Cirro-stratus and scud: a squall of rain and wind at 19h.	J H
A few clouds only here and there: at 20h. 45m rain and sleet began falling, and about 21h. 20m snow fell thickly, soon covering the ground: it ceased about 22h, when the clouds broke: wind in gusts to 2, with prolonged lulls.	P
Cirro-stratus and scud: wind in heavy gusts to 2½ and 3.	
,, ,, squalls of hail and snow are frequent; occasionally, also, a few breaks occur: very dark and gloomy: snow mingled with sleet has again begun to fall.	P
Cirro-stratus and scud: occasional squalls of sleet.	J H
,,	
,, sleet falling slightly at intervals.	
,, squally, with sudden gusts of wind, though but little sleet falls.	J H
,, the Moon is frequently visible: occasional squalls, with sudden gusts of wind.	G
About one hour since, the clouds became broken about the place of the Moon, and shortly afterwards they all moved away to the W.: the Moon is now shining very brightly: a few clouds remain near the horizon in the W.: occasional gusts of wind to 1½.	
Cloudless: frequent strong gusts of wind to 2.	
,, ,,	
,, gusts of wind to 1, but less frequent.	G
,, hazy.	P
Cloudless: hazy.	P
,, ,,	J H
,,	G
,,	
,, [western hemisphere, where they are now principally.	
Immediately after the last observation fleecy clouds began to collect, first about the place of the Moon, and afterwards in the	G
Thin fleecy clouds cover the sky: a few minutes before the observation there were breaks in every direction.	P
Cirro-stratus and scud: the clouds are not dense, the Moon being distinctly visible through them.	

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Jan. 30d. The mean daily value was the greatest in the month.
DEGREE OF HUMIDITY.—Jan. 30d. The mean daily value was the least in the month.
MAXIMUM THERMOMETER.
Jan. 30d. 22h. The reading was set down 38°·5: it is altered to 48°·5, on the supposition that it was read 10° in error; and the latter number has been used in the [Abstracts.
MINIMUM THERMOMETER.
Jan. 29d. 22h. The reading at the time of observation is registered: the index was set 24 hours previously.
PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.
Jan. 30d. 10h. 10m. The pressure was 9 lbs, which gradually decreased to 1 lb. at 10h. 45m: at 12h. 15m there was a gust of 12 lbs.
Jan. 31d. 0h. 10m. A gust of 12 lbs. suddenly occurred; five minutes afterwards the pressure was only 1 lb.
RAIN.—Jan. 31d. 12h. The amount of rain collected in rain-gauge No. 4 during the month of January was 2in·42.

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. of Free Therm. / of Rad. Therm. read at 22ʰ.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 1. 16	29·511	32·8	31·4	1·4	31·0	1·8	..	SSE	..	..	..	S	½	..	..	..	10	..
18	29·484	32·1	31·4	0·7	..	..	..	SSE	..	..	..	SE	¼	..	..	..	10	..
20	29·427	32·7	31·9	0·8	..	..	..	Calm	..	..	..	SE	¼	..	..	..	10	..
22	29·394	32·4	31·9	0·5	30·0	2·4	..	E	..	SE	0·20	ESE	¼	1·46	0·00	2·390	10	..
Feb. 2. 0	29·378	33·0	32·3	0·7	..	..	..	ENE	..	..	..	Calm	..	..	..	..	10	..
2	29·351	32·5	31·6	0·9	..	..	..	E	..	..	..	E	¼	..	..	..	10	..
4	29·344	31·2	30·9	0·3	28·0	3·2	..	E	..	..	..	E	¼	..	..	..	10	..
6	29·364	30·0	29·7	0·3	..	..		E by N	..	..	..	E	¼	..	..	..	10	..
8	29·406	30·0	29·7	0·3	..	..	33·8	E by N	..	..	..	E	¼	..	..	..	10	..
10	29·460	31·0	30·7	0·3	29·2	1·8	28·0	ENE	..	E	1·21	E	¼	..	..	..	10	..
12	29·533	31·6	31·4	0·2	..	..		NE	..	..	..	ENE	¼	..	..	..	10	Transit
14	29·609	33·0	31·5	1·5	..	..	35·0	NE	..	ENE	0·53	ENE	¼	..	..	..	10	..
16	29·686	33·2	31·8	1·4	29·5	3·7	25·0	NE	..	..	..	NE	¼	..	..	..	10	..
18	29·751	33·0	31·4	1·6	..	..	..	NE	..	NE	0·62	NE	¼	..	..	..	10	..
20	29·811	33·0	31·5	1·5	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	10	..
22	29·848	30·6	30·3	0·3	25·0	5·6	..	N	..	NNE	0·65	N	½	1·54	0·19	2·605	6	..
Feb. 3. 0	29·864	33·1	32·5	0·6	..	..	..	N by W	..	..	..	N	¼	..	..	..	3	..
2	29·853	35·8	34·0	1·8	..	..	..	NNW	..	..	..	N	¼	..	..	..	3	..
4	29·846	36·5	34·4	2·1	32·0	4·5	..	NW	..	..	..	NNW	¼	..	..	..	9	..
6	29·838	35·6	33·9	1·7	..	..		NW	..	..	..	NNW	¼	..	..	..	10	..
8	29·832	35·0	33·7	1·3	..	..	37·2	NNW	..	NNW	1·00	NNW	¼	..	..	..	10	..
10	29·817	33·2	32·5	0·7	..	..	28·0	NNW	..	..	..	NNW	¼	..	..	..	9	..
12	29·817	32·8	32·2	0·6	..	..		NNW	..	..	..	N by W	¼	..	..	..	10	Transit
14	..	..	..	..	..	..	51·0	SW	..	WNW	0·90	..	..	..	..	..	..	..
16	..	..	..	..	..	..	25·8	SW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..	..
22	..	..	..	..	..	..	..	SSE	..	WSW	0·20	S by E	¼	1·54	0·00	2·605	10	Full
Feb. 4. 0	29·509	34·1	33·3	0·8	..	..	..	S	..	..	..	S	¼	..	..	..	10	..
2	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	S by E	..	S	1·05	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	35·2	NNW	0 to 1	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	29·0	NNW	0 to 1	N	1·15	..	..	..	..	..	..	..
										WNW	0·12							
12	..	..	..	..	..	..	35·0	NW	0 to ½	..	..	..	..	..	..	..	..	..
14	29·384	32·0	31·0	1·0	..	..	23·0	NW	..	..	..	NNW	½	..	..	..	0	Transit
16	29·350	31·6	30·9	0·7	29·5	2·1	..	WNW	..	NNW	0·28	NNW	¼	..	..	..	3	..
18	29·341	30·5	29·9	0·6	..	..	..	W	..	..	..	NNW	¼	..	..	..	8	..
20	29·329	29·8	29·3	0·5	..	..	..	WSW	..	..	..	NNW	¼	..	..	..	8	..
22	29·330	30·1	30·0	0·1	28·5	1·6	..	WSW	..	NW	0·50	Calm	..	1·54	0·00	2·605	10	..
Feb. 5. 0	29·305	33·5	31·6	1·9	..	..	..	N by W	..	..	..	NW	¼	..	..	..	2	..
2	29·299	34·8	33·0	1·8	..	..		N by W	..	..	..	N	¼	..	..	..	0	..
4	29·316	34·3	32·7	1·6	30·0	4·3	35·2	NNW	..	..	..	N by W	¼	..	..	..	1	..
6	29·346	30·9	31·4	-0·5	..	..	25·4	NNW	..	..	..	NNW	¼	..	..	..	1	..
8	29·385	29·1	29·3	-0·2	..	..		NNW	..	..	..	NNW	¼	..	..	..	1½	..
10	29·407	25·8	26·0	-0·2	25·0	0·8	47·4	Calm	..	..	..	WNW	¼	..	..	..	3	..
12	29·414	27·0	27·0	0·0	..	..	18·3	Calm	..	..	..	Calm	..	..	..	..	6	..
14	29·428	27·7	27·4	0·3	..	..	..	Calm	..	..	..	WNW	¼	..	..	..	10	Transit

DRY THERMOMETER.

Feb. 2ᵈ. The daily range was the least in the month.

Feb. 5ᵈ. 6ʰ, 8ʰ, and 10ʰ. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Feb. 3ᵈ. 10ʰ. The observation was inadvertently omitted.

REMARKS.	Observer.
Cirro-stratus and scud: the clouds are thicker, and the wind is rising.	P
,, snow has just begun to fall.	
,, snow thinly falling: the ground is covered.	P
,, ,,	D
Cirro-stratus and scud: snow thinly falling.	
Overcast: no snow is falling at present.	D
,, ,,	P
Cirro-stratus.	
,, snow thinly falling.	
,, ,,	P
,, no snow falling.	D
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	D
Light clouds and scud: hazy.	J H
Light clouds: hazy.	
,, ,,	J H
Cirro-stratus and scud: hazy.	D
Overcast: cirro-stratus.	
,, ,,	
Cirro-stratus and scud: a coloured corona around the Moon.	D
Overcast: stratus and vapour.	J H
Overcast: snow commenced falling shortly before 22^h.	
,, ,,	
Cloudless.	
Light clouds and scud.	
Scud and cirro-stratus.	
Scud and light clouds.	J H
Overcast: a thick mist.	G
Thin cirri and fleecy clouds scattered about the sky: hazy.	P
Cloudless: a dense haze prevails, especially in the S.	P
Light clouds: hazy.	J H
Scud in the S. and S.S.W.: hazy.	
Vapour in the N. and N.W. of the zenith.	
Vapour in every direction and very hazy: a few of the brighter stars only visible.	J H
Hazy, with fleecy clouds.	P
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. of Free Therm. / of Rad. Therm. read at 22^{h}.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 5. 16	29·434	27·2	27·2	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·441	29·5	29·5	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·446	29·6	29·8	–0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·471	31·7	30·9	0·8	30·0	1·7	..	Calm	..	NNW	0·60	Calm	..	1·54	0·00	2·605	7	..
Feb. 6. 0	29·479	35·3	33·4	1·9	..	..	..	SW	..	WNW	0·60	WNW	¼	..	..	..	1	..
2	29·457	38·5	36·3	2·2	..	..	..	SW	..	..	..	WSW	¼	..	..	..	2	..
4	29·426	38·0	36·9	1·1	34·0	4·0	..	SW	..	..	..	SW	¼	..	..	..	2	..
6	29·408	34·0	33·2	0·8	..	..	..	Calm	..	..	..	SW	¼	..	..	..	2	..
8	29·391	32·7	32·2	0·5	..	..	39·2	Calm	..	..	..	SW	¼	..	..	..	8	..
10	29·361	32·8	32·4	0·4	32·0	0·8	32·0	Calm	..	..	..	SW	¼	..	..	..	9½	..
12	29·334	32·6	32·3	0·3	..	..	55·0	Calm	..	..	..	Calm	..	..	..	..	9½	..
14	29·311	34·2	33·9	0·3	..	..	28·8	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·272	36·6	36·2	0·4	35·5	1·1	..	S	..	..	..	Calm	..	..	..	..	10	Transit
18	29·237	36·6	36·2	0·4	..	..	..	S	..	..	..	Calm	..	..	..	..	10	..
20	29·210	36·6	36·2	0·4	..	..	..	S	..	..	..	SSW	¼	..	..	..	10	..
22	29·143	38·2	37·9	0·3	36·0	2·2	..	S	..	SSW	2·90	SW	½	1·62	0·17	2·790	10	..
Feb. 7. 0	29·163	40·3	40·2	0·1	..	..	..	WSW	..	..	..	SW	½	..	..	..	10	..
2	29·177	41·7	40·5	1·2	..	..	..	WSW	..	..	..	SW	½	..	..	..	8	..
4	29·154	42·7	41·0	1·7	38·5	4·2	..	SSW	..	..	..	Calm	..	..	..	..	10	..
6	29·145	41·2	40·3	0·9	..	..	44·2	SSW	..	SW	0·70	Calm	..	..	..	..	10	..
8	29·079	40·2	39·9	0·3	..	..	32·2	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·049	43·0	40·2	2·8	40·0	3·0		Nearly calm	..	WNW	0·98	Calm	..	..	..	..	10	..
12	29·059	36·1	36·2	–0·1	..	..	46·2	W	0 to ½	..	..	W	¼	..	..	..	10	..
14	29·091	34·7	34·5	0·2	..	..	28·8	WSW	0 to 1	..	..	W	¾	..	..	..	1	..
16	29·144	32·6	31·9	0·7	30·0	2·6		WSW	0 to 1	..	..	W	¾	..	..	..	0	Transit
18	29·173	32·3	31·9	0·4	..	..	..	WSW	0 to 1	W	0·67	WSW	¾	..	..	..	2	..
20	29·210	32·2	31·2	1·0	..	..	..	SW	0 to ½	..	..	WSW	¾	..	..	..	2	..
22	29·262	34·5	33·2	1·3	31·0	3·5	..	SW	0 to 1½	WSW	0·13	WSW	¾	1·83	0·11	3·025	0	..
Feb. 8. 0	29·284	39·0	36·2	2·8	..	..	..	SW	2 to 4	..	..	WSW	1	..	..	..	0	..
2	29·275	41·0	37·5	3·5	..	..	..	SW	2 to 3	..	..	WSW	1	..	..	..	½	..
4	29·249	41·3	38·0	3·3	35·0	6·3	..	SW	1½ to 3½	..	..	WSW	1	..	..	..	½	..
6	29·256	35·1	34·5	0·6	..	..	..	SW	0 to ½	WSW	6·00	WSW	¾	..	..	..	7	..
8	29·250	35·0	34·2	0·8	..	..	42·9 32·7	SSW	0 to ½	..	..	WSW	1	..	..	..	2	..
10	29·235	34·6	33·7	0·9	32·0	2·6		SSW	0 to ½	..	..	WSW	1	..	..	..	1	..
12	29·221	33·2	32·4	0·8	..	..	53·0	SSW	..	..	..	WSW	¼	..	..	..	0	..
14	29·189	33·5	32·7	0·8	..	..	29·1	SSW	..	..	..	Calm	..	..	..	..	0	..
16	29·132	33·5	32·7	0·8	32·0	1·5	..	SSW	..	..	..	WSW	¼	..	..	..	10	Transit
18	29·097	33·8	33·2	0·6	..	..	..	SSW	..	..	..	WSW	¼	..	..	..	9½	Perigee
20	29·097	32·7	32·2	0·5	..	..	..	SSW	..	..	..	WSW	¼	..	..	..	7	..
22	29·091	33·9	33·1	0·8	30·5	3·4	..	SSW	..	SW	3·02	W by S	¼	1·83	0·00	3·025	1	..
Feb. 9. 0	29·084	37·0	34·8	2·2	..	..	..	W by S	..	..	..	W by S	¼	..	..	..	1	..
2	29·061	39·6	37·4	2·2	..	..	42·4	WSW	0 to ½	..	..	W by S	¼	..	..	..	3	..
4	29·036	40·5	38·0	2·5	36·8	3·7	32·2	SW	0 to ½	..	..	WSW	¼	..	..	..	9½	..
6	29·046	34·7	34·9	–0·2	..	..		WSW	0 to ½	..	..	WSW	¼	..	..	..	10	..
8	29·047	35·5	35·5	0·0	..	..	58·0	WSW	..	..	..	WSW	¼	..	..	..	7	..
10	29·065	35·3	35·2	0·1	34·2	1·1	30·8	WSW	..	WSW	2·10	WSW	¼	..	..	..	10	..
12	29·105	34·2	33·4	0·8	..	..	..	NNW	..	..	..	Calm	..	..	..	..	10	..

DRY THERMOMETER.

Feb. $5^{d}. 20^{h}$, $7^{d}. 12^{h}$, and $9^{d}. 6^{h}$. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Feb. $5^{d}. 16^{h}$. The observation was inadvertently omitted.

Feb. 6^{d}, 7^{d}, and 8^{d}. The differences of the mean daily values were considerable.

WIND BY OSLER'S ANEMOMETER.

Feb. $7^{d}. 10^{h}$ the direction was S.W.; at $10^{h}. 10^{m}$ it was N. by W.; and after that time it gradually veered to W.S.W. by $12^{h}. 40^{m}$.

REMARKS.	Observer.
Cirro-stratus and scud: a thick fog.	P
Cirro-stratus: foggy.	
,, ,,	P
Cirro-stratus and scud: hazy.	J H
Light clouds: hazy.	
,, ,,	J H
Light clouds in the S. and S.W.	P
Dark clouds of no definite modification in the W. and S.W.	
The stars in and about the zenith are shining faintly, being obscured by vapour.	
A few stars only are visible in the zenith, the rest of the sky being covered with dark scud.	P
A few stars are seen between the clouds, which are white cirro-strati; there are some clouds in lines running E. and W.: at times a coloured corona is visible around the Moon: the Moon is at present shining brightly through a break in the clouds.	G
Shortly after 12^h the sky became overcast, and at $13^h. 20^m$ a thin rain began to fall, and still continues.	
Overcast: cirro-stratus: at times a thin rain has been falling: the Moon has not been visible since 14^h.	
,, ,, no rain falling: not a break since 10^h.	
,, ,, a slight rain has been falling during the last hour.	G
,, ,,	J H
Overcast: cirro-stratus.	
,, cirro-stratus and scud.	J H
,, ,,	G
,, cirro-stratus: rain has been falling about half an hour.	
,, ,, rain has been falling without intermission since the last observation.	
,, ,, continued steady rain since 8^h.	G
,, the rain has just ceased.	J H
Nearly cloudless: strong gusts of wind occasionally.	
Cloudless. ,,	
Scud in various directions: strong gusts of wind.	
Nearly cloudless.	J H
Cloudless: hazy: the wind in gusts to 1 +, and increasing.	P
Cloudless: hazy: the wind in gusts to 1½.	
A few cumuli and light scud: the wind in gusts to 1½ +.	P
A few light clouds.	J H
Cirro-stratus and scud: a squall of rain and hail at $4^h. 30^m$: the Electrometer has not been affected, except by a sudden but slight start in the pith balls shortly before the squall.	
Vapour, principally S. of the zenith.	
,,	J H
Cloudless, but the stars are dim from the prevalence of vapour.	P
,,	
Loose scud covers the sky.	
Nearly overcast.	
A thin film of cloud covers nearly the whole of the sky.	P
Light clouds: hazy.	J H
Light vapour: hazy.	
Light clouds: cumuli.	J H
A few small breaks in different directions.	P
Overcast: cirro-stratus and scud: at $5^h. 45^m$ a shower of sleet and snow fell, which ceased at 6^h.	
The stars shining dimly in and round the zenith: misty and damp.	
Cirro-stratus: very dark: damp.	P
,, ,, snow has been falling about twenty minutes, during which time the bell of the Electrometer has been constantly ringing.	G

DIRECTION AND PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Feb. $9^d. 5^h. 35^m$. A sudden gust of 4½ lbs., with a change of direction from S.W. to W., and a gradual decrease of pressure to nothing: at $5^h. 50^m$ the direction, also, gradually changed to S.W.; at $11^h. 20^m$ the direction was W.S.W.; at $12^h. 0^m$ it was N.N.W.; at $12^h. 20^m$ it was W. by N.; and at $12^h. 35^m$ it was N.N.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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 9. 14	29·129	33·8	33·8	0·0	..	..	..	NNW	..	..	..	Calm	..	..	..	..	10	..
16	29·161	33·6	33·7	−0·1	33·5	0·1	..	N by W	..	..	..	Calm	..	..	..	..	10	..
18	29·214	33·2	33·4	−0·2	..	..	..	N	..	..	..	Calm	..	..	..	..	10	Transit
20	29·262	32·0	31·9	0·1	..	..	..	N	..	..	..	ENE	¼	..	..	..	3	..
22	29·317	33·5	33·2	0·3	31·0	2·5	..	N	0 to ½	N	2·70	Calm	..	1·83	0·33	3·180	8	..
Feb. 10. 0	29·363	35·0	34·5	0·5	..	..	..	N	0 to 1	NNW	0·20	NNW	¼	..	..	..	10	..
2	29·393	36·8	35·5	1·3	..	..	..	N by W	0 to 1	..	..	NW	¾	..	..	..	7	..
4	29·417	38·2	35·5	2·7	30·5	7·7	..	NNW	0 to 1	NW	1·20	NNW	¾	..	..	..	7	..
6	29·469	35·2	33·4	1·8	..	..	38·4	NNW	..	..	..	N by W	¼	..	..		4	..
8	29·511	34·0	32·1	1·9	..	..	31·7	NNW	..	..	..	NNW	½	..	..	..	6	..
10	29·549	35·0	32·9	2·1	32·0	3·0		NW	..	..	..	NNW	½	..	..	..	10	..
12	29·572	34·6	32·5	2·1	..	..	45·5	NW	..	..	..	NNW	½	..	..	..	10	..
14	..	..	..	..	..	..	27·8	WNW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	WNW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..	Last Quarter Transit
20	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..	..
22	29·676	33·6	32·2	1·4	..	..	..	NNW	..	NNW	2·12	NNW	½	1·83	0·00	3·180	10	..
Feb. 11. 0	..	..	..	..	..	..	..	NNW	0 to ½	NNW	0·10	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	NNW	0 to ½	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		NNW	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	37·2	NNW	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	30·2	NNW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		NNW	..	..	..	..	..	..	..	..	..	..
14	29·876	31·7	31·0	0·7	..	..	43·0	NNW	..	..	..	N	½	..	..	..	10	..
16	29·870	31·0	30·5	0·5	29·0	2·0	27·2	NNW	..	..	..	N	½	..	..	..	10	..
18	29·874	30·7	30·0	0·7	..	..	..	NNW	..	..	..	N by W	½	..	..	..	10	..
20	29·896	30·4	29·7	0·7	..	..	..	NW	..	..	..	N by W	½	..	..	..	10	Transit
22	29·920	31·3	30·5	0·8	27·0	4·3	..	NW	..	N	2·58	N by W	¼	1·83	0·00	3·180	10	..
Feb. 12. 0	29·913	31·8	31·2	0·6	..	..	..	N by W	..	..	..	Calm	..	..	..	..	10	..
2	29·882	32·5	31·9	0·6	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..
4	29·885	33·6	32·7	0·9	30·0	3·6	..	Calm	..	..	..	NE	½	..	..	..	1	..
6	29·895	30·6	30·2	0·4	..	..		Calm	..	..	..	NNE	½	..	..	..	4	..
8	29·916	28·8	29·0	−0·2	..	..	31·7	N by E	..	..	..	NNE	½	..	..	..	10	..
10	29·929	26·0	25·7	0·3	23·0	3·0	24·5	Calm	..	..	..	NNE	½	..	..	..	10	..
12	29·948	26·2	26·2	0·0	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·946	25·5	25·7	−0·2	..	..	38·4	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·947	25·6	25·7	−0·1	25·5	0·1	20·2	Calm	..	..	..	Calm	..	..	..	..	10	Greatest declination S.
18	29·954	25·3	25·3	0·0	..	..	..	Calm	.	..	..	Calm	..	..	..	..	10	..
20	29·976	24·7	24·9	−0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
22	30·000	26·1	25·8	0·3	24·5	1·6	..	Calm	..	N	0·03	Calm	..	1·83	0·00	3·180	10	..
Feb. 13. 0	30·013	26·3	26·3	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·989	29·3	29·3	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·986	29·5	30·2	−0·7	28·2	1·3	..	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·987	28·2	28·7	−0·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
8	30·003	26·0	26·7	−0·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..

BAROMETER.

Feb. 13^{d}. The daily range was the least in the month.

DRY THERMOMETER.

Feb. 9^{d}. 16^{h} and 18^{h}, and 12^{d}. 8^{h}, 14^{h}, 16^{h}, and 20^{h}. The readings were lower than those of the Wet Thermometer.

Feb. 13^{d}. The mean daily temperature was the least in the month.

Feb. 13^{d}. 4^{h} to 14^{h}. At all the observations between these times the readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Feb. 13^{d}. The mean daily temperature was the lowest in the month.

REMARKS.	Observer.
Overcast: cirro-stratus: very dark: sleet falling.	G
,, ,,	
,, ,, there was a slight fall of snow at $16^h.50^m$, the bell of the Electrometer ringing during its continuance.	
At $17^h.50^m$ the clouds became broken, and the Moon shortly afterwards became visible; large masses of dark scud were passing under her for half an hour from the E. N. E.: a few clouds only now remain in the E.	G
Scud and light fleecy clouds.	J H
Cirro-stratus and scud.	
Scud and light clouds.	J H
White fleecy clouds, below which is scud, the whole moving from the N. N.W., the motion of the latter being apparently much quicker than that of the former; from the rapidity of the movement of the scud, there are frequently large portions of blue sky and as frequently very small portions visible: the Sun is frequently shining.	G
Scud generally scattered over the sky.	J H
Very hazy in the N. and W.: the South clear.	J H
Cirro-stratus: very dark.	P
,, a few of the brighter stars occasionally appear.	J H
A dense cirro-stratus: a little snow has fallen this morning: the day has been cloudy throughout.	G
Cirro-stratus: very dark.	J H
,, ,,	
,,	
,,	J H
Dense cirro-stratus.	G
Dense cirro-stratus.	P
,,	P
Light clouds.	J H
Scud and haze.	
Overcast: foggy.	
,, ,, very dark.	J H
,, a very dense fog.	P
,, ,,	
,, ,,	
,, ,, hoar frost.	
,, ,, ,,	P
,, ,,	D
Overcast: a thick fog: very dark.	
,, the fog is much thinner, the Sun being faintly visible through it.	D
,, dense and damp fog: the Sun is distinctly seen through it.	P
,, ,,	
,, ,,	

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR. Feb. 13^d. The mean daily value was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.—Feb. 13^d. The mean daily value was the greatest in the month.

DEGREE OF HUMIDITY.—Feb. 13^d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.—Feb. $9^d.22^h$. The reading was higher than that of the Dry Thermometer at 20^h.

PRESSURE OF THE WIND BY THE ANEMOMETER.—Feb. $12^d.4^h$, 6^h, 8^h, and 10^h. No pressures were shown by the Anemometer at these times, although the force of the wind by estimation was sensible.

CLOUDS.—Feb. $12^d.8^h$ to $13^d.12^h$. The sky during this period was, with few exceptions, covered with cloud; it is the longest period of cloudy weather in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 13. 10	30·005	24·5	25·2	-0·7	22·0	2·5	30·9	Calm	..	..	..	Calm	..	..	..	..	10	..
12	30·006	21·5	21·8	-0·3	..	..	20·0	Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·991	21·3	21·4	-0·1	..	..		Calm	..	..	..	Calm	..	..	..	..	7	..
16	29·961	21·2	21·2	0·0	19·5	1·7	31·8	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·964	21·2	21·1	0·1	..	..	16·6	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·961	22·3	22·2	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·986	28·6	28·2	0·4	27·5	1·1	..	Calm	..	..	0·00	Calm	..	1·83	0·00	3·180	10	Transit
Feb. 14. 0	29·971	34·5	32·0	2·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·928	38·3	36·2	2·1	..	..	..	S by W	..	..	..	Calm	..	..	..	..	10	..
4	29·916	40·1	37·7	2·4	34·5	1·6	..	S by W	..	..	..	SSW	¼	..	..	..	9½	..
6	29·911	37·8	36·1	1·7	..	..	41·2	S	..	..	..	SSW	¼	..	..	..	10	..
8	29·906	37·6	36·7	0·9	..	..	36·8	S	..	..	..	Calm	..	..	..	..	10	..
10	29·898	37·9	37·0	0·9	36·0	1·9		S	..	..	..	SSW	¼	..	..	..	10	..
12	29·877	38·1	37·3	0·8	..	..	50·5	S	..	..	..	SSW	½	..	..	..	10	..
14	29·866	38·1	37·4	0·7	..	..	29·3	S	..	..	..	SSW	¾	..	..	..	10	..
16	29·855	38·1	37·8	0·3	36·5	1·6		S by E	..	..	..	SSW	½	..	..	..	10	..
18	29·841	38·1	38·2	-0·1	..	..	..	S by E	..	..	..	SSW	½	..	..	..	10	..
20	29·841	35·7	35·2	0·5	..	..	..	S	..	..	..	SW	½	..	..	..	4	..
22	29·851	42·0	39·9	2·1	38·0	4·0	..	S	..	SSW	3·69	SW	¼	1·85	0·00	3·190	9	Transit
Feb. 15. 0	29·852	44·8	42·0	2·8	..	..	..	S W	0 to ½	..	..	SSW	¼	..	..	..	10	..
2	29·841	44·7	43·3	1·4	..	..	..	SSW	0 to ½	SW	0·63	SW	¼	..	..	..	10	..
4	29·832	44·5	42·8	1·7	40·5	4·0	..	SSW	0 to ½	..	..	SW	½	..	..	..	10	..
6	29·838	42·8	41·8	1·0	..	..	..	SSW	0 to ½	..	..	SW	½	..	..	..	10	..
8	29·843	42·1	42·1	0·0	..	..	45·7	SSW	0 to 1	..	..	SW	¾	..	..	..	10	..
10	29·872	42·6	42·8	-0·2	42·5	0·1	33·0	SSW	0 to ½	SSW	2·57	SW	¾	..	..	..	10	..
12	29·919	42·2	42·2	0·0	..	..	48·5	NNW	..	..	..	N	¼	..	..	..	10	..
14	29·943	41·0	39·8	1·2	..	..	25·2	NNW	..	..	..	N	¼	..	..	..	3	..
16	29·975	36·5	35·7	0·8	34·0	2·5	..	NNW	..	..	..	N	¼	..	..	..	2	..
18	29·998	36·0	35·2	0·8	..	..	..	NW	..	..	..	NW	½	..	..	..	1	..
20	30·030	34·0	33·2	0·8	..	..	..	W	..	..	..	W	¼	..	..	..	0	..
22	30·064	35·2	34·4	0·8	32·8	2·4	..	SW	..	NNW	2·08	SW	¼	1·88	0·01	3·225	3	..
Feb. 16. 0	30·088	40·8	38·2	2·6	..	..	..	WSW	..	WSW	0·26	WSW	¼	..	..	..	0	Transit
2	30·077	44·8	40·8	4·0	..	..	..	WNW	..	..	..	WNW	¼	..	..	..	0	..
4	30·085	45·5	41·2	4·3	35·0	10·5	..	WNW	0 to ½	WNW	0·81	NNW	½	..	..	..	5	..
6	30·102	41·7	39·4	2·3	..	..	45·9	WSW	..	..	..	W	very light	..	..	..	0	..
8	30·107	38·7	37·0	1·7	..	..	34·0	SW	..	..	..	W	½	..	..	..	0	..
10	30·108	36·5	35·4	1·1	34·0	2·5		SW	..	..	..	W	½	..	..	..	0	..
12	30·096	35·1	34·5	0·6	..		55·8	SW	..	..	..	Calm	..	..	..	..	0	..
14	30·067	34·3	33·8	0·5	..	..	27·8	SW	..	..	..	Calm	..	..	..	..	9¾	..
16	30·050	34·0	33·4	0·6	33·0	1·0		SSW	..	..	..	Calm	..	..	..	..	9¾	..
18	30·025	34·8	34·3	0·5	..	..	..	SSW	..	..	..	Calm	..	..	..	..	10	..
20	30·017	36·0	35·7	0·3	..	..	..	SSW	..	..	..	SW	¼	..	..	..	10	..
22	30·014	39·3	38·4	0·9	37·0	2·3	..	SW	..	WSW	3·63	WSW	¼	1·88	0·01	3·225	10	..
Feb. 17. 0	30·005	45·1	42·7	2·4	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	9½	Transit
2	29·961	46·3	43·4	2·9	..	..	..	SW	..	WSW	1·72	SW	¼	..	..	..	10	..
4	29·925	47·0	43·2	3·8	40·0	7·0	..	SW	..	..	..	SW	¼	..	..	..	9	..
6	29·915	42·7	40·3	2·4	..	..	..	SW	..	..	..	WSW	¼	..	..	..	7	..
8	29·935	40·5	39·2	1·3	..	..	..	SSW	..	SW	1·00	SW	¼	..	..	..	6	..

BAROMETER.
Feb. 16d. The mean daily height was the greatest in the month.
Feb. 16d. 10h. The reading at this hour was the highest in the month.
DRY THERMOMETER.
Feb. 13d. 16h and 18h. The readings were the lowest in the month.
Feb. 14d and 15d. The greatest difference of the mean daily temperatures for consecutive days in the month occurred.
Feb. 14d. 18h and 15d. 10h. The readings were lower than those of the Wet Thermometer.
TEMPERATURE OF THE DEW POINT.
Feb. 13d. 16h. The reading as observed was the lowest in the month.
Feb. 14d and 15d. The differences of the mean daily values were considerable.
Feb. 15d. The mean daily temperature was the highest in the month.

REMARKS.	Observer.
Overcast: a dense and damp fog.	P
,, the fog is now considerably thinner; the stars are visible in several parts of the sky.	D
,, the fog is again very dense.	
,, a dense fog.	
,, ,,	
Cirro-stratus and fog: every substance is beautifully covered with white frost.	D
,, white frost.	J H
Cirro-stratus and fog: white frost.	P
,, the white frost disappeared with remarkable rapidity within forty minutes after the last observation.	J H
Cirro-stratus and haze.	D
Overcast: cirro-stratus.	
,, ,,	
,, ,,	D
,, ,, a thin rain is falling.	J H
,, ,,	
,, ,,	
Cirro-stratus and scud.	
,,	J H
,, a few small breaks in various directions.	P
Cirro-stratus and scud: the clouds slightly broken in the N.W.	
Overcast: cirro-stratus and scud: a thin rain falling.	P
,, ,,	J H
,, ,, wind in gusts, and every appearance of rain.	
,, ,, wind in gusts: small rain falling.	
,, ,, ,, ,,	J H
,, ,, a slight rain continued falling till $11^{h}.20^{m}$: at this time the direction of the wind was N.N.W.	G
At about $13^{h}.30^{m}$ a break appeared near the horizon in the N., which has since extended itself so that all the N. is clear and a good part of the S.: near the S. horizon it is still black and cloudy: gentle airs from the N.	
A few clouds about the N., and a few near the horizon to the S.: vapour prevalent.	
The horizon is thick all around: vapour prevalent.	
Cloudless.	G
Light clouds and haze: the morning fine.	P
Hazy, but no absolute cloud.	
Hazy.	P
Pale blue sky around the zenith: a dark, loose kind of cumuli, with haze generally scattered about the other parts of the sky.	G
,,	
,,	
,,	G
Pale blue sky around the zenith, but the stars are dim and appear small.	P
A few stars only seen here and there.	
,,	
Cirro-stratus.	
Cirro-stratus and scud.	P
,,	D
Cirro-stratus and scud.	
Overcast: cirro-stratus.	D
Cirro-stratus and scud, the breaks being small and much scattered.	P
,,	
,, stars are visible here and there, but they look small and dim, apparently from vapour.	

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

Feb. 15^{d}. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.

Feb. $14^{d}.22^{h}$. The reading was set down $26^{\circ}\cdot8$; the temperature was rising throughout the day, and at the time of setting the instrument the reading of the Dry Thermometer was $28^{\circ}\cdot6$, and it is supposed that this should be the reading: $26^{\circ}\cdot8$ has been used in the Abstracts.

PRESSURE OF THE WIND.

Feb. $14^{d}.14^{h}$. No pressure was shewn by the Anemometer at this time, although the force as estimated was sensible.

AMOUNT OF CLOUDS.

Feb. $15^{d}.16^{h}$ to $16^{d}.12^{h}$. The sky was nearly cloudless; it is the longest clear period in the month.

Feb. 16^{d}. The mean daily value was the smallest in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 17. 10	29·894	40·2	39·0	1·2	37·0	3·2	..	S by W	..	..	..	SW	¼	..	..	..	10	..
12	29·876	37·2	36·8	0·4	..	..	49·4	S	..	..	..	Calm	..	..	..	..	2	..
14	..	..	..	..	..	..	37·3	S	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		S	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	56·0	S	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	32·2	S	..	..	..	..	..	..	..	..	..	..
22	29·729	43·4	41·6	1·8	..	..	..	S	0 to ½	SSW	3·17	WSW	½	1·88	0·00	3·225	10	New
Feb. 18. 0	..	..	..	..	..	..	..	S by W	0 to 1½	..	..	..	..	..	..	..	..	Transit
2	..	..	..	..	..	..	..	S by W	½ to 1½	..	..	..	..	..	..	..	..	..
4	29·647	43·5	42·2	1·3	..	..	..	S	½ to 3	..	..	SSW	¾	..	..	..	10	..
6	..	..	..	..	..	..		S	½ to 2½	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	46·4	S	½ to 3	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	40·4	S	½ to 3	..	..	..	..	..	..	..	..	..
12	29·438	43·9	43·4	0·5	..	..		SSW	2 to 3½	..	..	SSW	1½	..	..	..	10	..
14	29·404	44·1	43·6	0·5	..	..	50·3	SSW	½ to 1½	..	..	SSW	1	..	..	..	10	..
16	29·370	43·8	43·2	0·6	42·5	1·3	36·8	SSW	½ to 1	..	..	SSW	¾	..	..	..	6	..
18	29·362	40·9	40·4	0·5	..	..	..	SSW	..	SSW	6·11	SSW	½	..	..	..	2	..
20	29·311	41·0	40·1	0·9	..	..	..	SSW	0 to ½	..	..	SSW	½	..	..	..	3	..
22	29·266	45·8	43·6	2·2	43·5	2·3	..	SSW	½ to 3	SW	1·00	WSW	1	1·90	0·03	3·260	3	..
Feb. 19. 0	29·226	43·7	43·7	0·0	..	..	..	SW	½ to 3	SW	0·74	SW	1	..	..	..	10	..
2	29·191	46·5	43·9	2·6	..	..	..	WSW	1½ to 3½	..	..	SW	1	..	..	..	9	Transit
4	29·178	44·2	39·8	4·4	34·0	10·2	..	WSW	3½ to 5	..	..	WSW	1½	..	..	..	8	..
6	29·180	42·5	39·8	2·7	..	..		WSW	1½ to 4	WSW	2·54	WSW	1	..	..	..	10	..
8	29·252	39·3	37·1	2·2	..	..	49·5	W	1 to 3½	W	0·32	W	¾	..	..	..	10	..
10	29·398	34·6	33·8	0·8	32·0	2·6	29·7	NNW	½ to 3	..	..	NNW	¾	..	..	..	9	..
12	29·476	33·6	32·0	1·6	..	..		WNW	½ to 3	NW	1·80	W	1½	..	..	..	2	..
14	29·507	33·0	30·9	2·1	..	..	57·2	WNW	½ to 1½	..	..	W	1½	..	..	..	3	..
16	29·541	32·1	30·1	2·0	28·5	3·6	23·0	WNW	½ to 2½	..	..	W	1½	..	..	..	2	..
18	29·591	31·3	29·4	1·9	..	..	..	W by N	½ to 1½	..	..	WSW	1½	..	..	..	4	..
20	29·634	30·8	28·7	2·1	..	..	..	W	0 to ½	..	..	WSW	1½	..	..	..	1	..
22	29·668	33·0	31·0	2·0	24·0	9·0	..	W	½ to 1½	WNW	1·30	WNW	½	2·02	0·05	3·415	3	..
Feb. 20. 0	29·688	35·9	31·9	4·0	..	..	..	NW	0 to 1½	..	..	NW	¾	..	..	..	8	..
2	29·698	36·9	32·3	4·6	..	..	..	NNW	0 to ½	..	..	WNW	½	..	..	..	6	Transit
4	29·709	37·3	32·4	4·9	27·0	10·3	..	NW	..	..	..	NNW	¾	..	..	..	4	..
6	29·721	36·5	32·2	4·3	..	..		NW	..	NNW	1·30	NW	½	..	..	..	5	..
8	29·729	31·5	31·2	0·3	..	..	38·2	WSW	..	..	..	NW	½	..	..	..	3	..
10	29·714	30·1	28·9	1·2	26·5	3·6	27·3	SW	..	..	..	WNW	½	..	..	..	3	..
12	29·687	29·0	28·7	0·3	..	..		SW	..	..	..	Calm	..	..	..	..	1	..
14	29·648	28·7	28·2	0·5	..	..	50·9	SW	..	..	..	Calm	..	..	..	..	0	..
16	29·575	28·1	27·5	0·6	26·0	2·1	21·0	Calm	..	..	..	SSW	(¼–)	..	..	..	0	..
18	29·516	29·0	28·2	0·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·453	31·7	30·2	1·5	..	..	..	Calm	..	..	..	SSW	¼–	..	..	..	10	..
22	29·406	34·2	31·8	2·4	30·5	3·7	..	SSW	..	SSW	2·12	SSW	¼	2·02	0·00	3·415	10	..
Feb. 21. 0	29·339	35·6	34·9	0·7	..	..	..	Calm	..	..	..	SSW	¼	..	..	..	10	..
2	29·259	37·1	36·0	1·1	..	..	..	Calm	..	..	..	S by E	¼	..	..	..	10	Transit
4	29·183	36·8	36·2	0·6	36·0	0·8	..	E by S	..	..	..	ESE	(¼–)	..	..	..	10	..
6	29·137	35·5	35·2	0·3	..	..	..	E	..	..	..	E	(¼–)	..	..	..	10	..
8	29·132	35·0	34·7	0·3	..	..	..	Calm	..	..	..	E by N	¼	..	..	..	10	..
10	29·122	34·5	34·3	0·2	33·0	1·5	..	Calm	..	E	0·43	E by N	¼	..	..	..	10	..

BAROMETER.

Feb. 21d and 22d. The least difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.

Feb. 19d. The mean daily temperature was the greatest in the month.

TEMPERATURE OF THE DEW POINT.

Feb. 19d and 20d. The greatest difference in the mean values for consecutive days in the month occurred.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Feb. 20d. The mean daily value was the greatest in the month.

DEGREE OF HUMIDITY.—Feb 20d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cirro-stratus and scud.	P
Vapour: the stars are shining very dimly.	D
Cirro-stratus and scud: the wind in moderate gusts to $\frac{1}{2}+$ or $\frac{3}{4}$.	P
Cirro-stratus and scud: a thin rain has just commenced falling: gusts of wind to 1+.	P
Overcast: cirro-stratus and scud: strong gusts of wind.	D
,, ,, rain falling.	
,, ,,	
Clouds near the horizon; the sky is otherwise clear.	
Cirro-stratus S. of the zenith: loose fragments of scud have been continually passing over since the last observation.	D
Scud and fleecy clouds: wind in gusts.	J H
Cirro-stratus and scud: rain falling heavily: the squall commenced at about $22^h. 50^m$.	
,, gusts of wind.	J H
,, gusts of wind to 2.	D
,,	
,, rain falling.	
,, a few stars are shining N. of the zenith.	D
Heavy vapour in the S. W. and W.	J H
,, strong gusts of wind.	
,, ,,	
Cirro-stratus E. of the meridian.	
,, in the E. horizon.	J H
Thin clouds, with haze, chiefly in the South.	P
Cirro-stratus, cumulo-stratus, and haze: gusts of wind to 1+.	D
Cumuli, cumulo-strati, scud, and haze: the wind in gusts to $\frac{3}{4}+$: the morning has been fine throughout.	P
Scud and haze, principally S. of the zenith.	J H
Scud and cumuli with haze.	
Heavy vapour N. of the zenith. [haze have greatly prevailed N. of the zenith.	
,, gusts of wind: the southern sky has been very clear since the last observation, but vapour and	J H
The horizon seems lined with cloud or very dense haze, and the stars in every direction look dim and small.	P
Cloudless, but the stars look small and dim.	
,,	
Overcast: cirro-stratus and scud.	
,, ,,	P
,, ,, snow falling slightly.	J H
Overcast: cirro-stratus: sleet falling.	
,, ,, sleet falling slightly.	J H
Cirro-stratus and scud.	P
,,	
,, a thin rain falling.	
,, ,,	P

WEIGHT OF A CUBIC FOOT OF AIR.

Feb. 21^d and 22^d. The least difference in the mean daily values for consecutive days in the month occurred.

MINIMUM THERMOMETER.

Feb. $17^d. 22^h$. The reading was higher than that of the Dry Thermometer at 12^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Feb. $18^d. 22^h$ and $19^d. 0^h$. Between these times the pressure of the wind varied from 4 lbs. to 6 lbs.

Feb. 18^d. At 23^h a pressure of 6 lbs. was recorded; at $23^h. 5^m$ the pressure was only 2 lbs.; at $23^h. 15^m$ a gust to 7 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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 21. 12	29·137	34·3	34·1	0·2	..	..	39·1	Calm	..	..	..	E by N	$\frac{1}{4}$	..	..	..	10	..
14	29·146	32·7	32·6	0·1	..	..	32·0	E by N	..	..	..	Calm	..	..	..	..	10	..
16	29·128	32·5	32·2	0·3	31·0	1·5		E by N	..	..	..	ENE	$\frac{1}{4}$	..	..	..	10	..
18	29·117	32·5	32·2	0·3	..	..	41·6	ENE	..	..	..	ENE	$\frac{1}{2}$	..	..	..	10	..
20	29·129	32·7	32·4	0·3	..	..	33·5	ENE	..	..	..	NE	$\frac{1}{4}$	..	..	..	10	..
22	29·176	32·1	32·0	0·1	31·5	0·6		NE	0 to $1\frac{1}{2}$	ENE	1·89	NE	$\frac{1}{4}$	2·04	0·08	3·465	10	..
Feb. 22. 0	29·242	33·2	32·0	1·2	..	..	..	NE	$\frac{1}{2}$ to	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
2	29·299	33·5	32·0	1·5	..	..	..	NE	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
4	29·368	34·4	31·7	2·7	25·0	9·4	..	NNE	$\frac{1}{2}$ to 2	NNE	1·26	NE	$\frac{1}{2}$	..	..	..	10	Transit
6	29·446	33·2	30·9	2·3	..	..	34·8	N by E	..	..	..	NNE	$\frac{1}{2}$	..	..	..	8	..
8	29·545	29·4	28·8	0·6	..	..	23·2	N	..	..	..	N	$\frac{1}{4}$	..	..	..	0	..
10	29·599	28·1	27·7	0·4	24·0	4·1		NNW	..	..	..	Calm	..	..	..	..	0	..
12	29·643	27·5	26·7	0·8	23·5	4·0	34·6	NW	..	NE	0·52	Calm	..	..	..	..	0	..
14	29·674	24·6	24·1	0·5	20·5	4·1	15·5	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·681	24·4	23·8	0·6	20·0	4·4		Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·686	23·5	23·2	0·3	19·5	4·0	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·696	25·5	24·7	0·8	21·5	4·0	..	SW	..	..	..	Calm	..	..	..	..	0	..
22	29·703	31·1	30·3	0·8	27·0	4·1	..	SW	..	WSW	0·68	W	$\frac{1}{4}$	2·06	0·00	3·510	2	..
Feb. 23. 0	29·687	36·5	32·5	4·0	25·0	11·5	..	SSW	..	SW	0·90	WSW	$\frac{3}{4}$	..	..	..	2	..
2	29·610	38·7	34·7	4·0	33·5	5·2	..	S by W	0 to 1	SSW	0·78	WSW	$\frac{3}{4}$	..	..	..	10	Apogee
4	29·509	37·6	35·0	2·6	31·0	6·6	..	S	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	SSW	1	..	..	..	10	Transit
6	29·360	34·5	34·1	0·4	33·0	1·5	50·4	S	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	S	$\frac{3}{4}$	..	..	..	10	..
8	29·170	34·7	34·4	0·3	33·5	1·2	31·2	S	$3\frac{1}{2}$ to 5	..	..	S	$1\frac{1}{2}$	..	..	..	10	..
10	29·012	41·4	41·1	0·3	40·0	1·4		SSW	1 to $3\frac{1}{2}$	S	1·57	S	2	..	..	..	10	..
12	28·905	46·5	45·7	0·8	..	..	49·5	SW	4 to 6	SSW	0·55	SSW	3	..	..	..	10	..
14	28·796	48·3	47·4	0·9	..	..	26·0	SW	5 to 7	..	..	SSW	$2\frac{1}{2}$	..	..	..	10	..
16	28·689	48·3	48·2	0·1	47·5	0·8		SW	5 to 8	WSW	3·90	SSW	$2\frac{1}{2}$	..	..	..	10	..
18	28·756	39·5	39·7	−0·2	..	..	..	NW	$\frac{1}{2}$ to $1\frac{1}{2}$	NNW	0·60	SSW	2	..	..	..	10	..
20	28·879	37·2	36·2	1·0	..	..	..	WNW	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	W	$\frac{3}{4}$	..	..	..	6	..
22	28·988	38·5	37·4	1·1	34·0	4·5	..	W	$\frac{1}{2}$ to $1\frac{1}{2}$	WNW	1·38	WNW	1	2·06	0·39	3·893	4	..
Feb. 24. 0	29·061	43·3	39·4	3·9	..	..	..	WNW	$\frac{1}{2}$ to 3	WNW	0·26	W by N	$\frac{3}{4}$	..	..	..	10	..
2	29·125	43·2	39·2	4·0	..	..	..	NW	$\frac{1}{2}$ constant	..	..	NW	$\frac{3}{4}$	..	..	..	9	..
4	29·215	40·1	37·2	2·9	35·0	5·1	..	N by W	..	NW	1·22	N by W	$\frac{1}{4}$	..	..	..	10	Transit
6	29·325	37·6	35·7	1·9	..	..	44·0	N	..	..	..	N by W	$\frac{1}{4}$	..	..	..	6	..
8	29·438	35·8	34·4	1·4	..	..	33·4	Calm	..	N	0·48	N	$\frac{1}{4}$	..	..	..	10	..
10	29·503	33·1	32·2	0·9	31·0	2·1		Calm	..	..	..	Calm	..	..	..	..	4	..
12	29·537	33·3	32·5	0·8	..	..	49·5	SW	..	..	..	S	$\frac{1}{4}$−	..	..	..	7	..
14	..	..	..	..	..	..	27·0	WSW	..	WSW	0·67	..	..	..	..	..	..	..
16	..	..	..	..	..	..		SSW	..	SSW	0·45	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	S	0·45	..	..	..	..	..	..	..
22	29·359	43·2	43·1	0·1	..	..	..	SSW	..	SSW	0·42	SSW	$\frac{1}{4}$	2·06	0·00	3·893	10	..
Feb. 25. 0	29·315	45·6	45·3	0·3	..	..	..	SSW	$\frac{1}{2}$ to 2	..	..	SSW	$\frac{1}{2}$+	..	..	..	10	..
2	..	..	..	..	..	..	50·1	SSW	3 to 5	SSW	0·30	..	..	..	..	..	..	..
4	29·104	48·2	47·3	0·9	..	..	48·9	SW	4 constant	..	..	SW	$1\frac{1}{2}$	..	..	..	10	..
6	29·065	48·4	47·4	1·0	..	..		SW	3 to 5	..	..	SW	1	..	..	..	10	Transit
8	..	..	..	..	..	..	50·3	SW	$1\frac{1}{2}$ to 4	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	36·5	SW	$\frac{1}{2}$ to 2	SW	1·57	..	..	..	..	..	..	..
12	..	..	..	..	..	..	..	SSW	..	SSW	0·48	..	..	..	..	..	..	..

BAROMETER.—Feb. 24d. The daily range was the greatest in the year.

DRY THERMOMETER.—Feb. 23d. The daily range was the greatest in the month.

Feb. 23d. 14h and 16h. The readings were the highest in the month at the two-hourly observations; a greater reading than these occurred on the same day in extraordinary observations.

Feb. 23d. 18h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Feb. 22d. 12h. In consequence of the low temperature of the air the dew point was taken at every observation from this time.

Feb. 23d. 16h. The observed Dew Point was the highest in the month.

Feb. 23d and 24d. The difference of the mean daily values was considerable.

REMARKS.	Observer.
Cirro-stratus and scud: a thin rain falling.	G
,, sleet falling: very dark.	
,, ,,	
,, ,,	
,, no sleet falling.	G
Overcast: sleet and snow falling.	D
Overcast: sleet and snow falling.	D
,, cirro-stratus.	G
,, ,, [sky are seen; the clouds are also broken about the zenith; the rest of the sky is covered with scud.	
The horizon in the N. and E. is clear to an altitude of 5°, above which the clouds are much broken, and small portions of blue	G
Cloudless: the clouds gradually disappeared after the last observation.	D
,,	J H
,,	D
,,	
,,	
,,	
,,	D
Scud and light clouds.	J H
Hazy: light clouds principally S. of the zenith.	
Scud and vapour.	J H
Overcast: cirro-stratus.	D
,, ,, a thin rain and sleet falling: the wind in gusts to 1+.	
,, ,, rain falling: gusts of wind to 2+.	D
,, heavy rain falling in squalls: gusts of wind to 3.	G
The gale continues: no rain falling: gusts of wind to 4.	G
Overcast: rain falling: gusts of wind to 3½.	P
,, rain and violent gusts of wind.	J H
,, rain falling: the wind has somewhat abated. [scud.	J H
A great portion of the sky N. of the zenith is now clear; the remainder of the heavens is still covered with cloud, which is chiefly	D
Thin fleecy clouds appearing in all parts of the sky, but more particularly in the N. W.	G
Cirro-stratus and scud: wind in gusts to 1.	P
,,	G
,, hazy.	D
Scud in every direction, but chiefly N. of the zenith.	P
Cirro-stratus and scud.	J H
Light fleecy clouds and scud: clouds principally N. of the zenith.	
Cirro-stratus and scud.	J H
Overcast: cirro-stratus and scud: rain falling.	D
Overcast: cirro-stratus and scud: the rain has ceased.	
,, ,, strong gusts of wind: rain has been falling in frequent and heavy showers during the whole day.	
,, ,, rain falling.	D

MINIMUM THERMOMETER.

Feb. 24^d. 22^h. The reading was higher than that of the Dry Thermometer at 10^h and 12^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Feb. 23^d. 14^h. 15^m. The pressure was 12 lbs., from which it suddenly decreased to 6 lbs. in a few minutes afterwards: at 16^h. 50^m the pressure suddenly decreased from 7 lbs. to ½ lb.; after which time no pressure greater than 4 lbs. occurred during the remainder of the day.

Feb. 25^d. 6^h. 25^m. At this time a pressure of 8 lbs. was recorded: at 6^h. 40^m the pressure was 6 lbs., after which it decreased to 2 lbs.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 25. 14	28·789	44·0	43·2	0·8	..	..	..	SSW	..	..	..	W	½	..	..	..	10	..
16	28·708	42·8	41·9	0·9	39·0	3·8	..	SW	2 to 3½	SW	1·20	WSW	¾	..	..	..	9	..
18	28·698	40·0	39·0	1·0	..	..	..	SW	½ constant	WSW	1·20	WSW	¾	..	..	..	8	..
20	28·667	41·2	39·9	1·3	..	..	..	SSW	½ to 3	SSW	1·00	SW	¾	..	..	..	5	..
										WSW	1·40							
22	28·627	44·0	42·0	2·0	39·5	4·5	..	SW	½ to 3	SW	0·85	SW	½	2·06	0·25	4·125	10	1st Qr.
										WSW	0·50							
Feb. 26. 0	28·562	46·5	43·7	2·8	..	..	..	SW	1½ to 3½	..	..	SW	½	..	..	..	5	..
2	28·525	44·0	42·5	1·5	..	..	..	SW	1 to 4	SW	0·72	SW	¾	..	..	..	10	..
4	28·527	44·7	41·2	3·5	38·2	6·5	..	WSW	2 to 4½	WSW	0·79	SW	1½—	..	..	..	9	..
6	28·588	41·0	38·9	2·1	..	..	49·2	WNW	½ to 2½	W	0·77	SW	1	..	..	..	9	Transit
8	28·668	37·5	37·5	0·0	..	..	27·0	WNW	0 to 1	WNW	0·81	WSW	¾	..	..	..	10	..
10	28·773	34·2	33·5	0·7	32·0	2·2		N	2 to 3½	..	..	N	1	..	..	..	10	..
12	28·898	32·5	32·0	0·5	..	..	60·3	N	2½ to 4	..	..	N	¾	..	..	..	10	..
14	29·010	32·0	30·2	1·8	..	..	24·4	N	1 to 2½	..	..	N	¾	..	..	..	10	..
16	29·100	30·0	29·2	0·8	25·0	5·0		N	½ to 1	..	..	N	¾	..	..	..	8	..
18	29·163	28·5	27·7	0·8	24·0	4·5	..	N by W	½ to 1	..	..	N	¾	..	..	..	0	..
20	29·241	28·0	27·2	0·8	23·0	5·0	..	N by W	½ to 2	..	..	N	½	..	..	..	½	..
22	29·304	29·5	28·4	1·1	23·0	6·5	..	NNW	0 to ½	N	5·01	N	½	2·06	0·05	4·195	½	Greatest declination N.
Feb. 27. 0	29·337	32·6	31·4	1·2	..	..	..	N	0 to ½	N	0·34	N	¼	..	..	..	½	..
2	29·338	33·8	32·1	1·7	..	..	..	NNW	..	NNW	0·26	NW	¼	..	..	..	¼	..
4	29·340	36·2	31·2	5·0	24·0	12·2	..	WNW	..	NW	0·32	WNW	¼+	..	..	..	3	..
6	29·335	36·0	32·2	3·8	25·0	11·0	38·2	W	..	WNW	0·28	W by N	¼	..	..	..	6	..
8	29·346	33·9	31·7	2·2	..	..	29·2	WSW	0 to ½	WSW	0·69	W	¼	..	..	..	9¾	Transit
10	29·365	36·8	34·2	2·6	30·0	6·8		WNW	0 to 1	WNW	0·56	W	¾	..	..	..	10	..
12	29·394	34·7	33·4	1·3	..	..	53·5	W	0 to ½	..	..	W	½	..	..	..	8	..
14	29·411	34·1	32·3	1·8	..	..	28·0	W by S	..	..	..	W	¼	..	..	..	3	..
16	29·437	34·5	32·4	2·1	30·0	4·5		W by S	..	..	..	W	¼	..	..	..	6	..
18	29·459	35·3	32·8	2·5	..	..	..	W by S	0 to 2½	W	1·35	W	¾	..	..	..	4	..
20	29·510	34·7	32·8	1·9	..	..	..	WSW	..	WSW	0·58	WSW	¼	..	..	..	2	..
22	29·557	38·2	35·5	2·7	34·5	3·7	..	WSW	0 to 1	W	0·32	W	½	2·06	0·05	4·195	1	..
Feb. 28. 0	29·573	43·0	38·9	4·1	..	..	..	W	0 to 1½	..	..	W	½	..	..	..	9	..
2	29·555	45·4	40·5	4·9	..	..	..	W by S	½ to 3	W	1·00	W	½	..	..	..	2	..
4	29·527	43·5	39·2	4·3	32·0	11·5	..	WSW	0 to 2	WSW	0·76	W by S	¼	..	..	..	8	..
6	29·477	39·4	37·4	2·0	..	..	..	SSW	..	..	..	S	¼	..	..	..	10	..
8	29·423	38·1	37·3	0·8	..	..	46·5	SSW	½ to 2½	..	..	SSW	¾	..	..	..	10	Transit
10	29·384	40·9	39·8	1·1	38·0	2·9	32·2	SW	2 to 3	SSW	1·24	SW	¾	..	..	..	10	..
12	29·398	39·0	38·0	1·0	..	..	63·0	WSW	..	..	..	SW	¼	..	..	..	9	..
14	29·414	38·7	37·7	1·0	..	..	29·0	WSW	..	..	..	SW	¼	..	..	..	10	..
16	29·440	34·5	33·9	0·6	33·0	1·5	..	WSW	..	..	..	SW	¼	..	..	..	5	..
18	29·460	33·2	32·5	0·7	..	..	..	WSW	..	..	..	W	¼	..	..	..	1	..
20	29·472	33·2	32·7	0·5	..	..	..	WSW	..	..	..	W	¼	..	..	..	0	..
22	29·513	39·3	37·7	1·6	36·0	3·3	..	WSW	..	WSW	5·30	W	¼	2·11	0·05	4·270	1	..
Feb. 29. 0	29·514	44·0	41·7	2·3	..	..	..	SW	..	..	..	WSW	¼	..	..	..	4	..
2	29·502	48·2	43·5	4·7	..	..	..	SW	..	SW	1·02	WSW	¼	..	..	..	6	..
4	29·485	47·8	44·7	3·1	39·8	8·0	..	SSW	..	SSW	0·66	WSW	¼	..	..	..	6	..
6	29·463	44·7	43·7	1·0	..	..	..	S	..	..	..	SSW	¼	..	..	..	10	..

BAROMETER.—Feb. 26d. The least mean daily height in the year occurred.
Feb. 26d. 2h. The reading at this time was the lowest in the year.
Feb. 26d and 27d. The greatest difference in the mean daily heights for consecutive days in the year occurred.

DRY THERMOMETER.
Feb. 27d. 4h. The greatest difference for the month between its reading and that of the Wet Thermometer occurred.

TEMPERATURE OF THE DEW POINT.
Feb. 26d, 27d, and 28d. The differences of the mean daily values were considerable.
Feb. 27d. 4h. The greatest difference for the month between the temperature of the air and the observed Dew Point occurred at this time.

REMARKS.	Observer.
Cirro-stratus : very dark.	J H
Scud and cirro-stratus.	
Scud and vapour : the appearance of the sky is frequently changing from the prevalence of vapour.	
Scud and large cumuli.	J H
Cirro-stratus and scud.	P
[moderate gusts to ¾.	
Scud and fleecy clouds, dark and lowering in the South, and of a white cumulo-stratus character in the N.N.E.: wind in	
Overcast: a heavy squall of rain commenced at 1h. 55m, and ended at 2h. 5m : the wind in gusts to 1 + : squally.	P
Cirro-stratus, cumulo-stratus, and scud.	J H
,, the wind in gusts.	
,, heavy rain.	
,, strong gusts of wind.	J H
,, the wind in gusts to 1.	P
Cirro-stratus: the wind in gusts to 1. [layer of snow ; at present no snow is falling.	
The stars are shining faintly in and around the zenith, the rest of the sky being still overcast: the ground is covered with a thin	
Cloudless: the wind is now pretty constant.	
Patches of scud scattered about.	P
,,	D
Small cumuli in various directions.	
A few very small cumuli are the only clouds visible, and those are near the horizon in the N.	D
Light clouds and haze.	P
The greater portion of the sky is nearly covered with scud : the amount of cloud varies almost momentarily.	
A few breaks only in the neighbourhood of the Moon: the cloud consists entirely of scud.	
Cirro-stratus and scud.	P
The amount of cloud is continually varying ; at present the sky is nearly covered with scud, which is passing over rapidly at a low	D
Scud in various directions. [elevation : a corona is visible around the Moon.	
,,	
,,	
,,	D
Cirri thinly scattered about, and a few clouds of no definite modification in the horizon in the W.	P
Scud covering nearly the whole of the sky ; the amount is constantly varying.	P
Cumuli, cirri, and patches of scud : a thick haze in the N. and E.	H B
Cirro-stratus and scud.	D
,, a slight shower of rain fell at 4h. 20m.	
,, rain falling.	
,, the wind blew in gusts to 1 +	D
Half an hour since, the Moon was visible for a short time, and since that time a star or two and the Moon have been occasionally seen ; at present they are visible through the breaks in the clouds ; there appears to be no upper cloud.	G
For a short time since the last observation the sky was nearly cloudless ; it is at present nearly covered with scud, which has all come up from the N.W.	
The sky has been alternately clear and cloudy since the last observation ; the clouds move from the N., though they are at a low	
A few clouds in the N., otherwise the sky is cloudless. [elevation : at present about one half of the sky is clear.	
Cloudless.	G
A few cirri and light clouds principally in the horizon.	H B
Linear cirri and undefined clouds.	P
Cirri, cirro-cumuli, cumuli, and scud : the morning has been remarkably fine.	P
Cirri, cumuli, and a loose kind of cumuli and scud, the latter moving from the W.	H B
The sky is nearly wholly covered with a dark scud, the mass moving from the S. S. W.; above which is a whitish cloud, almost stationary.	G

WEIGHT OF A CUBIC FOOT OF AIR.

Feb. 26d. The mean daily value was the least in the month.

Feb. 26d and 27d. The greatest difference in the mean daily values for consecutive days in the month occurred.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Feb. 29. 8	29·406	43·5	42·7	0·8	..	..	49·4	S by E	0 to 1	..	..	SSW	¼	..	..	..	10	..
10	29·333	43·7	43·7	0·0	42·8	0·9	39·3	S by E	0 to ½	..	..	SSW	½	..	..	..	10	Transit
12	29·191	44·7	43·7	1·0	..	..		S by E	½ to 3½	..	..	S	¾	2·18	0·10	4·370	10	..
14	29·099	44·1	43·7	0·4	..	..	66·3	S by E	1½ to 3½	S	1·14	S	1	..	..	..	10	..
16	29·073	47·0	46·7	0·3	46·5	0·5	35·0	SW	0 to 1½	SSW	1·91	S	¾	..	..	..	10	..
18	29·114	46·5	45·2	1·3	..	..	..	WSW	..	..	..	WSW	½	..	..	..	10	..
20	29·196	45·0	43·5	1·5	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	9	..
22	29·272	46·6	44·8	1·8	43·0	3·6	..	WSW	..	WSW	1·99	WSW	¼	..	0·01	4·395	7	..
Mar. 1. 0	29·344	50·2	45·5	4·7	..	..	..	W by S	½ to 3	..	..	WSW	½	..	..	..	7	..
2	29·363	51·1	45·0	6·1	..	..	..	W by S	½ to 3	..	..	WSW	½	..	..	..	7	..
4	29·377	50·5	44·6	5·9	36·0	14·5	..	WSW	½ to 3	WSW	1·90	WSW	½	..	..	..	7	..
6	29·399	47·2	43·6	3·6	..	..	..	SW	..	..	..	SW	½	..	..	..	8	..
8	29·404	43·5	41·7	1·8	..	..		SSW	0 to ½	..	..	SW	½	..	..	..	2	..
10	29·359	41·6	40·5	1·1	40·0	1·6	52·2	SSW	0 to 1½	..	..	SW	¾	..	..	..	3	Transit
12	29·274	43·0	41·7	1·3	..	..	37·1	SSW	1 to 3	..	..	SSW	1	..	..	..	10	..
14	29·213	41·2	39·8	1·4	..	..	69·0	SSW	½ to 2	SSW	3·20	SSW	1	..	..	..	10	..
16	29·219	39·8	38·8	1·0	37·5	2·3	34·0	SW	3 to 6	..	..	WSW	2½	..	..	..	10	..
18	29·267	38·1	36·8	1·3	..	..	..	SW	½ to 1¾	..	..	WSW	¾	..	..	..	2	..
20	29·313	39·0	37·3	1·7	..	..	..	SW	½ to 2	..	..	WSW	¾	..	..	..	7	..
22	29·348	41·5	38·8	2·7	35·5	6·0	..	WSW	1½ to 3½	WSW	3·50	WSW	¾	..	0·03	4·460	4	..
Mar. 2. 0	29·372	43·0	39·7	3·3	..	..	..	SW	2 to 4½	..	..	WSW	¾	..	..	..	6	..
2	29·357	46·5	42·0	4·5	..	..	..	SW	1 to 3½	..	..	W by S	¾	..	..	..	7	..
4	29·311	47·6	42·4	5·2	36·5	11·1	..	SW	1½ to 3	..	..	SW	1	..	..	..	8	..
6	29·299	42·2	40·9	1·3	..	..		SW	¾ to 4	WSW	3·50	SW	1	..	..	..	10	..
8	29·303	39·0	37·8	1·2	..	..	49·2	SW	½ to 2	..	..	SW	¾	..	..	..	2	..
10	29·294	40·2	38·8	1·4	37·5	2·7	35·3	SW	½ to 1½	SSW	1·10	SW	¾	..	..	..	10	..
12	29·282	40·5	38·4	2·1	..	..	62·5	SW	1½ to 4	WSW	0·60	SW	1	..	..	..	10	Transit
14	..	..	..	..	..	..	33·0	SW	½ to 6	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		SW	½ to 3½	SW	1·75	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	SW	½ to 3½	WSW	0·45	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	SW	3 to 4½	..	..	..	..	..	..	..	..	..
22	29·273	44·4	41·2	3·2	..	..	..	SW	3 to 6	SW	3·60	WSW	2	..	0·09	4·550	8	..
Mar. 3. 0	..	..	..	..	..	..	..	SW	2½ to 7½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	SW	2 to 7	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	SW	2½ to 4	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	SW	1½ to 4	..	..	..	..	..	..	..	..	..
8	29·307	41·2	37·9	3·3	..	..	48·4	SW	2 to 3	..	..	WSW	2	..	..	..	0	..
10	..	..	..	..	..	..	38·6	SW	2 to 5	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		SW	1½ to 2	..	..	..	..	..	..	..	..	Transit
14	29·361	39·2	36·9	2·3	..	..	58·3	SW	1½ to 3	..	..	WSW	1¼	..	..	..	1	..
16	29·346	39·7	37·3	2·4	35·8	3·9	36·5	SW	..	..	..	W by S	¾	..	..	..	6	..
18	29·316	38·7	37·2	1·5	..	..	..	SSW	..	..	..	SSW	½	..	..	..	10	..
20	29·300	39·2	38·7	0·5	..	..	..	Calm	..	..	..	W	¼	..	..	..	10	..
22	29·236	39·0	38·7	0·3	37·0	2·0	..	ENE	..	..	9·60	NE	¼	..	0·20	4·725	10	..
Mar. 4. 0	29·169	37·3	37·0	0·3	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
2	29·117	37·3	37·1	0·2	..	..	..	N by E	½ constant	NNE	0·31	NE	¼	..	..	..	10	..

BAROMETER.
March 0d. 16h. The lowest reading in the month occurred.
March 1d. The mean daily height was the least in the month.

DRY THERMOMETER.
March 4d. The daily range was the least in the month.

TEMPERATURE OF THE DEW POINT.
March 4d and 5d. The difference of the mean daily values was considerable.

WEIGHT OF A CUBIC FOOT OF AIR.
March 1d. The mean daily value was the least in the month.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER.
March 1d. At 13h. 10m a pressure of 9 lbs. was shewn; at 13h. 15m a gust of 9¼ lbs. occurred, after which the pressure gradually decreased; at 15h. 30m a pressure of 6 lbs. occurred, and five minutes afterwards a pressure of 9 lbs: after this time the pressures are well represented at the regular observations.

REMARKS.	Observer.
Overcast: cirro-stratus: some rain has fallen since the last observation.	H B
Heavy rain with frequent gusts of wind to ¾.	H B
Cirro-stratus and scud: the wind in gusts to 1¾ +.	P
,, the wind in gusts to 1½.	
,, the wind in gusts to 1.	
,, the wind in gusts to ¾.	
Small breaks in every direction: a thin fog in the Park.	P
Light fleecy clouds and scud.	D
Light fleecy clouds and scud.	D
,,	P
Light scud in every direction: the wind in gusts to ¾.	H B
Dark scud and cirri.	
Light cirri scattered about in every direction.	H B
Light scud and cirri: the wind blows frequently in gusts to 1¼.	D
Cirro-stratus and scud: a lunar halo is visible; its diameter is 42°.	
,, since the last observation the wind has been blowing a gale, particularly between 12^h and 13^h; some of the gusts have been very violent, and have equalled 3½.	
Cirro-stratus and scud: after a comparative lull for a considerable time the wind again began to blow with great violence, and at the time of the observation the gusts were chiefly at 3 +: a shower of rain fell at $15^h. 10^m$.	
Loose fragments of scud are scattered over the sky.	
Cirro-stratus and loose fragments of scud.	D
Cirri and fleecy clouds: gusts of wind to 1.	H B
Fleecy clouds in various parts of the sky: gusts of wind to 1.	
Cumuli and scud: the wind in gusts to 1 +.	H B
,, ,,	D
,, rain falling.	
Scud in fragments passing rapidly over the sky.	
Overcast: cirro-stratus and scud.	D
,, ,,	H B
The sky is nearly covered with passing nimbi, cumulo-stratus, and scud, but there does not appear to be any upper cloud: gusts of wind to 2½.	G
Cloudless: gusts of wind to 2½: the day continued the same as at 22^h till about 0^h, when it became cloudless; between 2^h and 3^h the wind increased in strength, and the gusts were estimated at 3 and 3 +.	G
Nearly cloudless, with the exception of a few cirri and some haze scattered about the sky: a large halo about the Moon has been [visible for some time.	H B
The sky is covered with haze, through which the Moon and stars are shining very dimly: since the last observation the wind has blown frequently in gusts to 2, but at present it is about ¾: the halo is still visible.	
Overcast: cirro-stratus: rain fell at 18^h.	
,, rain is falling.	H B
,, a steady rain is falling.	P
Overcast: rain is falling.	
,, ,,	P

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER.

March 2^d. From $13^h. 10^m$ to $13^h. 40^m$ a constant pressure of 6lbs. was shewn; at $13^h. 45^m$ the pressure was only 3½ lbs.; and at $14^h. 5^m$ no pressure was shewn.

March 3^d. At $3^h. 15^m$ a gust of 9 lbs. occurred.

March $3^d. 16^h$ and 18^h. No pressures were shewn at those times, although the force by Estimation was considerable.

WHEWELL'S ANEMOMETER.—March $2^d. 22^h$. The descent of the pencil in the previous 24 hours was $11^{in}\cdot00$, and this is the greatest daily descent in the year.

RAIN-GAUGES.

During the month of March it was found that the results of Osler's gauge were irreconcileable with those of the other rain-gauges. At the end of the month Mr. Glaisher examined every part of the apparatus, and he then left it in apparently good working order: he suspected that the cause of the failure had been the imperfect clamping of the string connecting the rain-vessel with the registering pencil, the former consequently receiving and discharging the rain without moving the latter; but of this he was not certain.

Feb. $29^d. 12^h$. The amount of rain collected in Rain Gauge No. 4 during the month was $2^{in}\cdot32$.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 4. 4	29·158	37·2	37·2	0·0	36·7	0·5	..	NNW	½ constant	NE	0·43	NNE	¼	..	..	..	10	..
6	29·238	37·3	37·2	0·1	..	..	..	NNW	0 to 1	..	..	NNW	¼	..	..	..	10	..
8	29·327	37·7	37·6	0·1	..	..		NW	..	..	..	NNW	¼	..	..	..	10	..
10	29·393	37·5	36·4	1·1	35·8	1·7	39·3	NW	0 to ½	N	0·81	N	½	..	..	..	10	Full
12	29·459	37·5	36·2	1·3	..	..	32·4	NW	..	..	..	NNW	¼−	..	..	..	10	Transit
14	29·508	36·8	36·0	0·8	..	..		NNW	..	NNW	0·69	N	¼+	..	..	..	10	..
16	29·566	35·0	33·6	1·4	32·0	3·0	39·4	NNW	..	..	..	N	¼	..	..	..	10	In Equator
18	29·657	33·5	32·3	1·2	..	..	26·5	NW	..	..	..	N	¼	..	..	..	10	..
20	29·665	33·1	31·9	1·2	..	..	..	NNW	..	..	..	N	¼−	..	..	..	10	..
22	29·700	35·6	34·2	1·4	32·0	3·6	..	NW	..	N	1·94	N	¼	..	0·48	5·160	9	..
Mar. 5. 0	29·706	38·9	36·7	2·2	..	..	..	N by W	..	..	..	N	¼	..	..	..	10	..
2	29·712	37·4	34·2	3·2	..	..	..	N by W	..	..	..	N	¼	..	..	..	10	..
4	29·704	38·2	33·7	4·5	27·8	10·4	..	NNW	..	..	..	WNW	¼	..	..	..	10	..
6	29·690	34·0	32·7	1·3	..	..		SW	..	..	..	Calm	..	..	..	..	8	..
8	29·691	32·6	31·1	1·5	..	..	38·9	SSW	..	..	..	Calm	..	..	..	..	4	..
10	29·672	29·2	28·5	0·7	27·2	2·0	24·1	Calm	..	..	..	SW	¼−	..	..	..	6	..
12	29·651	28·6	28·0	0·6	..	..		Calm	..	..	..	SSW	¼	..	..	..	2	..
14	29·625	27·6	27·2	0·4	..	..	48·2	Calm	..	..	..	Calm	..	..	..	..	1	Transit
16	29·598	26·5	26·4	0·1	25·0	1·5	12·0	Calm	..	..	..	Calm	..	..	..	..	1	..
18	29·606	25·4	25·9	−0·5	24·0	1·4	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·625	24·3	25·2	−0·9	22·0	2·3	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·656	31·1	29·2	1·9	24·5	6·6	..	Calm	..	NNW	0·63	Calm	..	..	0·00	5·160	5	..
Mar. 6. 0	29·680	36·5	31·7	4·8	..	..	..	N	..	..	..	NE	¼	..	..	..	2	..
2	29·684	39·6	34·4	5·2	..	..	..	N by W	..	..	..	NE	¼−	..	..	..	9	..
4	29·699	39·6	35·8	3·8	31·5	8·1	..	N by W	..	..	..	N by W	¼	..	..	..	10	..
6	29·735	38·2	35·1	3·1	..	..		NNW	½ to 1	..	..	N by W	¼	..	..	..	7	..
8	29·793	36·3	34·8	1·5	..	..	40·6	N by W	0 to ½	..	..	N	¼	..	..	..	7	..
10	29·825	34·6	33·6	1·0	32·5	2·1	30·6	NNW	..	..	..	N	¼	..	..	..	0	..
12	29·855	33·3	31·7	1·6	..	..		NNW	½ to 1½	..	..	NNE	¾	..	..	..	0	..
14	29·882	32·3	30·8	1·5	..	..	63·0	NNW	0 to ½	..	..	NNE	¾	..	..	..	0	..
16	29·897	31·9	30·5	1·4	29·0	2·9	25·5	NNW	..	..	..	NNE	½	..	..	..	9	Transit
18	29·914	32·5	31·3	1·2	..	..	..	NNW	..	..	..	N	½	..	..	..	10	..
20	29·970	33·0	31·7	1·3	..	..	..	NNW	..	..	..	N	½	..	..	..	7	Perigee
22	30·010	35·5	33·6	1·9	29·5	6·0	..	NNW	..	N	4·99	N	½	..	0·00	5·165	8	..
Mar. 7. 0	30·023	39·8	36·5	3·3	..	..	..	N	..	..	..	N	½	..	..	..	7	..
2	30·034	39·8	36·2	3·6	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
4	30·046	39·8	35·9	3·9	30·0	9·8	..	N	..	..	..	N	¼	..	..	..	10	..
6	30·053	38·3	35·4	2·9	..	..		N	..	..	..	N	¼	..	..	..	9¾	..
8	30·092	37·1	35·0	2·1	..	..	40·9	N	..	..	..	N	¼	..	..	..	10	..
10	30·115	35·8	34·2	1·6	32·0	3·8	29·6	N by E	..	..	..	N	¼	..	..	..	10	..
12	30·112	34·8	33·4	1·4	..	..		N by E	..	..	..	N	¼	..	..	..	10	..
14	30·125	32·7	31·8	0·9	..	..	62·7	N by E	..	..	..	N	¼	..	..	..	3	..
16	30·135	32·0	31·1	0·9	30·5	1·5	20·2	N	..	N	1·76	N	¼	..	..	..	10	Transit
18	30·140	30·9	31·5	−0·6	..	..	..	NNE	..	..	..	N	¼	..	..	..	8	..
20	30·167	30·9	30·9	0·0	..	..	..	NE	..	..	..	NNE	¼	..	..	..	3	..
22	30·184	35·8	32·0	3·8	29·5	6·3	..	NE	..	ENE	0·70	NNE	¼	..	0·00	5·165	3	..
Mar. 8. 0	30·188	40·3	36·5	3·8	..	..	..	ESE	..	..	..	ESE	¼	..	..	..	2	..
2	30·165	42·2	37·7	4·5	..	..	..	S by E	..	..	..	S	¼−	..	..	..	1	..
4	30·145	43·2	39·2	4·0	35·5	7·7	..	S	..	..	..	S	¼	..	..	..	10	..

DRY THERMOMETER.

March 5d. 18h and 20h and 7d. 18h. The readings were lower than those of the Wet Thermometer.

March 5d. 20h. The reading was the smallest in the month.

March 6d. The mean daily temperature was the least in the month.

March 8d and 9d. The greatest difference of the mean daily temperatures for consecutive days in the month occurred.

TEMPERATURE OF THE DEW POINT.

March 5d. 20h. The reading is discordant, as compared with the preceding and following observations, and also with the reading of [the wet-bulb thermometer at the time of observation.

March 5d. 22h. The lowest observed reading during the month occurred: the same reading occurred also on 21d. 10h.

March 8d and 9d. The greatest difference of the mean daily temperatures for consecutive days in the month occurred.

REMARKS.	Observer.
Overcast: rain is falling.	H B
,, rain is falling in heavy drops.	
,, the rain has ceased.	
The sky is covered with cirro-stratus and scud.	H B
Cirro-stratus and scud: the wind in occasional light airs.	P
,, a few drops of rain are falling.	
,, the cirro-stratus is thin in some few places E. of the zenith, a star or two being visible here and there.	
,,	
,, the cirro-stratus is in many parts very thin and apparently breaking up.	P
,, breaks S. of the zenith.	D
Cirro-stratus and scud.	
Overcast: cirro-stratus.	D
Cirro-stratus and scud: the cirro-stratus is thin in and about the zenith.	P
Breaks of small extent in every direction: the clouds compact: loose scud.	
Clouds in various directions, but chiefly in the N. and E.: the stars look small and dim. [a thin fog prevails.	
The zenith and its neighbourhood is free from cloud; the other parts of the sky are covered generally with motionless and thick haze:	P
Heavy vapour.	D
Vapour, which is nearly of sufficient density to obscure the stars.	
,,	
Cloudless: the stars are scarcely visible owing to a great haze; there is, however, no absolute cloud.	
,, the ground is covered with a white frost.	D
Stratus: hazy.	J H
Haze and vapour.	
Cumuli: hazy.	J H
Cirro-stratus and haze.	D
Fleecy clouds and vapour.	
Cirro-stratus and vapour: at this moment a little sleet is falling.	
Cloudless.	D
,,	J H
,,	
Scud and fleecy clouds.	
Scud and cirro-stratus.	
,,	J H
,,	H B
Cumuli and cirri scattered about the sky in various directions.	H B
Overcast: cirro-stratus.	D
,, ,,	J H
Scud nearly covers the sky.	
Heavy scud: a dark evening.	
Cirro-stratus and scud: overcast.	J H
,, a few breaks in the S. E.	H B
Light thin clouds scattered about in various directions: the Moon is shining brightly.	
Overcast: cirro-stratus and scud.	
Cirro-stratus: the Moon is shining faintly.	
A few cirri are scattered about the sky, with cumuli in the N. horizon.	H B
Light fleecy clouds.	J H
Light fleecy clouds and cumuli.	
,,	J H
Overcast: cirro-stratus.	H B

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

March 6^d. The mean daily value was the least in the month: the same value occurred on the 21st day.

WEIGHT OF A CUBIC FOOT OF AIR.

March 7^d. The mean daily value was the greatest in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 8. 6	30·132	41·5	38·1	3·4	..	..	..	S by W	..	S	2·12	SSW	¼	..	..	..	8	..
8	30·139	38·3	35·6	2·7	..	..	45·6	SSW	..	..	..	SW	¼	..	..	..	10	..
10	30·106	36·5	34·5	2·0	32·0	4·5	36·2	S by W	..	..	..	SW	¼	..	..	..	10	..
12	30·094	37·2	35·4	1·8	..	..	——	SSW	..	..	..	SSW	¼	..	..	..	10	..
14	30·056	38·2	36·4	1·8	..	..	68·4	SSW	0 to ½	..	..	S	½	..	..	..	10	..
16	30·019	38·7	36·9	1·8	34·5	4·2	32·7	SSW	½ to 1½	SSW	1·33	S	¾	..	..	..	10	Transit
18	29·962	39·8	38·2	1·6	..	..	..	SSW	½ to 2	..	..	S	¾	..	..	..	10	..
20	29·945	40·5	39·4	1·1	..	..	..	SSW	½ to 2½	..	..	SSW	1	..	..	..	10	..
22	29·892	44·3	43·7	0·6	42·5	1·8	..	SSW	¾ to 3	SW	1·67	SSW	¾	..	0·00	5·165	10	..
Mar. 9. 0	29·869	50·9	49·5	1·4	..	..	..	SW	2 to 3½	..	..	SW	1	..	..	..	10	..
2	29·846	55·6	52·3	3·3	..	..	..	SW	2½ to 4	..	..	WSW	1	..	..	..	9	..
4	29·829	55·3	50·6	4·7	45·5	9·8	..	WSW	1 to 3	..	..	WSW	1½	..	..	..	6	..
6	29·824	53·0	48·2	4·8	..	..		WSW	1 to 3	SSW	2·90	WSW	1½	..	..	..	6	..
8	29·864	47·0	45·2	1·8	..	..	57·2	WSW	..	..	..	WSW	¾	..	..	..	3	..
10	29·894	43·2	42·2	1·0	41·0	2·2	40·3	SW	..	SW	0·40	WSW	¼	..	..	..	1	..
12	29·880	42·6	41·8	0·8	..	..	——	SW	..	WSW	0·23	WSW	¼	..	..	..	10	..
14	..	..	..	..	..	..	68·7	SW	..	W	0·47	..	..	..	..	..	..	..
16	..	..	..	..	..	..	38·5	SSW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	Transit
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·432	41·0	41·2	-0·2	..	..	..	ESE	..	N	1·95	N	¼	..	0·57	5·430	10	..
Mar. 10. 0	..	..	..	..	..	..	..	N by E	1 to 5	..	..	..	..	..	..	..	..	..
2	29·546	38·5	38·0	0·5	..	..	..	N by W	1½ to 4½	N	1·30	N	¼	..	..	..	10	..
4	..	..	..	..	..	..	..	NNW	¾ to 2	NNW	0·30	..	..	..	..	..	..	..
6	..	..	..	..	..	..		NW	½ to 2½	NW	0·15	..	..	..	..	..	..	..
8	29·850	40·3	36·2	4·1	..	..	48·4	NW	½ to 1	WNW	0·65	NW	½	..	..	..	0	..
10	..	..	..	..	..	..	31·7	SW	..	..	..	..	..	..	..	..	..	..
12	29·902	34·8	33·2	1·6	..	..	——	SW	..	..	..	SW	¼	..	..	..	4	..
14	29·825	38·1	36·3	1·8	..	..	49·8	SW	½ to 2½	..	..	SW	¾	..	..	..	10	..
16	29·752	41·1	39·1	2·0	37·0	4·1	29·0	SW	2 to 3½	..	..	SW	1½	..	..	..	10	..
18	29·658	43·6	42·2	1·4	..	..	..	SW	3½ to 5½	..	..	SW	2½	..	..	..	10	Transit
20	29·579	45·9	44·7	1·2	..	..	..	SW	3½ to 7	..	..	SW	2½	..	..	..	10	Greatest declination S.
22	29·491	47·6	47·0	0·6	46·0	1·6	..	SW	4 to 6	WSW	5·82	W by S	1½	..	0·07	5·795	10	..
Mar. 11. 0	29·418	48·6	48·2	0·4	..	..	..	SW	6 to 9	..	..	WSW	2	..	..	..	10	..
2	29·339	52·5	51·9	0·6	..	..	..	WSW	3 to 10	..	..	WSW	2½	..	..	..	10	Last Quar.
4	29·275	50·1	48·0	2·1	45·0	5·1	..	WSW	4½ to 12	WSW	3·40	WSW	2½	..	..	..	10	..
6	29·284	47·1	45·2	1·9	..	..	..		1 to 3½	..	..	WSW	1 +	..	..	..	4	..
8	29·329	43·2	40·8	2·4	..	..	52·0 32·8 ——	W	3 to 5	..	..	W by N	2	..	..	..	7	..
10	29·361	42·8	38·8	4·0	35·5	7·3	53·8	W	3 to 5	..	..	W	1½	..	..	..	9	..
12	29·389	39·2	36·7	2·5	..	..	32·8	WSW	½ to 3½	..	..	W	1½	..	..	..	4	..
14	29·375	37·2	35·7	1·5	..	..	..	WSW	2 to 5	..	..	W	2	..	..	..	4	..
16	29·374	35·0	34·4	0·6	32·5	2·5	..	W	¼ to 4½	..	..	W	1½	..	..	..	6	..
18	29·369	33·7	33·7	0·0	..	..	..	WSW	½ to 2	..	..	W	1½	..	..	..	4	..
20	29·392	36·5	34·9	1·6	..	..	..	WSW	2½ to 4	..	..	W by S	1½	..	..	..	2	Transit
22	29·412	39·7	36·0	3·7	32·3	7·4	..	W	4 to 5	W	7·60	W by N	1½	..	0·00	5·925	2	..
Mar. 12. 0	29·381	44·5	39·0	5·5	..	..	..	W by N	8 to 13	..	..	W	2	..	..	..	9	..

BAROMETER.
March 11d. The daily range was the greatest in the month.
March 12d and 13d. The greatest difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.—March 9d. 22h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
March 11d and 12d. The difference of the mean daily values was considerable.

MAXIMUM THERMOMETER.—March 11d. 22h. The reading was lower than that of the Dry Thermometer at 2h.

PRESSURE OF THE WIND.—March 12d. 0h and 2h. The estimated forces are small compared with the pressures recorded by the Anemometer; at about 6h the pressure was 17 lbs on the square foot, and it was the greatest in the year.

REMARKS.	Observer.
Cirro-stratus and light fleecy clouds: a few breaks near the zenith and in the East.	H B
Overcast: cirro-stratus.	
,, ,, about ten minutes since, a few stars near the zenith were faintly visible.	H B
,, an elevated cirro-stratus.	G
,, ,,	
,, ,,	
,, cirro-stratus, approaching to nimbus: wind in gusts to 1.	
,, ,, bright in the east, the clouds lighter towards the S. horizon.	G
,, ,,	D
Overcast: cirro-stratus.	
Cirro-stratus and scud: several clear breaks in the S.	D
Comoid cirri round the zenith, and generally about the S., in more than its usual quantity; to the N. a thin cirro-stratus.	G
Cirri, cumulo-strati, cirro-strati, and scud, and all moving from the W. S.W.: the wind in frequent gusts to 2.	G
Vapour and light scud; the southern heavens clear.	J H
Vapour south of the zenith.	D
Overcast: cirro-stratus.	D
Overcast: a steady rain has been falling for a considerable time.	H B
Overcast: rain falling in heavy drops.	
Cloudless.	H B
Cirro-stratus coming up from the S.W.: the sky has remained clear since the last observation to within a few minutes of the pre-[sent time.	D
Overcast: cirro-stratus: gusts of wind.	
,, ,, ,,	
,, ,, a gale of wind.	
,, ,, ,,	D
,, ,, squalls of rain; the wind blowing in strong gusts.	J H
Overcast: cirro-stratus: squalls of rain; the wind blowing in strong gusts.	
,, ,, the rain has ceased.	J H
,, cirro-stratus and scud: squalls of rain at intervals: frequent gusts of wind to $3\frac{1}{2}$.	D
Squalls of rain since the last observation; at the present time the greater portion of the sky is clear: the strength of the wind has considerably abated, though there are now occasional gusts to $1\frac{1}{2}$.	
The gale again increased after 6^h, and has continued to the present time with great violence; some of the gusts have been very heavy; during the same interval the appearance of the sky has been continually changing, at one period being overcast with rain falling, and at another nearly cloudless.	
Cirro-stratus and scud: the greater portion of the sky has been generally clear since 8^h: the wind is still blowing in heavy gusts.	D
,, strong gusts of wind.	J H
,, ,,	
,, ,,	
Scud and vapour.	
,,	
Cumuli and light scud.	J H
Nearly overcast with cirro-stratus and thick scud: gusts of wind frequently to $2\frac{1}{2}$ and 3.	H B

PRESSURE AND DIRECTION OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

March 9^d. 8^h. No pressure was shewn by the Anemometer, although the force by Estimation was considerable.

March 9^d. 21^h. The direction of the wind was S. E.; between 21^h. 5^m and 21^h. 20^m it was N. E.; at 21^h. 40^m it was E; at 22^h. 10^m it was S. E.; at 22^h. 18^m it had shifted gradually to N.; and by 22^h. 20^m it had moved backwards to W. S. W.; at 22^h and 23^h it was N. again, having moved forward to that point; the direction remained for a few minutes about the N.; at 22^h. 30^m the direction was S. W., it having passed the points E. and S.; at 22^h. 40^m it was N. N. E., having repassed the points S. and E.; and after this time the variations are exhibited by the Ordinary Observations: the pressure was light during the changes; in about one hour afterwards the wind began to blow strongly.

March 10^d. 2^h. The estimated force appears small compared with the pressure at the Anemometer.

March 11^d. At 2^h. 40^m the pressure was 10 lbs.; at 2^h. 50^m it was 12 lbs.; from which time to 5^h. 25^m there were frequent gusts of 7 lbs. and 9 lbs.; at 7^h. 35^m a sudden gust of 13lbs took place; at 7^h. 40^m the pressure was only 6 lbs.; at 10^h. 35^m another gust of 8 lbs. occurred; after this time the variations of the gusts are sufficiently represented by the Ordinary Observations.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 12. 2	29·366	40·3	37·2	3·1	..	..	..	NW	4½ to 8	..	..	WNW	2	..	..	..	3	..
4	29·352	42·5	38·3	4·2	32·0	10·5	..	NW	4½ to 8	..	..	WNW	2½	..	..	..	8	..
6	29·359	39·5	36·7	2·8	..	..	40·3	NW	4 to 17	..	..	WNW	3	..	..	..	10	..
8	29·524	37·8	34·2	3·6	..	..	31·1	N by W	2 to 4	..	..	NNW	3	..	..	..	2	..
10	29·585	38·3	34·9	3·4	33·0	5·3		NW	½ to 1½	..	..	NW	2½	..	..	..	2	..
12	29·676	38·7	35·7	3·0	..	..	60·0	NW	½ to 3	..	..	NW	2	..	..	..	0	..
14	29·724	37·3	34·7	2·6	31·0	6·3	27·0	NW	½ to 2	..	..	NW	1½	..	..	..	0	..
16	29·766	36·2	33·7	2·5	29·0	7·2		NW	0 to 1	..	..	NW	1½	..	..	..	0	..
18	29·812	33·7	32·7	1·0	..	..	..	W by N	..	..	..	W by N	1	..	..	..	0	..
20	29·830	32·6	32·2	0·4	..	..	..	W by S	..	..	..	W	¼	..	..	..	3	Transit
22	29·843	38·0	35·2	2·8	32·0	6·0	..	NW	0 to 1	..	..	NW	½	..	0·15	5·985	1	..
Mar. 13. 0	29·857	42·2	38·5	3·7	..	..	..	WNW	0 to 1	..	..	WNW	¼+	..	..	..	8	..
2	29·856	42·4	38·3	4·1	..	..	..	NW	..	..	..	WNW	½	..	..	..	9	..
4	29·858	42·3	38·4	3·9	33·5	8·8	..	WNW	..	..	..	WNW	¼	..	..	..	4	..
6	29·858	38·3	36·5	1·8	..	..	43·3	W	..	..	..	NW	¼	..	..	..	1	..
8	29·860	38·5	34·9	3·6	..	..	33·7	WNW	..	..	..	NW	½	..	..	..	2	..
10	29·857	37·7	34·7	3·0	30·5	7·2		W by N	..	..	..	NW	¾	..	..	..	6	..
12	29·858	36·2	33·4	2·8	..	..	57·0	WNW	..	..	..	WNW	¼+	..	..	..	2	..
14	29·842	34·4	32·7	1·7	..	..	28·2	WSW	..	..	..	WSW	¼	..	..	..	4	..
16	29·821	34·2	33·0	1·2	31·2	3·0		SW	..	..	..	WSW	¼–	..	..	..	10	..
18	29·802	34·0	33·5	0·5	..	..	..	SSW	..	..	..	WSW	¼–	..	..	..	10	..
20	29·795	35·5	34·3	1·2	..	..	..	S	..	..	..	WSW	¼–	..	..	..	10	..
22	29·777	37·6	36·2	1·4	34·5	3·1	..	Calm	..	..	..	Calm	..	..	0·00	5·990	10	Transit
Mar. 14. 0	29·758	42·5	41·3	1·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·725	41·7	41·4	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·689	42·5	42·2	0·3	40·7	1·8	..	Calm	..	..	..	E	¼–	..	..	..	10	..
6	29·667	39·5	39·4	0·1	..	..	44·4	Calm	..	..	..	E	¼	..	..	..	10	..
8	29·650	39·8	39·6	0·2	..	..	38·1	Calm	..	..	..	SSE	¼–	..	..	..	10	..
10	29·606	40·0	39·7	0·3	39·3	0·7		Calm	..	..	..	SSE	¼–	..	..	..	10	..
12	29·572	40·2	40·1	0·1	..	..	46·3	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·513	42·2	42·2	0·0	..	..	38·3	S by W	..	..	..	Calm	..	..	..	..	10	..
16	29·442	42·8	42·5	0·3	42·0	0·8		S by W	..	..	..	Calm	..	..	..	..	10	..
18	29·376	42·6	42·2	0·4	..	..	..	SSW	..	..	..	SSW	¼	..	..	..	10	..
20	29·320	43·1	42·5	0·6	..	..	..	SW	0 to ½	..	..	SSW	¼	..	..	..	10	..
22	29·345	44·3	43·5	0·8	41·0	3·3	..	WSW	1 to 2	..	..	SW	¼	..	0·36	6·370	10	Transit
Mar. 15. 0	29·363	46·0	42·0	4·0	..	..	..	WSW	1 to 3	..	..	WSW	¾	..	..	..	3	..
2	29·369	46·0	40·2	5·8	..	..	..	..	..	..	..	WSW	1	..	..	..	5	..
4	29·358	48·0	42·6	5·4	34·5	13·5	..	..	..	..	..	SW	½	..	..	..	8	..
6	29·361	44·5	40·8	3·7	..	..	49·4	..	..	..	..	SW	½	..	..	..	10	..
8	29·359	41·9	39·7	2·2	..	..	36·6	..	..	..	..	SW	¼	..	..	..	10	..
10	29·357	39·7	38·6	1·1	37·5	2·2		..	..	..	..	SSW	¼–	..	..	..	10	..
12	29·344	39·4	38·4	1·0	..	..	67·0	..	..	..	..	SSW	¼	..	..	..	9	..
14	29·344	37·3	37·0	0·3	..	..	31·0	..	..	..	..	SSW	¼	..	..	..	4	..
16	29·342	37·8	37·2	0·6	36·5	1·3		..	..	..	..	Calm	..	..	..	..	8	..
18	29·339	39·0	38·5	0·5	..	..	..	..	..	..	..	Calm	..	..	..	..	10	..
20	29·353	42·2	41·9	0·3	..	..	..	..	..	..	..	SSE	¼–	..	..	..	10	..
22	29·374	45·5	44·2	1·3	42·5	3·0	..	..	..	..	..	E	¼–	..	0·00	6·385	9½	Transit
Mar. 16. 0	29·397	47·5	45·0	2·5	..	..	..	E by S	..	.	..	E	¼	..	..	..	9¾	..
2	29·403	48·9	45·7	3·2	..	..	..	E	0 to 1	..	..	ENE	¼	..	..	..	8	..

TEMPERATURE OF THE DEW POINT.
March 13d and 14d. The difference in the mean daily values was considerable.

MAXIMUM THERMOMETER.
March 12d. 22h. The reading was lower than that of the Dry Thermometer at 0h.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
March 14d. The mean daily value was the least in the month.

DEGREE OF HUMIDITY.
March 14d. The mean daily value was the greatest in the month.

REMARKS.	Observer.
Cumuli, cirri, and light scud: frequent gusts of wind to $2\frac{1}{2}$.	H B
Scud and vapour: the wind blowing in strong gusts.	J H
Cirro-stratus and scud: very heavy gusts of wind to about 4.	
,, heavy gusts of wind.	
Heavy vapour: very strong gusts of wind: the gale has slightly abated.	J H
Cloudless: the wind in gusts to $2\frac{1}{2}$.	H B
,, the wind has somewhat subsided, but the gusts are frequently to 2.	
,,	
,,	
Vapour and light scud.	H B
Scud and haze: a few minutes before the observation the clouds covered about one half of the sky.	P
Dark cumulo-strati, scud, and dense haze.	
,, there are a few small breaks here and there.	P
Dense cumulo-strati cover the sky in the N. and N. E.: towards the S. the sky is altogether free from clouds.	H B
Cloudless, with the exception of a dark bank of clouds in the N. horizon.	
Thick haze in the N.W. horizon; the remainder of the sky is clear.	
The sky towards the S. and W. is covered with cirro-stratus; a few stars are shining dimly through it.	H B
The stars look dim and small, and the horizon is lined with scud or dense haze, most probably the latter, as a few stars are seen [somewhat low down.	P
Nearly as before, the stars still appearing dim and small.	
Overcast: cirro-stratus.	
Cirro-stratus: a long streak of golden light in the eastern horizon.	
,, a few flakes of snow are falling.	P
,, a thin rain is falling.	D
Cirro-stratus: a steady rain is falling.	
Overcast: cirro-stratus: no rain is falling.	D
,, ,,	P
Cirro-stratus and scud: a thin rain is falling.	
,,	
,, a thin rain is falling.	P
,, ,,	D
Overcast: cirro-stratus: a thin rain is falling.	
,, ,, rain falling.	
,, ,, ,,	
,, ,, ,,	D
,, ,,	J H
Cumuli and light clouds.	
,,	J H
Cumuli, cumulo-strati, and light fleecy clouds.	D
Overcast: cirro-stratus.	
,, ,, rain is falling.	
,, ,,	D
Cirro-stratus and heavy vapour.	J H
,,	
,,	
Overcast: cirro-stratus.	
,, ,,	J H
Cirro-stratus and broken scud.	P
Cirro-stratus and broken scud.	
Cirro-stratus, scud, and cumuli.	P

PRESSURE OF THE WIND.

March $12^d. 6^h. 20^m$. At about this time the Theodolite House on the Octagon Room, on which Whewell's Anemometer was placed, was blown over, and the Anemometer was much broken.

March $12^d. 8^h, 10^h, 12^h, 16^h$, and 18^h. The estimated forces are too large, compared with the corresponding pressures at the Anemometer.

March $14^d. 22^h$. The estimated force is small, compared with the pressure recorded by the Anemometer.

OSLER'S ANEMOMETER.

March 15^d. It was found, that at about $0^h. 40^m$ the registering pencil had gone off the rack-work, and consequently no directions 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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 16. 4	29·441	48·0	44·0	4·0	39·0	9·0	..	E	½ to 2	..	..	ENE	½	..	..	..	10	..
6	29·483	45·0	43·0	2·0	..	..	..	E by N	½ to 2½	..	..	ENE	¾	..	..	..	10	..
8	29·529	42·7	41·3	1·4	..	..	51·8	E by N	1 to 3½	..	..	ENE	1	..	..	..	10	..
10	29·579	41·7	40·5	1·2	39·5	2·2	37·5	E by N	1 to 3	..	..	ENE	1	..	..	..	9	..
12	29·633	40·7	40·0	0·7	..	..		ENE	2 to 4½	..	..	ENE	1	..	..	..	10	..
14	..	..	..	..	..	..		ENE	3 to 5	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	66·6	E by N	2 to 4½	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	38·5	E by N	1½ to 4	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	E by N	2½ to 7	..	..	..	..	..	..	..	..	..
22	29·811	38·8	37·5	1·3	..	..	..	E by N	2 to 6	..	..	ENE	1½	..	0·00	6·385	10	..
Mar. 17. 0	..	..	..	..	..	..	..	NE	3 to 5	..	..	..	..	..	..	..	..	Transit
2	..	..	..	..	..	..	..	NE	3 to 4½	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NNE	2 to 3½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		NNE	½ to 2	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	39·1	ENE	2 to 3½	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	30·3	ENE	1 to 3	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		ENE	½ to 2½	..	..	..	..	..	..	..	..	..
14	29·889	35·3	34·2	1·1	..	..	50·3	ENE	½ to 1¾	..	..	NE	¾	..	..	..	10	..
16	29·874	34·7	33·4	1·3	32·0	2·7	25·2	ENE	1 to 1½	..	..	NE	¾	..	..	..	10	In Equator
18	29·877	31·5	30·5	1·0	..	..	..	ENE	0 to 1	..	..	NE	½	..	..	..	0	..
20	29·903	31·7	30·7	1·0	..	..	..	NE	..	..	..	NE	¼	..	..	..	0	..
22	29·911	37·1	34·6	2·5	31·0	6·1	..	ENE	½ to 1½	..	..	NE	½	..	0·00	6·385	3	..
Mar. 18. 0	29·911	40·9	37·1	3·8	..	..	..	NE	½ to 1½	..	..	NE	¾	..	..	..	4	Transit
2	29·892	43·1	37·6	5·5	..	..	..	NE	½ to 2	..	..	NE	½+	..	..	..	0	..
4	29·878	43·7	38·9	4·8	36·5	7·2	..	NE	½ to 2	..	..	NE	½	..	..	..	6	..
6	29·883	42·0	38·8	3·2	..	..		NE	0 to ½	..	..	NE	½	..	..	..	10	..
8	29·915	40·8	38·7	2·1	..	..	44·8	NNE	0 to ½	..	..	NE	½	..	..	..	10	..
10	29·929	39·5	37·3	2·2	37·0	2·5	36·1	NNE	½ to 3½	..	..	NE	½	..	..	..	10	..
12	29·944	38·4	36·4	2·0	..	..		NNE	..	..	..	NE	½	..	..	..	10	New
14	29·944	37·0	35·8	1·2	..	..	59·3	N by E	..	..	..	N by E	¼	..	..	..	10	..
16	29·935	36·2	35·6	0·6	34·5	1·7	30·7	N	..	..	..	N	¼	..	..	..	9	..
18	29·949	36·6	35·7	0·9	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
20	29·963	36·5	35·2	1·3	..	..	..	N by E	..	..	..	N	¼	..	..	..	10	..
22	29·977	38·7	36·9	1·8	33·0	5·7	..	N	..	..	..	N	¼	..	0·00	6·390	7	..
Mar. 19. 0	29·975	42·2	39·2	3·0	..	..	..	NNW	..	..	..	N	¼	..	..	..	9¾	..
2	29·939	45·3	41·1	4·2	..	..	..	NW	..	..	...	N by W	¼	..	..	..	10	Transit
4	29·898	45·9	42·2	3·7	37·0	8·9	..	WSW	..	..	..	WSW	¼	..	..	..	9½	..
6	29·863	45·3	41·6	3·7	..	..		W	..	..	..	W	¼	..	..	..	10	..
8	29·837	44·0	41·3	2·7	..	..	46·4	WSW	..	..	..	W by S	½	..	..	..	10	..
10	29·804	43·8	40·2	3·6	35·0	8·8	39·5	NW	..	..	..	NW	½	..	..	..	10	..
12	29·773	42·0	39·2	2·8	..	..		W by S	..	..	..	Calm	..	..	..	..	10	..
14	29·701	41·3	38·8	2·5	..	..	55·2	WSW	0 to ½	..	..	WNW	½	..	..	..	10	..
16	29·629	40·8	38·6	2·2	35·5	5·3	35·0	WSW	½ to 1½	..	..	WNW	½	..	..	..	10	..
18	29·575	39·1	37·1	2·0	..	..	..	WSW	½ to 1½	..	..	WNW	½	..	..	..	7	..
20	29·515	40·7	38·2	2·5	..	..	..	WSW	1 to 3	..	..	WNW	1	..	..	..	10	..
22	29·433	43·2	40·4	2·8	37·5	5·7	..	WSW	1½ to 3½	..	..	WSW	¾	..	0·00	6·390	10	..
Mar. 20. 0	29·375	45·5	42·8	2·7	..	..	..	W	½ to 3	..	..	W	¾	..	..	..	10	..
2	29·319	47·7	44·9	2·8	..	..	..	WNW	1 to 4	..	..	W by N	1	..	..	..	10	Transit
4	29·404	39·8	39·2	0·6	36·5	3·3	..	N	3 to 4½	..	..	N	1	..	..	..	9	..

BAROMETER.

March 18d. The daily range was the least in the month.

March 18d and 19d. The least difference in the mean daily heights for consecutive days in the month occurred.

TEMPERATURE OF THE DEW POINT.

March 20d and 21d. The difference of the mean daily values was considerable.

MINIMUM THERMOMETER.

March 19d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

REMARKS.	Observer.
Cirro-stratus and scud.	J H
,, rain falling slightly.	
,, every appearance of rain.	
,,	J H
,, no rain.	P
Cirro-stratus and scud.	
Cirro-stratus and scud.	
,,	
Cloudless.	
,,	P
Cumuli scattered over the sky.	D
Cirri and small cumuli in every direction.	
Cloudless.	D
Cirri scattered in every direction, with a few cumuli in the N.W., and undefined clouds in the S.: gusts of wind to $\frac{3}{4}$.	P
Dark scud covers the sky: no upper cloud.	
Cirro-stratus and scud.	
,,	P
Overcast: the sky is covered with cirro-stratus of an uniform density.	D
,, at present a thin rain is falling.	
A few stars are shining in the zenith.	
Overcast: cirro-stratus.	
,, ,, a little rain has fallen since the last observation.	D
Cirro-stratus and scud: ten minutes after this observation cumuli and large fleecy clouds prevailed.	J H
Cirro-stratus and scud.	
,,	J H
,,	D
Overcast: cirro-stratus.	
,, ,,	
,, ,,	D
,, ,,	J H
Cirro-stratus and scud.	
,,	
,,	
Thin cirro-stratus and scud.	J H
,, a few drops of rain are falling: gusts of wind to 1.	P
Cirro-stratus and scud: wind in gusts to $1\frac{1}{2}$: a squall of rain fell at $22^h. 40^m$. [the wind veered to the N.W.	
,, the wind in gusts to $1\frac{1}{2}$: squalls of rain: a violent squall of rain at $2^h. 15^m$, it lasted about twenty minutes;	P
,, gusts of wind.	J H

PRESSURES OF THE WIND.

March $16^d. 10^h$ and 12^h. The estimated forces are small compared with the pressures of the Anemometer.

THERMOMETER WHOSE BULB IS EXPOSED TO THE SKY.

March $16^d. 22^h$. The reading appears wrong as compared with that of the Minimum Thermometer.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 20. 6	29·534	36·3	33·7	2·6	..	..	50·6	N	2½ to 4	..	..	N	1½	..	..	..	7	..
8	29·623	34·8	31·2	3·6	..	..	27·9	N	..	..	..	N	¾	..	..	..	9	..
10	29·686	32·2	30·2	2·0	26·5	5·7		N	..	..	..	N	½	..	..	..	0	..
12	29·747	30·9	28·9	2·0	..	..		N by W	..	..	..	N	½−	..	..	..	0	..
14	29·798	31·0	28·7	2·3	..	..	61·0	NNW	..	..	..	N	¼	..	..	..	0	..
16	29·819	30·3	28·4	1·9	25·0	5·3	19·0	NNW	..	..	..	NNW	¼	..	..	..	0	..
18	29·854	29·0	27·5	1·5	..	..	..	WNW	..	..	..	NW	¼	..	..	..	0	..
20	29·885	29·8	29·2	0·6	..	..	..	W by S	..	..	..	Calm	..	..	..	..	2	..
22	29·914	36·0	32·2	3·8	29·0	7·0	..	N	..	..	..	N	½	..	0·00	6·390	0	..
Mar. 21. 0	29·930	40·5	36·7	3·8	..	..	..	NNW	..	..	..	NW	¼+	..	..	..	6	..
2	29·912	42·5	37·6	4·9	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	6	Transit
4	29·887	43·7	37·7	6·0	31·0	12·7	..	NW	..	..	..	NNW	¼	..	..	..	5	..
6	29·871	42·2	36·8	5·4	..	..		WSW	..	..	..	W by S	¼−	..	..	..	8	..
8	29·863	38·1	34·2	3·9	..	..	45·4	WSW	..	..	..	WSW	¼	..	..	..	0	..
10	29·844	35·5	31·7	3·8	24·5	11·0	32·0	WSW	..	..	..	W	½	..	..	..	1	..
12	29·817	33·0	30·7	2·3	..	..		WSW	..	..	..	W	¼+	..	..	..	0	..
14	29·755	34·1	32·0	2·1	..	..	62·2	WSW	..	..	..	W	¼	..	..	..	10	..
16	29·711	34·9	32·2	2·7	29·5	5·4	26·7	WSW	..	..	..	W	¼	..	..	..	10	..
18	29·681	36·2	33·4	2·8	..	..	..	WSW	..	..	..	W	¼	..	..	..	10	..
20	29·654	38·2	36·3	1·9	..	..	..	SW	..	..	..	SW	¼	..	..	..	9¾	..
22	29·612	43·1	40·7	2·4	38·0	5·1	..	SW	..	..	..	SW	½	..	0·00	6·455	8	..
Mar. 22. 0	29·585	45·2	42·6	2·6	..	..	..	SW	0 to ½	..	..	SW	½	..	..	..	10	..
2	29·531	49·5	45·3	4·2	..	..	..	SW	½ to 1½	..	..	SSW	1	..	..	..	10	..
4	29·477	45·8	43·2	2·6	40·0	5·8	..	SSW	0 to 1	..	..	SSW	½	..	..	..	10	Transit
6	29·473	43·5	41·7	1·8	..	..		SSW	0 to 1	..	..	SSW	¼+	..	..	..	10	..
8	29·440	42·6	40·9	1·7	..	..	50·0	S by W	..	..	..	SSW	¼+	..	..	..	10	..
10	29·417	41·6	41·2	0·4	40·8	0·8	39·8	S	..	..	..	Calm	..	..	..	..	10	..
12	29·386	42·0	41·4	0·6	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·367	41·5	41·3	0·2	..	..	58·7	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·349	41·1	41·1	0·0	41·0	0·1	41·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·364	40·8	40·8	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·399	40·4	39·7	0·7	..	..	..	NW	..	..	..	NNW	¼	..	..	..	10	Apogee
22	29·443	41·2	40·1	1·1	37·5	3·7	..	NNW	..	..	..	NNW	¼	..	0·07	6·515	10	..
Mar. 23. 0	29·460	44·7	41·9	2·8	..	..	..	NNW	..	..	..	N by W	¼	..	..	..	10	..
2	29·475	46·7	41·7	5·0	..	..	..	NW	..	..	..	NNW	¼	..	..	..	10	..
4	29·482	48·5	43·2	5·3	36·0	12·5	..	W	..	..	..	W	¼	..	..	..	7	Transit
6	29·481	46·1	41·1	5·0	..	..		WNW	..	..	..	WNW	¼	..	..	..	7	..
8	29·512	41·9	39·6	2·3	..	..	49·0	Calm	..	..	..	Calm	..	..	..	..	9	..
10	29·518	37·8	36·4	1·4	34·5	3·3	33·3	SW	..	..	..	Calm	..	..	..	..	0	..
12	29·513	36·3	34·8	1·5	..	..		SSW	..	..	..	Calm	..	..	..	..	0	..
14	..	..	..	..	..	..	61·3	SW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	29·2	SSW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	S by W	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	S by W	..	..	..	..	..	..	..	..	..	..
22	29·401	45·7	42·4	3·3	..	..	..	SW	½ to 3	..	..	SW by S	1½	..	0·00	6·515	10	..
Mar. 24. 0	..	..	..	..	..	..	..	SSW	2½ to 6	..	..	..	..	..	..	..	..	..
2	29·355	44·5	42·7	1·8	..	..	..	SSW	3 to 5	..	..	SW	2	..	..	..	10	..
4	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	Transit
6	29·395	49·8	45·9	3·9	..	..	..	WNW	..	..	..	W	½	..	..	..	7	..

TEMPERATURE OF THE DEW POINT.
March 21d. The mean daily value was the least in the month; at 10h the reading as observed was the least in the month.
March 21d and 22d. The difference of the mean daily values was considerable.

WEIGHT OF A CUBIC FOOT OF AIR.
March 21d and 22d. The greatest difference in the mean daily values for consecutive days in the month occurred.

DEGREE OF HUMIDITY.
March 21d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cirro-stratus and scud: gusts of wind: clouds of a cumulo-stratus character in the N. E.	J H
,,	J H
Cloudless: gusts of wind, frequently to $\frac{3}{4}$.	G
,,	G
,,	P
,,	D
,,	D
A few light clouds and haze.	J H
There are a few fleecy clouds to the S., but to no numerical extent.	G
Cumuli, cumulo-strati, scud, and haze.	P
,,	P
Loose cumuli and cumulo-strati are spread about; scud and haze in other directions.	G
The sky is clear about the zenith; every other part is covered with fleecy cumuli and irregularly-formed cumulo-strati: a dense	D
Cloudless: hazy. [haze prevails.	D
Vapour principally W. of the zenith.	J H
Cloudless.	P
Overcast: very dark.	
,, cirro-stratus.	
,, ,,	
The cirro-stratus is broken in many places, where small patches of blue sky are seen.	P
Cirro-stratus and scud.	D
Overcast: cirro-stratus: a thin rain falling.	
,, ,,	D
Cirro-stratus and scud: a few minutes before the observation there were many small breaks in different directions.	P
,,	
,,	
,,	P
Overcast: cirro-stratus: a thin rain falling.	D
,, ,, ,,	
,, ,, no rain.	
,, ,,	
,, ,,	D
,, ,,	J H
Overcast: cirro-stratus.	
Cirro-stratus and scud.	J H
Cirro-stratus, cumulo-stratus, and haze.	D
,,	
Cirro-stratus and thick haze: the Moon and Venus, with one or two of the principal stars, are visible through the clouds.	
The clouds disappeared immediately after the last observation, and the sky became cloudless; it has continued clear to the	D
Cloudless. [present time.	J H
Overcast; cirro-stratus and scud; rain falling: squally.	
Overcast: cirro-stratus and scud: the rain has ceased.	
Scud and light vapour: hazy.	J H

PRESSURE OF THE WIND.
March 20d. 8h and 10h. No pressures were shewn by the Anemometer, although the force by estimation was considerable.

WIND BY OSLER'S ANEMOMETER.—March 22d. 18h. 15m. At this time the direction changed from S. S. E. to N. N. W.

AMOUNT OF CLOUDS.—March 21d. The mean daily value was the smallest in the month.

CLOUDS.—March 21d. 14h to 23d. 12h. With few exceptions the sky during this period was covered with cloud: it is the longest period of cloudy weather in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No.1, (Osler's).	Reading of Rain-gauge No.2.	Stand of Rain-gauge No.3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 24. 8	..	..	..	..	..	..	51·2	WSW	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	39·5	SW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	..
14	29·525	40·3	39·2	1·1	..	..	59·2	SW	..	..	..	W	¼	..	..	..	10	..
16	29·516	40·0	38·8	1·2	37·0	3·0	37·5	SW	..	..	..	W	¼	..	..	..	10	..
18	29·513	39·8	38·7	1·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·526	41·3	39·9	1·4	..	..	..	S	..	..	..	SW	¼–	..	..	..	10	..
22	29·541	43·8	42·7	1·1	41·2	2·6	..	S	..	..	..	SSW	¼	..	0·00	6·525	10	..
Mar. 25. 0	29·519	47·8	46·4	1·4	..	..	..	SW	..	..	..	SSW	¼	..	..	..	10	..
2	29·479	50·6	47·0	3·6	..	..	..	SW	½ to 2½	..	..	SSW	¾	..	..	..	8	..
4	29·438	49·3	46·9	2·4	44·0	5·3	..	SW	½ to 1	..	..	SW	½	..	..	..	10	Greatest declination N.
6	29·384	48·0	47·2	0·8	..	..	..	SSW	½ to 1	..	..	SSW	¾	..	..	..	10	Transit
8	29·344	49·0	48·3	0·7	..	..	52·0	SW	½ to 1½	..	..	SSW	¾	..	..	..	10	..
10	29·332	49·8	49·1	0·7	47·5	2·3	44·0	W by S	1½ to 4	..	..	SSW	1½	..	..	..	10	..
12	29·371	47·0	45·8	1·2	..	..		W by N	0 to 1	..	..	WSW	¼	..	..	..	2	..
14	29·388	44·0	43·2	0·8	..	..	58·3	W by S	..	..	..	WSW	¼	..	..	..	1	..
16	29·407	44·7	42·9	1·8	42·0	2·7	39·6	W by S	½ to 1½	..	..	WSW	½	..	..	..	10	..
18	29·431	45·2	42·8	2·4	..	..	..	W by N	½ to 1½	..	..	WSW	½	..	..	..	1	..
20	29·480	46·5	44·2	2·3	..	..	..	W by N	½ to 1	..	..	W by S	½	..	..	..	8	..
22	29·539	49·6	46·4	3·2	43·0	6·6	..	WNW	0 to ½	..	..	W	¼	..	0·00	6·525	9	..
Mar. 26. 0	29·580	52·8	47·3	5·5	..	..	..	WNW	0 to 2	..	..	WNW	¾	..	..	..	8	..
2	29·603	55·3	48·7	6·6	..	..	..	WNW	0 to ½	..	..	NW	½	..	..	..	7	..
4	29·623	54·0	48·0	6·0	40·2	13·8	..	WNW	0 to ½	..	..	WNW	½	..	..	..	6	..
6	29·653	53·3	48·5	4·8	..	..	..	WNW	..	..	..	W by N	¼	..	..	..	7	Transit
8	29·689	49·6	47·0	2·6	..	..	57·9	WSW	..	..	..	WSW	¼	..	..	..	10	..
10	29·720	49·3	47·3	2·0	46·2	3·1	46·1	WSW	..	..	..	WSW	¼	..	..	..	10	..
12	29·739	47·6	46·2	1·4	..	..		W by S	..	..	..	WSW	¼	..	..	..	10	..
14	29·734	46·4	45·3	1·1	..	..	71·5	SW	..	..	..	SW	¼	..	..	..	10	..
16	29·737	47·8	46·2	1·6	44·5	3·3	42·0	SW	..	..	..	SW	¼	..	..	..	10	..
18	29·741	46·9	45·7	1·2	..	..	..	SSW	..	..	..	SSW	¼	..	..	..	10	1st Qr.
20	29·745	49·5	48·0	1·5	..	..	..	SW by W	0 to 1	..	..	SW	¼	..	..	..	10	..
22	29·770	53·0	50·2	2·8	47·5	5·5	..	WSW	0 to 2	..	..	SW	¼	..	0·00	6·555	10	..
Mar. 27. 0	29·783	55·7	52·9	2·8	..	..	..	WSW	0 to 1	..	..	WSW	½	..	..	..	10	..
2	29·805	55·0	52·8	2·2	..	..	..	WSW	..	..	..	WSW	½	..	..	..	10	..
4	29·825	53·7	52·3	1·4	51·5	2·2	..	WSW	..	..	..	SW	¼	..	..	..	10	..
6	29·853	52·6	51·6	1·0	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
8	29·894	51·6	51·1	0·5	..	..	57·2	SW	..	..	..	SW	¼	..	..	..	10	Transit
10	29·939	51·0	50·8	0·2	50·5	0·5	42·5	WSW	..	..	..	Calm	..	..	..	..	10	..
12	29·972	51·2	49·9	1·3	..	..		N by W	..	..	..	Calm	..	..	..	..	10	..
14	30·007	49·6	47·5	2·1	..	..	63·1	N	..	..	..	N	¼	..	..	..	10	..
16	30·054	46·2	43·8	2·4	40·5	5·7	38·9	N	..	..	..	N	¼	..	..	..	9	..
18	30·111	43·3	41·2	2·1	..	..	..	N	..	..	..	N	¼	..	..	..	9	..
20	30·146	43·0	41·2	1·8	..	..	..	N by W	..	..	..	N	¼	..	..	..	5	..
22	30·201	47·5	44·0	3·5	39·0	8·5	..	N	..	..	..	N by W	¼	..	0·00	6·555	6	..
Mar. 28. 0	30·232	52·1	47·2	4·9	..	..	..	N	..	..	..	N	¼	..	..	..	3	..
2	30·250	56·3	50·7	5·6	..	..	..	NNE	..	..	..	N	¼	..	..	..	7	..
4	30·275	55·1	49·5	5·6	44·5	10·6	..	N by E	..	..	..	NNE	¼	..	..	..	2	..
6	30·290	54·0	48·6	5·4	..	..	..	NE	..	..	..	NE	¼	..	..	..	½	..
8	30·314	49·6	45·8	3·8	..	..	..	NNE	..	..	..	NE	¼	..	..	..	1	Transit

DRY THERMOMETER.

March 27d. The mean daily temperature was the highest in the month.

TEMPERATURE OF THE DEW POINT.

March 26d, 27d, and 28d. The differences of the mean daily values were considerable.

March 27d. The mean daily value was the greatest in the month; and at 4h the reading as observed was the highest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

March 25d and 26d. The least difference in the mean daily values for consecutive days in the month occurred.

REMARKS.	Observer.
Overcast: cirro-stratus.	J H
,, ,,	
,, ,,	
,, ,,	J H
,, ,, rain falling; it commenced at $21^h. 40^m$.	P
Overcast: cirro-stratus: no rain.	
Cirro-stratus and scud: breaks in and about the zenith.	P
Overcast: cirro-stratus and scud.	J H
,, ,, gusts of wind.	
,, ,, ,,	
,, ,,	J H
Scud in the W. and W. S. W.; the rest of the sky is cloudless.	P
Cloudless, except a large bank of dark cloud in the N. W. horizon.	
Cirro-stratus and scud: gusts of wind to $\frac{3}{4}$.	
A few clouds here and there: gusts of wind to $\frac{3}{4}$.	
Small breaks in every direction; the clouds consist of scud and imperfectly-formed cirro-cumuli.	P
Cirro-stratus and fleecy clouds.	D
Cirro-stratus and fleecy clouds.	
Large cumuli are scattered over the greater portion of the sky; in the horizon the kind of cloud is chiefly cirro-stratus: hazy.	D
Cirri, loose scud, and haze.	P
Curled and linear cirri, cirro-cumuli, scud, and haze.	
Overcast by dense scud: a few minutes since there were extensive breaks in every direction.	
Cirro-stratus and scud.	P
Overcast: cirro-stratus.	D
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
Cirro-stratus and scud.	J H
Cirro-stratus and scud.	
,,	J H
Overcast: cirro-stratus and scud.	D
,, ,,	
,, ,,	
,, ,, the place of the Moon is faintly visible.	D
,, ,,	J H
,, ,, the cloud more broken or less dense.	
Cirro-stratus.	
Cirro-stratus and scud.	
Scud and light clouds.	J H
Cirri, fleecy clouds, and other clouds of no definite modification, scattered in every direction.	P
Cumuli and light scud.	
Cumuli and large masses of light coloured scud.	P
Cumuli and large fleecy clouds.	J H
A few light clouds W. of the zenith.	
Vapour in the horizon from the N. to the E., and scud N. of the zenith.	

ELASTIC FORCE OF VAPOUR, AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
March 27^d. The mean daily value was the greatest in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
March 26^d. The mean daily value was the greatest in the month.

CLOUDS.
March $28^d. 4^h.$ to 20^h. The sky was nearly cloudless: it is the longest clear period in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Mar. 28. 10	30·357	45·5	43·9	1·6	42·5	3·0	59·4	Calm	..	..	..	NE	¼	..		..	1	..
12	30·363	41·7	41·4	0·3	..	..	34·9	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·376	38·5	38·7	–0·2	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·369	36·0	36·0	0·0	35·8	0·2		Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·379	33·7	33·8	–0·1	..	..	82·8	Calm	..	..	..	Calm	..	..	..	..	2	..
20	30·410	37·2	37·4	–0·2	..	..	29·0	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·418	48·4	46·5	1·9	45·5	2·9		Calm	..	..	..	Calm	..	..	0·00	6·555	3	..
Mar. 29. 0	30·417	55·1	49·2	5·9	..	..		ESE	..	..	..	Calm	..	..	..	..	3	..
2	30·387	57·6	51·3	6·3	..	..		ENE	..	..	..	ENE	¼	..	..	..	2	..
4	30·366	56·0	48·6	7·4	41·5	14·5		E	..	..	..	E	¼	..	..	..	½	..
6	30·362	52·2	47·3	4·9	..	..		E by N	..	..	..	E	¼	..	..	..	2	..
8	30·354	43·0	41·5	1·5	..	..	60·2	E	..	..	..	E	¼–	..	..	..	0	Transit
10	30·360	37·5	37·4	0·1	37·0	0·5	37·9	E	..	..	..	E	½	..	..	..	10	..
12	30·340	38·2	37·9	0·3	..	..	83·6	E by N	..	..	..	ENE	¼	..	..	..	10	..
14	30·269	39·0	38·5	0·5	..	..	28·6	ENE	..	..	..	ENE	¼	..	..	..	10	..
16	30·286	39·9	39·7	0·2	39·5	0·4		ENE	..	..	..	ENE	¼	..	..	..	10	..
18	30·287	40·9	40·5	0·4	..	..		ENE	..	..	..	ENE	¼	..	..	..	10	..
20	30·292	41·7	41·2	0·5	..	..		NE by E	..	..	..	ENE	¼	..	..	..	10	..
22	30·277	48·3	45·0	3·3	42·2	6·1		NE	0 to ½	..	..	ENE	½	..	0·00	6·555	2	..
Mar. 30. 0	30·262	50·9	45·0	5·9	..	..		E	½ to 2	..	..	E	½+	..	..	..	1	..
2	30·241	51·9	45·3	6·6	..	..		ENE	½ to 3	..	..	E	¾	..	..	..	0	..
4	30·206	50·9	44·0	6·9	36·0	14·9		ENE	½ to 4	..	..	E by N	¾	..	..	..	0	..
6	30·204	46·6	41·7	4·9	..	..		ENE	½ to 3+	..	..	ENE	¾	..	..	..	0	..
8	30·207	41·9	39·4	2·5	..	..	54·6	ENE	½ to 2	..	..	E	¾	..	..	..	0	..
10	30·211	39·8	38·9	0·9	38·0	1·8	39·8	E by N	..	..	..	ENE	½	..	..	..	½	Transit
12	30·207	41·0	40·2	0·8	..	..	72·5	..	..	..	..	E	½	..	..	..	10	..
14	..	..	..	..	..	..	34·4	..	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..
22	30·136	45·7	43·8	1·9	42·0	3·7		..	..	..	..	ENE	½	..	0·00	6·560	7	..
Mar. 31. 0	..	..	..	..	..	..		ENE	0 to ½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..		E	0 to 1½	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..		E by N	0 to 1	..	..	..	..	..	..	..	..	..
6	30·078	49·6	46·8	2·8	..	..		E by N	..	..	..	ESE	½	..	..	..	0	..
8	..	..	..	..	..	..	55·5	E by S	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	36·6	E	..	..	..	..	..	..	..	..	..	Transit
12	..	..	..	..	..	..	73·2	E by N	..	..	..	..	..	3·55	0·00	6·565	..	..
14	30·063	40·8	40·7	0·1	..	..	36·6	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·085	39·8	39·7	0·1	39·0	0·8		NE by E	..	..	..	Calm	..	..	..	..	10	..
18	30·097	37·0	37·0	0·0	..	..		E	..	..	..	Calm	..	..	..	..	10	..
20	30·118	38·6	38·9	–0·3	..	..		NNE	..	..	..	Calm	..	..	..	..	10	..
22	30·142	42·3	41·9	0·4	41·5	0·8		N by E	..	..	..	Calm	..	..	0·00	6·565	10	..
Apr. 1. 0	30·128	53·5	51·0	2·5	..	..		NNE	..	..	..	Calm		..	..	..	0	..
2	30·105	62·3	53·2	9·1	..	..	63·6	E by N	..	..	..	NE	¼–	..	..	..	0	..
4	30·097	62·7	53·3	9·4	42·3	20·4	36·4	Calm	..	..	..	ENE	¼	..	..	..	3	..
6	30·081	60·3	52·4	7·9	..	..		E	..	..	..	ENE	¼	..	..	..	3	..
8	30·090	52·8	49·7	3·1	..	..	88·5	Calm	..	..	..	ENE	¼	..	..	..	0	..
10	30·097	48·7	47·2	1·5	45·5	3·2	29·6	Calm	..	..	..	SE	¼–	..	..	..	0	..

BAROMETER.
March 28d. 22h. The reading at this time was the highest during the year. March 29d. The mean daily height was the greatest in the year.

DRY THERMOMETER.
March 28d. 14h, 18h, 20h, and 31d. 20h. The readings were lower than those of the Wet Thermometer.
March 29d. The daily range was the greatest in the month. March 29d. 2h. The reading was the highest in the month.
March 29d. 4h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred at this time.

TEMPERATURE OF THE DEW POINT.
March 30d. 4h. The difference between the temperature of the air and the observed dew point was greater at this time than at any other during the month.

MINIMUM THERMOMETER.
March 28d. 22h. The reading was higher than that of the Dry Thermometer at 18h.
March 29d. 22h. The reading was higher than that of the Dry Thermometer at 10h.

REMARKS.	Observer.
Light fleecy clouds and a very thin fog.	J H
Cloudless: a very faint halo round the Moon about eight times her diameter: a thin fog prevalent.	P
,, the fog much denser.	
,, ,,	
Clouds in the horizon in the E. and in the S. E., the rest of the sky being free from cloud: the fog is still as thick as ever.	
A dense fog: there appears to be no absolute cloud, as the Sun's disk is well seen through the fog.	P
Cirro-cumuli S. of the zenith: hazy.	D
Cumuli and light clouds: linear cirri in the S.	
Cirro-cumuli in the zenith: light clouds in the southern portion of the sky.	D
A few light clouds scattered here and there; the general character of the sky is cloudless.	P
Cirri and fleecy clouds, chiefly in the W., N., and E.	
Cloudless, except a few thin lines of cirri, which will not affect the notation.	
Overcast: cirro-stratus and scud; also a low driving mist; this was first observed at $8^h. 10^m$.	P
,, cirro-stratus.	D
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
Light cirri and fleecy clouds.	J H
Light cirri and fleecy clouds.	
Cloudless.	J H
,, the wind in gusts to 1+.	D
,, frequent gusts of wind to 1+.	
,, ,,	
A bank of clouds in the S.W. horizon.	D
Cirro-stratus and scud: at $10^h. 40^m$ the scud was passing with great rapidity from the E.	J H
Cirro-stratus and scud: several clear breaks in the N. E.	D
Cloudless: a very fine day.	D
Overcast: cirro-stratus; damp misty air.	J H
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	J H
,, ,, ,, a thin fog through which the Sun is gleaming.	G
Cloudless: a thin mist spread over the Park, and dew yet remains on the grass, even where the Sun is shining.	P
A thin haze in the horizon.	P
Light cirri and fleecy clouds: a very fine warm day.	J H
,,	
Cloudless.	
,, thin vapour round the horizon: very nearly calm.	J H

OSLER'S ANEMOMETER.
March $30^d. 12^h$. At this time the registering pencil went off the rack-work.

OSLER'S RAIN GAUGE.
March $31^d. 12^h$. The amount of rain inserted at this time is found by deducing the amount fallen in March from the mean amount collected on the ground in Crosley's gauge and in the simple cylinder gauges, on the supposition that the ratio existing between the amounts is 61 : 100, and adding the deduced quantity to the amount on Feb. $28^d. 12^h$.

RAIN.
March $31^d. 12^h$. The amount of rain collected in rain-gauge No. 4 during the month of March was $2^{in}\cdot30$, and that collected by the Rev. G. Fisher in a rain-gauge of the same construction at the Greenwich Hospital Schools during the same period was $2^{in}\cdot87$.

CLOUDS.
April $1^d. 8^h$ to $4^d. 2^h$. This period was cloudless with slight exceptions, and it was the longest clear period in the year.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 1. 12	30·094	45·7	44·9	0·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	Transit
14	30·078	41·7	41·4	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·044	40·2	39·9	0·3	38·0	2·2	..	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·043	37·5	37·6	–0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·040	42·4	41·9	0·5	..	..	..	Calm	..	..	..	S	very light	..	..	..	0	..
22	30·026	57·4	52·5	4·9	50·0	7·4	..	Calm	..	..	..	SSW	¼–	..	0·00	6·565	1	..
Apr. 2. 0	29·984	65·5	56·7	8·8	..	..	..	SW	..	..	..	SSW	¼–	..	..	..	½	..
2	29·939	67·0	56·5	10·5	..	..	..	SW	0 to ½	..	..	SW	¼	..	..	..	2	..
4	29·909	64·0	53·2	10·8	42·0	22·0	..	SW	0 to ½	..	..	SW	½	..	..	..	4	..
6	29·899	59·8	51·4	8·4	..	..	..	SW by S	..	..	..	SW	1	..	..	..	4	..
8	29·869	52·3	47·9	4·4	..	..	67·7 / 41·6	SSW	..	..	..	SW	¾	..	..	..	1	..
10	29·857	48·5	45·2	3·3	42·0	6·5	——	SSW	..	..	..	SW	¾	..	..	..	0	..
12	29·829	47·0	43·6	3·4	..	..	88·7 / 32·2	SSW	..	..	..	SW	¼–	..	..	..	0	Transit
14	29·799	45·8	42·4	3·4	..	..	..	SW	..	..	..	SW	¼	..	..	..	0	..
16	29·779	42·0	41·1	0·9	40·0	2·0	..	SSW	..	..	..	SW	¼–	..	..	..	0	..
18	29·751	41·5	40·7	0·8	..	..	..	SSW	..	..	..	Calm	..	..	..	..	0	..
20	29·739	49·3	46·5	2·8	..	..	..	SSW	..	..	..	SW	¼	..	..	..	0	Full
22	29·730	58·6	50·9	7·7	43·5	15·1	..	SW	0 to ½	..	..	SW	½	..	0·00	6·565	0	..
Apr. 3. 0	29·705	63·5	53·8	9·7	..	..	..	SW	0 to 1	..	..	SW	½	..	..	..	0	..
2	29·669	65·2	53·8	11·4	40·0	25·2	..	SW	0 to ½	..	..	SSW	½	..	..	..	0	..
4	29·644	63·3	54·1	9·2	43·9	19·4	..	SW	½ to 1	..	..	SSW	½	..	..	..	0	..
6	29·625	59·0	51·1	7·9	..	..	..	SSW	..	..	..	SSW	½	..	..	..	0	..
8	29·624	51·3	46·7	4·6	..	..	..	S by W	..	..	..	SSW	¼–	..	..	..	·½	..
10	29·609	47·5	43·6	3·9	41·0	6·5	65·9 / 43·4 —— 84·5 / 35·0	Calm	..	..	..	SSW	¼	..	..	..	0	..
12	29·586	46·1	43·7	2·4	..	..		SE	..	..	..	SE	¼	..	..	..	0	..
14	29·554	45·7	41·7	4·0	..	..	..	S by E	..	..	..	SSE	¼	..	..	..	0	Transit
16	29·521	46·0	42·8	3·2	39·0	7·0	..	Calm	..	..	..	SSE	¼	..	..	..	0	..
18	29·507	45·6	42·4	3·2	..	..	..	S by W	..	..	..	S	¼	..	..	..	0	..
20	29·520	51·1	46·8	4·3	..	..	..	S by W	..	..	..	S	¼	..	..	..	0	..
22	29·540	55·5	50·0	5·5	43·2	12·3	..	SW	..	..	..	S by W	¼	..	0·00	6·565	½	..
Apr. 4. 0	29·526	62·7	54·9	7·8	..	..	..	SW by W	..	..	..	S by W	¼	..	..	..	1	Perigee
2	29·519	64·3	54·7	9·6	..	..	..	SW	..	..	..	SSW	¼	..	..	..	2	..
4	29·515	62·1	53·4	8·7	43·5	18·6	..	SW	..	..	..	SSW	¼	..	..	..	3	..
6	29·521	57·7	52·0	5·7	..	..	..	SW	..	..	..	SW	¼	..	..	..	3	..
8	29·536	51·8	48·8	3·0	..	..	66·5 / 44·4	SW	..	..	..	SW	¼	..	..	..	5	..
10	29·558	48·1	46·4	1·7	44·5	3·6	——	SSW	..	..	..	Calm	..	..	..	..	4	..
12	29·574	46·2	44·4	1·8	..	..	87·0 / 37·0	SW	..	..	..	SSE	¼–	..	..	..	7	..
14	..	..	..	..	..	..		SSW	..	..	..	..	..	..	..	..	..	Transit
16	..	..	..	..	..	..		S by W	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	S	..	..	..	..	..	..	..	..	..	..
22	29·633	49·5	47·7	1·8	..	..	..	S	..	..	..	SSW	¼	..	0·00	6·565	10	..
Apr. 5. 0	..	..	..	..	..	..	..	SSW	0 to 1	..	..	..	..	..	..	..	..	..

BAROMETER.
April 4d. The mean daily height was the least in the month.

TEMPERATURE OF THE DEW POINT.
April 3d. 4h. The dew came on instantaneously, and in a thin black ring; it disappeared in a few seconds, almost as suddenly as it came.

WEIGHT OF A CUBIC FOOT OF AIR.
April 4d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cloudless: thin vapour round the horizon.	G
,, thin vapour: a great deposition of moisture.	
,, ,, ,,	
,, a creeping mist on the ground.	
,, ,,	G
Light clouds scattered about near the horizon: a slight haze in the W. and in the E.	P
A few light clouds here and there, with a few cirri also in the West: the horizon is dark and well defined.	
Cirri and light clouds, predominating however to windward: the horizon is still free from haze.	P
Comoid cirri to the N. and to the W., long straight linear cirri to the S., running N. and S., with other shorter lines at right angles to them; a portion of the cirri in the W. forming into cirro-cumuli.	G
The appearance of the sky is similar to that described at the last observation, except that perhaps the cirrus is more scattered; there are several long lines of cirri near the zenith.	
A few lines of strati near the horizon in the N., and also under the Moon; with these exceptions it is cloudless.	
An occasional thin cirro-stratus passes over: a glory round the Moon at times: a few lines of cloud occasionally appear but to no numerical extent.	G
Cloudless: a very faint lunar halo, but exhibiting the prismatic colours, is visible, its diameter being about six times that of the [Moon.	P
,,	
,,	
,,	
,,	P
,,	J H
Cloudless.	
,,	J H
,, the horizon dark and well defined.	P
,,	
A line of dark cloud in the W. horizon: the horizon is sharply defined and free from haze: there is a bright, yellow light in the W. and N.W. horizon, probably zodiacal light, extending about 15° above the horizon; but, no stars being yet visible, its position cannot be determined with accuracy.	
Cloudless: it afterwards appeared, when darker, that the light mentioned in the previous observation as the zodiacal light was not so, but arose from the light of the Sun.	P
Cloudless.	D
,,	
,,	
,,	
,,	D
Light cirri, principally near the S. horizon.	J H
Light cirri and fleecy clouds.	
Light cirri and cumuli.	J H
Cirro-cumuli and light cirri: a very fine day.	D
Light clouds and cirro-cumuli.	
Cirro-stratus and small fragments of scud.	
Cirro-stratus and vapour.	D
Fleecy clouds and scud: the direction of the wind taken from the motion of the clouds.	J H
Overcast: nimbi and cirro-stratus: a few drops of rain fell a few minutes since.	G

MINIMUM THERMOMETER.

April $2^d . 22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

April 5^d. Between $0^h . 50^m$ and $1^h . 30^m$ there were frequent gusts to 3 lbs.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 5. 2	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..	..
4	29·663	53·7	47·7	6·0	..	..	..	SSW	0 to ¼	..	..	SW	½	..	..	..	3	..
6	..	..	..	..	..	..	..	SSW	0 to 1	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	57·4	S by E	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	40·4	SE	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	—	SE	..	..	..	..	..	..	..	..	..	..
14	29·650	42·5	41·7	0·8	..	..	75·0	SE	..	..	..	SE	¼	..	..	..	1	..
16	29·668	41·0	40·2	0·8	39·0	2·0	33·1	SE	..	..	..	ESE	¼–	..	..	..	3	Transit
18	29·698	40·3	39·5	0·8	..	..	..	ESE	..	..	..	Calm	..	..	..	..	2	..
20	29·722	46·6	44·4	2·2	..	..	..	SE	..	..	..	SSE	¼	..	..	..	1	..
22	29·751	52·0	48·2	3·8	45·2	6·8	..	NE by N	..	..	..	Calm	..	3·55	0·00	6·565	1½	..
Apr. 6. 0	29·767	56·5	48·8	7·7	..	..	..	E	..	..	..	NE	¼+	..	..	..	4	..
2	29·783	57·3	50·1	7·2	..	..	..	E by N	..	..	..	NE	¼	..	..	..	9¾	..
4	29·785	53·7	48·2	5·5	39·5	14·2	..	E by N	..	..	..	Calm	..	..	..	..	10	..
6	29·792	54·0	47·6	6·4	..	..	60·1	NE	..	..	..	Calm	..	..	..	..	7	..
8	29·816	49·4	45·4	4·0	..	..	34·4	N by E	..	..	..	N	¼–	..	..	..	2	..
10	29·837	44·6	42·7	1·9	41·0	3·6	—	N by E	..	..	..	N	¼	..	..	..	0	..
12	29·868	41·0	40·5	0·5	..	..	82·0	N	..	..	..	Calm	..	..	..	..	0	..
14	..	..	..	..	..	..	29·3	N by W	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	N by W	..	..	..	..	..	..	..	..	..	Transit
18	..	..	..	..	..	..	..	N	..	..	..	.	..	..	..	..	..	..
20	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	..
22	30·017	51·4	47·0	4·4	..	..	..	ENE	..	..	..	NE	¼	3·55	0·00	6·565	0	..
Apr. 7. 0	..	..	..	..	..	..	..	ENE	0 to ¼	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..
4	30·044	52·0	44·2	7·8	..	..	..	E by N	..	..	..	ENE	¼+	..	..	..	0	Greatest declination S.
6	..	..	..	..	..	..	54·3	E	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	33·4	E	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	—	E	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	77·0	E	..	..	..	..	..	..	..	..	..	..
14	30·192	35·0	34·5	0·5	..	..	22·7	E	..	..	..	ENE	½	..	..	..	0	..
16	30·204	34·0	33·7	0·3	33·2	0·8	..	E	..	..	..	ENE	¼–	..	..	..	0	..
18	30·236	34·5	34·6	–0·1	..	..	..	E	..	..	..	Calm	..	..	..	..	10	Transit
20	30·269	37·0	37·0	0·0	..	..	..	E	..	..	..	Calm	..	..	..	..	10	..
22	30·306	40·9	40·4	0·5	38·5	2·4	..	NNE	..	..	..	Calm	..	3·55	0·00	6·565	10	..
Apr. 8. 0	30·310	51·8	47·6	4·2	..	..	..	NNE	..	..	..	Calm	..	..	..	..	3	..
2	30·303	58·3	50·8	7·5	..	..	..	WSW	..	..	..	WSW	½	..	..	..	1½	..
4	30·295	60·0	50·8	9·2	40·0	20·0	..	W	..	..	..	W	¼	..	..	..	1	..
6	30·294	59·4	50·8	8·6	..	..	..	W by S	..	..	..	W by S	¼	..	..	..	0	..
8	30·303	52·6	46·9	5·7	..	..	61·2	Calm	..	..	..	Calm	..	..	..	..	¼	..
10	30·329	47·0	42·5	4·5	36·0	11·0	39·4	WSW	..	..	..	Calm	..	..	..	..	0	..
12	30·352	44·3	40·6	3·7	..	..	—	SW	..	..	..	Calm	..	..	..	..	0	..
14	30·352	42·1	38·7	3·4	..	..	85·7	SW	..	..	..	SW	¼	..	..	..	0	..
16	30·347	41·2	38·7	2·5	36·0	5·2	33·3	SW by W	..	..	..	SW	¼	..	..	..	0	..
18	30·358	39·4	38·1	1·3	..	..	..	SW by W	..	..	..	Calm	..	..	..	..	0	Transit
20	30·382	46·0	43·8	2·2	..	..	..	WSW	..	..	..	Calm	..	..	..	..	0	..
22	30·390	53·5	48·2	5·3	41·0	12·5	..	WSW	..	..	..	Calm	..	3·55	0·00	6·565	4	..
Apr. 9. 0	30·381	61·7	52·8	8·9	..	..	..	W by S	..	..	..	W	¼–	..	..	..	3	..

BAROMETER.
April 8d. 22h. The reading was the greatest in the month.
April 9d. The daily range was the least in the month.
April 9d. The mean daily height was the greatest in the month.

DRY THERMOMETER.
April 7d. 16h. The lowest reading in the month occurred.
April 7d. 18h. The reading was lower than that of the Wet Thermometer.
April 8d and 9d. The greatest difference of the mean daily temperatures for consecutive days in the month occurred.

REMARKS.	Observer.
The clouds became broken: between $4^d. 22^h$ and this time a slow rain was falling occasionally.	G
Between 2^h and 4^h a few cirri and cumuli have prevailed; at present there are a few lines of cirri to the N.; and near the horizon all round there are white cumuli: after this time the sky was cloudless; the evening and night being very fine.	
	G
Light clouds about the Moon.	J H
Fleecy clouds S. W. and S. of the zenith.	
Dark scud principally N. of the zenith.	
Light clouds in the horizon in the E. and N.	J H
Cirri and a few cumuli chiefly in the S.	P
Cumuli, scud, and fleecy clouds: between this and the preceding observation cirri have been unusually abundant, covering at [times the greater portion of the sky.	
The sky is nearly covered with cumuli and dark scud: a few breaks in the eastern horizon, and W. of the zenith: the clouds have been increasing in density and numerical amount since the preceding observation.	P
Cirro-stratus and scud.	J H
,,	
Cirro-stratus and scud West of the meridian.	
Cloudless.	J H
,,	P
,,	
Cloudless: the general character of the day has been cloudless, with a cold wind as evening approached.	
,,	
,,	
Overcast: a very dense fog.	
,, ,, everything is dripping with moisture.	P
Stratus, which appears to be on the point of breaking up.	J H
Stratus in the S., and also near the W. horizon.	D
Cirro-stratus near the horizon in the N. and N.W.; with that exception the sky is without cloud.	D
A few fleecy clouds only in the W. and N.	P
Cloudless.	
A few dark clouds in the W. horizon only: hazy.	
Cloudless: the fog seems to have gone off, though from the appearance of the stars there is vapour about.	P
,,	D
,,	
,,	
,,	
,,	D
Light clouds: hazy.	J H
Light clouds: hazy.	

TEMPERATURE OF THE DEW POINT.

April 8^d. The mean daily value was the lowest in the month: at $7^d. 16^h$ the reading as observed was the lowest in the month.

DEGREE OF HUMIDITY.

April 9^d. The mean daily value was the least in the month.

MINIMUM THERMOMETER.

April $5^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

April 8^d. The mean daily values were the least in the month: the same values occurred on April 29^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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 9. 2	30·362	65·1	53·2	11·9	..	..	..	W by S	..	..	..	W	$\frac{1}{4}$	..	..	..	2	..
4	30·336	66·7	54·2	12·5	42·0	24·7	..	W by S	..	..	..	WNW	$\frac{1}{4}$	..	..	..	0	..
6	30·325	63·0	52·3	10·7	..	..	..	W by S	..	..	..	W	$\frac{1}{4}$	..	..	..	0	..
8	30·325	53·8	48·0	5·8	..	..	67·8	SW	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	..
10	30·332	50·3	47·4	2·9	44·5	5·8	41·2	SSW	..	..	..	SSW	$\frac{1}{4}$	..	..	..	0	Last Quar.
12	30·337	48·6	44·8	3·8	..	..		SSW	..	..	..	SSW	$\frac{1}{4}$	..	..	..	2	..
14	30·322	46·0	43·0	3·0	..	..	90·9	SW by S	..	..	..	SW	$\frac{1}{4}$–	..	..	..	1	..
16	30·304	43·1	40·7	2·4	38·5	4·6	34·7	SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	1	..
18	30·288	42·8	40·2	2·6	..	..	..	SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	..
20	30·287	46·8	43·5	3·3	..	..	..	SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	Transit
22	30·276	57·7	52·0	5·7	45·5	12·2	..	SSW	..	..	..	SW	$\frac{1}{4}$	3·55	0·00	6·565	0	..
Apr. 10. 0	30·254	63·2	57·6	5·6	..	..	..	SW	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	..
2	30·202	66·4	56·0	10·4	..	..	..	SW by W	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	..
4	30·138	66·7	54·7	12·0	39·0	27·7	..	WSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	1	..
6	30·106	63·1	54·5	8·6	..	..	..	SW	..	..	..	SW	$\frac{1}{4}$	..	..	..	0	..
8	30·083	55·0	49·5	5·5	..	..	69·8	S	..	..	..	SW	$\frac{1}{4}$	..	..	..	$\frac{1}{4}$	..
10	30·052	50·7	46·4	4·3	40·5	10·2	38·3	S	..	..	..	WSW	$\frac{1}{4}$	..	..	..	0	..
12	30·007	46·1	43·1	3·0	..	..		S	..	..	..	S	$\frac{1}{4}$	..	..	..	0	..
14	29·972	43·2	40·5	2·7	..	..	95·4	S	..	..	..	S	$\frac{1}{4}$	..	..	..	0	..
16	29·926	41·7	38·8	2·9	34·3	7·4	29·6	SSW	..	..	..	S	$\frac{1}{4}$	..	..	..	0	..
18	29·903	39·2	36·9	2·3	..	..	..	SW by W	..	..	..	WSW	$\frac{1}{4}$	..	..	..	0	..
20	29·885	44·8	41·9	2·9	..	..	..	SW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	0	Transit
22	29·859	54·6	48·2	6·4	39·5	15·1	..	WSW	..	..	..	WSW	$\frac{1}{4}$	3·55	0·00	6·565	2	..
Apr. 11. 0	29·849	54·6	49·2	5·4	..	..	..	WSW	0 to $\frac{1}{2}$	..	..	W	$\frac{1}{4}$	..	..	..	$9\frac{1}{2}$	..
2	29·821	57·1	50·0	7·1	..	..	..	WSW	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	W by S	$\frac{1}{2}$	..	..	..	9	..
4	29·812	57·4	47·9	9·5	34·5	22·9	..	W	$\frac{1}{2}$ to 1	..	..	W by S	$\frac{1}{2}$	..	..	..	8	..
6	29·768	55·7	48·1	7·6	..	..	..	W	..	..	..	W by S	$\frac{1}{4}$	..	..	..	7	..
8	29·774	50·7	45·4	5·3	..	..	61·5	W by S	..	..	..	W by S	$\frac{1}{2}$	..	..	..	8	..
10	29·789	48·5	45·3	3·2	41·5	7·0	42·0	W	..	..	..	W by S	$\frac{1}{2}$	..	..	..	9	..
12	29·795	46·8	44·9	1·9	..	..		W by S	..	..	..	Calm	..	..	..	..	7	..
14	29·806	46·5	44·4	2·1	..	..	79·3	NNW	..	..	..	Calm	..	..	..	..	10	..
16	29·822	44·5	42·2	2·3	39·5	5·0	34·2	NNW	..	..	..	Calm	..	..	..	..	10	..
18	29·836	42·3	40·0	2·3	..	..	..	NNW	..	..	..	Calm	..	..	..	..	8	..
20	29·867	42·7	41·2	1·5	..	..	..	W by S	..	..	..	Calm	..	..	..	..	0	Transit
22	29·871	49·2	45·4	3·8	39·0	10·2	..	W by S	..	..	..	WSW	$\frac{1}{4}$	3·55	0·00	6·565	8	..
Apr. 12. 0	29·842	56·6	49·2	7·4	..	..	..	WSW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	8	..
2	29·804	60·2	51·4	8·8	..	..	..	SW	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	SW	$\frac{1}{2}$	..	..	..	8	..
4	29·759	57·2	49·9	7·3	41·0	16·2	..	SSW	$1\frac{1}{4}$ to $3\frac{1}{2}$	..	..	SW	$\frac{3}{4}$	..	..	..	9	..
6	29·718	50·5	45·2	5·3	..	..	..	SSW	$\frac{3}{4}$ to $2\frac{1}{2}$	..	..	SSW	1	..	..	..	10	..
8	29·671	47·2	45·7	1·5	..	..	62·0	S by W	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	SW	$\frac{1}{2}$	..	..	..	10	..
10	29·609	46·2	45·5	0·7	44·0	2·2	46·4	S	1 to 3	..	..	SW	$\frac{1}{2}$	..	..	..	10	..
12	29·488	46·3	46·0	0·3	..	..	77·0	S by W	$\frac{1}{2}$ constant	..	..	SSW	$\frac{1}{2}$	..	..	..	10	..
14	29·442	47·8	47·7	0·1	..	..	44·3	WSW	$\frac{1}{2}$ to 1	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
16	29·462	47·5	47·5	0·0	47·5	0·0	..	W by S	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	W	$\frac{1}{2}$	..	..	..	10	..
18	29·504	46·6	45·7	0·9	..	..	..	W	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	W	$\frac{3}{4}$	..	..	..	10	..
20	29·543	48·1	46·3	1·8	..	..	..	W	1 to 3	..	..	W	1	..	..	..	$9\frac{1}{2}$	..
22	29·605	49·6	46·9	2·7	42·0	7·6	..	W by N	$\frac{1}{4}$ to 2	..	..	WNW	1	3·71	0·17	6·790	10	Transit

BAROMETER.

April 10d and 11d. The greatest difference in the mean daily heights for consecutive days in the month occurred.

April 12d. The daily range was the greatest in the month.

April 12d. 14h. The reading was the lowest in the month.

TEMPERATURE OF THE DEW POINT.

April 10d. 4h. The greatest difference in the month between the temperature of the air and dew point occurred, on the supposition that the dew point as observed on April 26d. 4h was 10° in error.

MINIMUM THERMOMETER.

April 12d. 22h. The reading was higher than that of the Dry Thermometer at 10h and 12h.

REMARKS.	Observer.
Light clouds : hazy.	J H
Cloudless : hazy.	D
,, ,,	
,, ,,	
,, ,,	
Vapour in the N. horizon.	D
Vapour : hazy.	J H
,, ,,	
Cloudless.	
,, hazy.	J H
,, ,,	H B
Cloudless : thick haze in the N. horizon.	
,,	H B
Light clouds in the N. : a great difficulty in obtaining the dew point.	J H
Cloudless : hazy near the horizon in the W. and N.	
A few light clouds in the W.	
Cloudless.	J H
,,	H B
,, thick haze in the N. and E. parts of the sky.	
,,	
,, hazy.	
,, ,,	H B
Light fleecy clouds and cirro-cumuli ; also cirri of the linear kind and cirro-strati are forming.	J H
Scud and cirro-stratus : the clouds are much heavier than at the last observation.	
Cirro-stratus and scud.	J H
,,	H B
A dense cirro-stratus covers the sky near the horizon, but the zenith and its neighbourhood are quite clear.	
Cirro-stratus and scud.	
,, a few stars are visible : at $8^h. 40^m$ the sky was cloudless.	H B
A very thin cirro-stratus covers every part of the sky, except in the S. E., where the stars are shining rather brightly.	G
A high and thin cirro-stratus : occasionally a few stars are visible for a short time, particularly in the S. E.	
The cirro-stratus has now become more uniformly spread and much more dense, but still high : no star has been seen for some time.	
The sky to the E. of the zenith is clear ; the remainder of the sky is covered by a thin layer of clouds : there are occasional gentle airs from the W.	
The amount of cloud became less and less from the time of the last observation, and at about 19^h the sky was cloudless, and it continues so : there are occasional gentle airs from the N. N.W.	G
Cirro-stratus and scud.	D
Cirro-stratus, scud, and cumuli.	
,,	D
Cumuli near the horizon all round ; cirri above scud : the wind is rising, and many of the clouds are curled up, having a stormy [appearance.	G
Cirro-stratus, scud moving quickly from the S. : the appearance of the sky is wild.	
Overcast : a little rain fell about half-an-hour since, and then ceased ; it now rains more freely.	
,, rain falling : rain has been falling in intermittent showers since the last observation : the wind occasionally surges among the trees.	G
Overcast : rain falling.	D
,, ,,	
,, a thin rain falling.	
,, cirro-stratus and scud.	
Cirro-stratus and scud : a few small breaks are near the zenith.	D
,,	J H

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

April $11^d. 3^h$. At this time a pressure of $2\frac{1}{2}$ lbs. took place.

DIRECTION OF THE WIND BY OSLER'S ANEMOMETER.

April 11^d. At $13^h. 10^m$ the direction changed from W. by N. to N. by W., and continued nearly in this position to $17^h. 40^m$; after that time it returned to its former position.

CLOUDS.

April $12^d. 6^h$ to $13^d. 12^h$ +. The sky during this period was generally covered with cloud ; it is the longest cloudy period in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 13. 0	29·636	50·7	46·9	3·8	..	..	..	W	..	..	..	W	$\frac{3}{4}$	..	..	..	10	..
2	29·659	55·3	49·5	5·8	..	..	..	W by N	0 to 1	..	..	WNW	1	..	..	..	10	..
4	29·668	54·9	49·8	5·1	45·0	9·9	..	WSW	0 to $1\frac{1}{2}$	N	..	WSW	$\frac{1}{2}$	..	..	..	8	..
6	29·693	52·9	49·4	3·5	..	..		WSW	0 to $\frac{1}{4}$	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
8	29·704	50·3	47·8	2·5	..	..	55·9	WSW	0 to $\frac{1}{2}$	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
10	29·706	49·2	47·4	1·8	45·0	4·2	48·7	SW	0 to $\frac{1}{2}$	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
12	29·684	48·3	47·8	0·5	..	..	71·3	SW	$\frac{1}{4}$ to $1\frac{1}{2}$	..	..	SW	$\frac{3}{4}$	..	..	..	10	..
14	..	..	..	..	..	..	45·6	WSW	0 to $1\frac{1}{2}$	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		WSW	0 to 1	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	WSW	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
22	29·802	54·4	50·4	4·0	..	..	..	W	$\frac{1}{2}$ to 2	..	..	W by N	$\frac{3}{4}$	3·73	0·02	6·815	10	Transit
Apr. 14. 0	..	..	..	..	..	..	..	W by N	..	..	..	..	..	..	..	..	..	In Equator
2	29·829	56·3	53·0	3·3	..	..	..	W by S	..	..	..	W	$\frac{3}{4}$	..	..	..	10	..
4	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		WSW	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
8	29·887	54·5	53·2	1·3	..	..	58·4	WSW	0 to $\frac{1}{4}$	..	..	W	$\frac{1}{2}$	..	..	..	$9\frac{1}{2}$	..
10	..	..	..	..	..	..	43·9	SW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	71·8	SSW	..	..	..	..	..	..	..	..	..	..
14	29·951	46·1	45·8	0·3	..	..	40·8	SSW	..	..	..	W	$\frac{1}{2}$	..	..	..	0	..
16	29·945	45·1	44·9	0·2	44·0	1·1		SSW	..	..	..	W	$\frac{1}{2}$	..	..	..	0	..
18	29·972	43·8	43·8	0·0	..	..	..	SSW	..	..	..	W	$\frac{1}{2}$	..	..	..	3	..
20	30·008	47·9	47·0	0·9	..	..	..	SW	0 to $\frac{1}{2}$	..	..	W	$\frac{1}{2}$	..	..	..	8	..
22	30·020	52·4	50·8	1·6	48·5	3·9	..	SW	..	..	..	W	$\frac{1}{4}$	3·73	0·00	6·822	10	Transit
Apr. 15. 0	30·021	55·8	52·7	3·1	..	..	..	WSW	0 to $\frac{1}{4}$	..	..	W by S	$\frac{1}{4}$	..	..	..	10	..
2	29·989	59·2	55·6	3·6	..	..	..	SW	0 to $\frac{1}{4}$	..	..	W by S	$\frac{1}{4}$	..	..	..	6	..
4	29·969	60·0	54·3	5·7	49·0	11·0	..	SSW	$\frac{1}{2}$ to 1	..	..	W	$\frac{3}{4}$	..	..	..	4	..
6	29·977	55·5	51·3	4·2	..	..		SSW	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	W	$\frac{3}{4}$	..	..	..	3	..
8	29·998	51·2	49·0	2·2	..	..	63·5	S by W	0 to $\frac{1}{4}$	..	..	WSW	$\frac{1}{2}$	..	..	..	9	..
10	30·012	48·5	47·0	1·5	46·0	2·5	48·6	S by W	0 to $\frac{1}{4}$	..	..	SW	$\frac{3}{4}$	..	..	..	3	..
12	30·021	48·2	46·9	1·3	..	..	80·2	S by W	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
14	30·020	48·8	47·4	1·4	..	..	44·4	SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
16	30·024	49·4	47·8	1·6	46·5	2·9		SSW	..	..	..	SSW	$\frac{1}{4}$	..	..	..	10	..
18	30·031	48·7	48·2	0·5	..	..	..	SSW	..	..	..	SSW	$\frac{1}{4}$	..	..	..	10	..
20	30·065	49·8	49·6	0·2	..	..	..	S by W	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
22	30·077	52·8	51·8	1·0	49·0	3·8	..	WSW	..	..	..	WSW	$\frac{1}{4}$	3·73	0·00	6·835	10	..
Apr. 16. 0	30·090	54·7	53·4	1·3	..	..	..	SW	..	..	..	SW	$\frac{1}{2}$	..	..	..	10	Transit
2	30·084	61·1	57·4	3·7	..	..	..	SW	..	..	..	SW	$\frac{1}{2}$	..	..	..	7	..
4	30·083	59·7	55·0	4·7	49·8	9·9	..	SW	..	..	..	W by S	$\frac{1}{4}$	..	..	..	10	..
6	30·080	57·8	54·5	3·3	..	..		SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	9	..
8	30·101	53·4	51·6	1·8	..	..	62·4	S by W	..	..	..	SW	$\frac{1}{4}$	..	..	..	5	..
10	30·113	49·8	48·9	0·9	48·5	1·3	41·9	S by W	..	..	..	SW	$\frac{1}{2}$	..	..	..	0	..
12	30·115	47·5	47·2	0·3	..	..	75·8	S by W	..	..	..	Calm	..	..	..	..	1	..
14	30·114	45·2	45·2	0·0	..	..	36·3	SSW	..	..	..	Calm	..	..	..	..	0	..
16	30·104	43·2	43·4	−0·2	43·0	0·2		SSW	..	..	..	Calm	..	..	..	..	0	..
18	30·103	41·7	41·8	−0·1	..	..	..	SSW	..	..	..	Calm	..	..	..	..	5	..
20	30·101	46·6	46·2	0·4	..	..	..	SSW	..	..	..	Calm	..	..	..	..	9	..
22	30·099	53·3	51·6	1·7	49·3	4·0	..	Calm	..	..	..	Calm	..	3·73	0·00	6·835	8	..
Apr. 17. 0	30·068	60·8	55·4	5·4	..	..	..	E	..	..	..	ESE	$\frac{1}{4}$	..	..	..	2	Transit

DRY THERMOMETER.

April 13d. The daily range was the least in the month.

April 16d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

April 16d. The mean daily value was the greatest in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

April 16d. The mean daily values were the greatest in the month: the former values occurred on April 20d.

REMARKS.	Observer.
Cirro-stratus and scud: gloomy.	J H
,, gusts of wind.	J H
,,	D
,,	
,,	
,,	D
,, gusts of wind: rain has been falling until within the last twenty minutes; it commenced at about 10^h.	J H
Overcast: cirro-stratus and scud: at $22^h. 40^m$ rain began to fall.	
Overcast: cirro-stratus and scud: the rain has ceased.	
Cirro-stratus and scud: the day has been cloudy throughout, with the exception of a few breaks occasionally during the afternoon.	
Cloudless.	
,,	
Scud in various directions.	
,,	J H
Thick scud covers every part of the sky.	H B
Overcast: thick scud.	
The N. and N. E. parts of the sky are nearly free from cloud, but the remaining part is altogether covered.	H B
Cumuli and light fleecy clouds.	J H
,,	
A break low down in the West, otherwise the sky is covered with a dark scud.	
Heavy vapour: scud: the wind is blowing in gusts to 1+.	J H
Overcast: the wind has subsided since the last observation.	H B
,,	
,, a few drops of rain are falling: since the last observation the wind has blown frequently in gusts to $\frac{3}{4}$.	
,, slight rain.	
,,	H B
,, a very thin rain falling.	D
Overcast: cirro-stratus and scud.	
Cirro-stratus and scud.	D
Overcast.	H B
Cirro-stratus and scud: a few breaks near the zenith.	
Dense patches of scud scattered about in various directions.	
Cloudless.	H B
Vapour in the horizon.	D
Cloudless: the stars look dim.	
,, deposition of moisture.	
Cirro-stratus and fleecy clouds.	
Cirro-stratus and light fog.	D
Cumuli, cirri, and fleecy clouds.	H B
Cumuli and light cirri scattered about in various parts of the sky.	

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

April 16^d. The mean daily value was the least in the month.

DEGREE OF HUMIDITY.

April 16^d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.

April $13^d. 22^h$. The reading was higher than that of the Dry Thermometer at 12^h.

April $14^d. 22^h$, and $16^d. 22^h$. The readings were higher than those of the Dry Thermometer at 18^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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 17. 2	30·039	64·0	58·4	5·6	..	..	..	NNE	..	..	..	ESE	¼	..	..	..	9	..
4	29·997	66·8	58·7	8·1	49·0	17·8	..	S	..	..	..	S	¼	..	..	..	6	..
6	29·989	66·4	56·3	10·1	..	..	..	SSW	..	..	..	SW	¼	..	..	..	6	New
8	29·986	57·6	51·8	5·8	..	..	67·5	S by W	..	..	..	Calm	..	..	..	..	5	..
10	29·989	52·5	48·7	3·8	43·5	9·0	44·6	S	..	..	..	Calm	..	..	..	..	0	..
12	29·998	48·5	47·2	1·3	..	..	87·3	W by S	..	..	..	Calm	..	..	..	..	0	..
14	29·984	47·8	46·2	1·6	..	..	39·3	WSW	..	..	..	Calm	..	..	..	..	0	..
16	29·972	45·5	44·7	0·8	43·5	2·0	..	WSW	..	..	..	Calm	..	..	..	..	0	..
18	29·998	44·2	44·0	0·2	..	..	..	WSW	..	..	..	Calm	..	..	..	..	0	..
20	30·015	48·7	47·2	1·5	..	..	..	W by S	..	..	..	Calm	..	..	..	..	0	..
22	30·029	54·7	50·3	4·4	44·8	9·9	..	N	..	..	..	Calm	..	3·73	0·00	6·835	10	..
Apr. 18. 0	30·044	56·7	51·7	5·0	..	..	..	N by E	..	..	..	N	¼–	..	..	..	8	..
2	30·051	57·8	52·2	5·6	..	..	..	N	0 to ¼	..	..	N	¼–	..	..	..	10	Transit
4	30·060	52·0	47·9	4·1	42·0	10·0	..	N	½ to 1½	..	..	N	½	..	..	..	10	..
6	30·081	53·0	47·6	5·4	..	..	..	N	..	..	..	N	½	..	..	..	10	..
8	30·107	49·3	44·6	4·7	..	..	58·5	N	..	..	..	N	¼	..	..	..	2	..
10	30·141	45·7	41·9	3·8	37·5	8·2	37·0	N	..	..	..	NW	¼	..	..	..	0	..
12	30·165	42·5	39·6	2·9	..	..	76·2	N	..	..	..	NW	¼	..	..	..	0	..
14	30·176	40·5	38·7	1·8	..	..	27·3	N by E	..	..	..	WNW	¼	..	..	..	2	..
16	30·189	39·8	37·9	1·9	36·0	3·8	..	NNW	..	..	..	W	¼	..	..	..	3	..
18	30·215	36·3	35·5	0·8	..	..	..	NW	..	..	..	W	¼	..	..	..	½	..
20	30·244	43·7	41·6	2·1	..	..	..	W	..	..	..	W	¼	..	..	..	5	..
22	30·259	51·2	45·6	5·6	39·0	12·2	..	NNE	..	..	..	NNE	¼	3·73	0·00	6·835	4	..
Apr. 19. 0	30·256	58·4	49·7	8·7	..	..	..	N	..	..	..	N	¼	..	..	..	8	..
2	30·233	60·3	50·8	9·5	..	..	..	N by W	..	..	..	NNE	¼	..	..	..	7	Transit
4	30·213	59·1	50·3	8·8	40·0	19·1	..	NNW	..	..	..	N	¼	..	..	..	9	..
6	30·201	58·1	50·3	7·8	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	9¾	Apogee
8	30·208	56·1	50·7	5·4	..	..	61·7	N by W	..	..	..	Calm	..	..	..	..	9	..
10	30·213	54·1	50·2	3·9	46·0	8·1	48·2	N by W	..	..	..	Calm	..	..	..	..	3	..
12	30·228	52·2	49·5	2·7	..	..	83·8	Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·213	50·5	48·8	1·7	..	..	41·2	N	..	..	..	N	¼	..	..	..	10	..
16	30·195	48·0	47·0	1·0	46·2	1·8	..	Calm	..	..	..	W	¼	..	..	..	10	..
18	30·188	47·4	46·8	0·6	..	..	..	Calm	..	..	..	W	¼	..	..	..	10	..
20	30·197	50·9	50·0	0·9	..	..	..	Calm	..	..	..	SW	¼	..	..	..	10	..
22	30·193	54·6	52·2	2·4	49·5	5·1	..	Calm	..	..	..	Calm	..	3·73	0·00	6·835	10	..
Apr. 20. 0	30·165	60·5	56·3	4·2	..	..	..	NW	..	..	..	Calm	..	..	..	..	9	..
2	30·140	63·1	55·7	7·4	..	..	..	WNW	..	..	..	W	½	..	..	..	9	Transit
4	30·115	61·2	54·7	6·5	49·0	12·2	..	NW	..	..	..	WNW	½	..	..	..	10	..
6	30·106	59·6	53·9	5·7	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	6	..
8	30·112	57·2	53·1	4·1	..	..	62·9	N by W	..	..	..	N	¼	..	..	..	10	..
10	30·117	55·8	52·9	2·9	50·5	5·3	51·1	N	..	..	..	Calm	..	..	..	..	10	..
12	30·109	55·1	52·4	2·7	..	..	77·7	N	..	..	..	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..	44·3	N	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	30·099	61·4	53·7	7·7	..	..	..	N	..	..	..	NW	¼	3·73	0·00	6·835	8	..

TEMPERATURE OF THE DEW POINT.
April 19d and 20d. The greatest difference in the mean daily values for consecutive days in the month occurred.

MAXIMUM THERMOMETER.
April 20d. 22h. The reading was lower than that of the Dry Thermometer at 2h.

MINIMUM THERMOMETER.
April 17d. 22h and 18d. 22h. The readings were higher than those of the Dry Thermometer at 18h.
April 19d. 22h. The reading was higher than those of the Dry Thermometer at 16h and 18h.

REMARKS.	Observer.
The sky near the horizon is covered with a bank of cumuli, and the remainder with cumulo-stratus, patches of blue sky intervening.	H B
Fleecy clouds and cumuli.	D
Cumulo-strati, cumuli, and small fragments of scud.	
The S. E. portion of the sky is clear; in the remaining parts the modification of cloud is chiefly a fleecy kind of cirro-stratus.	
Cloudless.	D
,,	G
,, deposition of moisture: about half an hour since a bank of cloud formed in the N., which has since disappeared: there are occasional gentle airs passing from the W.: at the time of the prevalence of the cloud the thermometer rose a degree, viz., to $49^{\circ}\cdot0$, it has since sunk to $47^{\circ}\cdot8$.	
Cloudless: deposition of moisture.	
A few small clouds have collected in the N., but to no numerical extent.	
Cloudless, with the exception of a few clouds in the N. as before: a very fine morning.	G
Scud and undefined clouds cover the sky.	J H
Cirro-stratus and scud.	
,,	J H
Overcast: cirro-stratus: a few drops of rain falling.	G
Cirro-stratus and scud.	
The clouds passed off from N. to S.; they became broken about an hour since, and now a few only remain near the S. horizon.	
Cloudless.	G
Cloudless, but the stars appear dim.	J H
Heavy vapour.	
,,	
Light clouds.	
,, hazy.	J H
Cirri and haze.	H B
Fleecy clouds and cumuli: thick haze in the N.	
Thick haze in the N. W., and cumuli in the remaining parts of the sky.	H B
Fleecy clouds: hazy.	J H
Scud and undefined clouds: hazy.	
Cirro-stratus and scud.	
Heavy vapour.	J H
Overcast: cirro-stratus.	H B
,, ,,	
,, ,,	
Cirro-stratus and scud: there are a few breaks in various parts of the sky, but of no numerical amount.	
,, ,, ,,	H B
Overcast: cirro-stratus: a dense haze.	D
Several clear breaks S. W. of the zenith.	
Cirro-stratus and haze: the Sun is faintly visible through the clouds.	D
Cirro-stratus and scud.	H B
Cirro-stratus and thick scud, especially in the N. W.	
Overcast: cirro-stratus and scud.	
,, ,,	H B
,, ,, very dark.	D
Cumuli and fleecy clouds.	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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 21. 0	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	Transit
6	30·049	61·2	54·9	6·3	..	..		Calm	..	..	..	W by S	¼	..	..	..	10	..
8	..	..	..	..	..	..	64·8	SW	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	43·6	SSW	..	..	..	..	..	..	..	..	..	Greatest declination N.
12	30·052	52·0	49·7	2·3	..	..		SW	..	..	..	SW	¼	..	..	..	8	..
14	30·032	48·0	47·2	0·8	..	..	81·3	S	..	..	..	S	¼	..	..	..	6	..
16	30·014	44·6	44·4	0·2	44·0	0·6	40·8	S by W	..	..	..	S	¼	..	..	..	4	..
18	30·020	45·0	45·2	–0·2	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
20	30·019	52·3	51·1	1·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	4	..
22	30·037	59·8	55·3	4·5	51·0	8·8	..	WSW	..	..	..	WSW	¼–	3·73	0·00	6·835	½	..
Apr. 22. 0	30·033	62·7	55·3	7·4	..	..	..	W	..	..	..	W	¼	..	..	..	4	..
2	30·012	62·8	54·3	8·5	..	..	..	W	..	..	..	W	¼	..	..	..	4	..
4	30·001	66·2	56·2	10·0	46·0	20·2	..	NW	..	..	..	W	½	..	..	..	3	Transit
6	30·001	62·1	54·5	7·6	..	..		WNW	..	..	..	W	¼	..	..	..	4	..
8	30·024	57·2	52·3	4·9	..	..	66·4	W	..	..	..	W	¼	..	..	..	9	..
10	30·062	53·6	51·0	2·6	48·5	5·1	45·1	N by E	..	..	..	Calm	..	..	..	..	8	..
12	30·089	55·1	51·8	3·3	..	..		N	..	..	..	Calm	..	..	..	..	10	..
14	30·082	51·9	49·9	2·0	..	..	90·2	N	..	..	..	Calm	..	..	..	..	9	..
16	30·094	47·5	46·5	1·0	45·5	2·0	36·8	N	..	..	..	Calm	..	..	..	..	2	..
18	30·110	47·0	45·9	1·1	..	..	..	N	..	..	..	N	¼	..	..	..	0	..
20	30·127	48·6	46·2	2·4	..	..	..	N	..	..	..	N	¼	..	..	..	½	..
22	30·122	56·4	51·4	5·0	45·3	11·1	..	NNE	..	..	..	NNE	¼	3·73	0·00	6·835	0	..
Apr. 23. 0	30·099	58·5	50·9	7·6	..	..	..	NNE	..	..	..	N by E	¼	..	..	..	0	..
2	30·071	64·9	55·5	9·4	..	..	..	W	..	..	..	NW	¼	..	..	..	2	..
4	30·019	64·8	55·3	9·5	44·2	20·6	..	W by S	..	..	..	WNW	½	..	..	..	2	..
6	29·984	64·4	55·2	9·2	..	..		W by S	..	..	..	WNW	¼	..	..	..	1	Transit
8	29·981	56·7	52·2	4·5	..	..	67·4	SW	..	..	..	W	¼	..	..	..	2	..
10	29·981	52·9	50·2	2·7	48·0	4·9	41·4	S W by S	..	..	..	W	½	..	..	..	0	..
12	29·961	49·2	47·6	1·6	..	..		WSW	..	..	..	W by S	¼	..	..	..	½	..
14	29·949	45·7	43·4	2·3	..	..	90·2	WSW	..	..	..	WSW	½	..	..	..	0	..
16	29·926	41·8	40·5	1·3	39·2	2·6	35·2	WSW	..	..	..	SW	½	..	..	..	2	..
18	29·933	41·6	40·7	0·9	..	..	..	WSW	..	..	..	SW	¼	..	..	..	7	..
20	29·953	48·1	46·6	1·5	..	..	..	W by S	..	..	..	W by S	¼	..	..	..	3	..
22	29·976	56·1	50·7	5·4	44·8	11·3	..	WNW	0 to ½	..	..	W by S	¼	3·73	0·00	6·835	7	..
Apr. 24. 0	29·998	59·3	52·2	7·1	..	..	..		..	..	..	W by S	¼	..	..	..	9	..
2	29·999	62·0	53·9	8·1	..	..	..	NW	..	..	..	WNW	¼	..	..	..	8	..
4	29·996	61·7	53·0	8·7	42·4	19·3	..	NW	..	..	..	NW	¼	..	..	..	6	..
6	30·000	59·2	52·0	7·2	..	..		N	..	..	..	NNE	¼	..	..	..	2	Transit
8	30·031	54·8	48·9	5·9	..	..	62·6	NNE	..	..	..	NNE	¼	..	..	..	3	..
10	30·060	48·6	45·2	3·4	41·5	7·1	39·4	Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·087	45·6	41·4	4·2	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·094	43·5	38·5	5·0	..	..	84·0	NE	..	..	..	Calm	..	..	..	..	0	..
16	30·089	40·4	37·8	2·6	36·5	3·9	27·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·083	38·3	37·1	1·2	..		..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·093	49·1	45·6	3·5	..	..	..	ESE	..	..	..	Calm	..	..	..	..	0	..
22	30·101	56·5	49·7	6·8	39·0	17·5	..	S	..	..	..	Calm	..	3·73	0·00	6·835	0	..
Apr. 25. 0	30·072	61·7	53·7	8·0	..	..	..	Calm	..	..	..	S	¼	..	..	..	0	..

DRY THERMOMETER.
April 21d. 18h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
April 21d. 22h. The reading as observed was the highest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.
April 24d and 25d. The least difference in the mean daily values for consecutive days in the month occurred.

REMARKS.	Observer.
The sky has been generally cloudy to this time; it was cloudless between $23^h.0^m$ and $1^h.0^m$; at present it is covered with cumulo-stratus: there are a few breaks, but of no numerical amount.	H B
Cirro-stratus and scud.	D
,,	
Cirro-stratus and vapour.	
Overcast: light fog.	
Fleecy clouds and small fragments of scud.	D
A few light cumuli.	J H
Light fleecy clouds.	
,,	J H
Cumuli and light fleecy clouds.	D
Cumuli: light clouds and haze.	
The sky is now nearly covered with cirro-stratus and haze: the Moon is visible through the clouds.	
Cirro-stratus and vapour.	D
Overcast: cirro-stratus.	J H
Cirro-stratus: very dark.	
,,	
Cloudless.	
A few light clouds in the S	J H
Cloudless.	H B
Cloudless.	
Cirri and cumuli scattered about in various directions: a thick bank of cumuli in the N. horizon.	H B
Light cumuli and fleecy clouds in every direction.	J H
Light fleecy clouds.	
Scud and undefined clouds near the W. horizon.	
Cloudless.	J H
With the exception of a few light clouds near the Moon's place the sky is perfectly clear.	H B
Cloudless.	
A thick bank of cloud covers the sky near the North horizon; the remainder is quite clear.	
Cirro-stratus and undefined clouds.	
Cirri and fleecy clouds.	H B
Fleecy clouds.	J H
Cirro-stratus and scud.	
Light clouds: hazy in the N.	J H
Fleecy clouds and thin scud.	H B
Cumuli and fleecy clouds.	
Light clouds and cirro-stratus in the N.W.	H B
Cloudless.	G
,,	
,, the stars look dim.	G
,,	H B
,,	H B
,,	D
,, occasional gentle airs from the S.	G
A few cumuli scattered about but to no numerical amount.	H B

MINIMUM THERMOMETER.

April $24^d.22^h$. The reading was higher than that of the Dry Thermometer at 18^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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 25. 2	30·044	66·4	58·0	8·4	..	..	..	Calm	..	..	..	S by E	$\frac{1}{4}$	..	..	..	3	..
4	29·998	65·8	57·7	8·1	49·0	16·8	..	Calm	..	..	..	S by E	$\frac{1}{4}$	..	..	..	$\frac{1}{4}$	..
6	29·979	61·8	56·2	5·6	..	..		Calm	..	..	..	E by S	$\frac{1}{4}$	..	..	..	0	Transit
8	29·971	54·3	50·9	3·4	..	..	68·9	Calm	..	..	..	E	$\frac{1}{4}$	..	..	..	0	1st Qr.
10	29·966	50·3	48·7	1·6	46·8	3·5	41·4	Calm	..	..	..	E by S	$\frac{1}{4}$	..	..	..	0	..
12	29·956	47·9	44·5	3·4	..	..	95·4	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·928	43·2	42·0	1·2	..	..	31·2	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·897	42·6	41·3	1·3	40·0	2·6		Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·900	41·6	40·8	0·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·910	51·9	49·6	2·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·904	61·2	54·2	7·0	46·0	15·2	..	Calm	..	..	..	SE	$\frac{1}{4}$	3·73	0·00	6·835	$\frac{1}{2}$	..
Apr. 26. 0	29·876	68·4	55·8	12·6	..	..	..	NNE	..	..	..	NE	$\frac{1}{4}$	..	..	..	0	..
2	29·858	72·3	58·3	14·0	..	..	..	NNE	..	..	..	NNE	$\frac{1}{4}$	..	..	..	4	..
4	29·846	74·6	59·1	15·5	39·0	(35·6)	..	N by E	..	..	..	N	$\frac{1}{4}$–	..	..	..	5	..
6	29·851	67·8	58·3	9·5	..	..	74·9	NNE	..	..	..	Calm	..	..	..	..	8	..
8	29·869	59·7	50·8	8·9	..	..	46·1	E	..	..	..	Calm	..	..	..	..	9	Transit
10	29·933	57·1	53·2	3·9	49·5	7·6		NNE	$\frac{1}{2}$ to 3	..	..	N	$\frac{1}{2}$	..	..	..	9	..
12	29·958	54·0	53·8	0·2	..	..	102·8	NNE	0 to $\frac{1}{4}$	..	..	Calm	..	..	..	..	10	..
14	29·997	52·2	52·4	–0·2	..	..	45·0	NNE	..	..	..	N	$\frac{1}{2}$	..	..	..	10	..
16	30·011	49·0	49·2	–0·2	48·5	0·5		NNE	..	..	..	N	$\frac{1}{2}$	..	..	..	10	..
18	30·027	48·1	48·2	–0·1	..	..	..	NE	..	..	..	N	$\frac{1}{2}$	..	..	..	10	..
20	30·082	47·0	46·9	0·1	..	..	..	NNE	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
22	30·108	52·8	46·6	6·2	39·5	13·3	..	NE	..	..	..	NNE	$\frac{1}{4}$	3·77	0·04	6·895	0	..
Apr. 27. 0	30·118	57·0	48·0	9·0	..	..	..	NNE	0 to $\frac{1}{4}$	..	..	N	$\frac{1}{4}$–	..	..	..	0	..
2	30·112	60·6	49·6	11·0	..	..	..	NNE	0 to $\frac{1}{4}$	..	..	N by E	$\frac{1}{4}$	..	..	..	0	..
4	30·102	61·6	51·2	10·4	36·0	25·6	..	N by E	0 to $\frac{1}{4}$	..	..	N by E	$\frac{1}{4}$	..	..	..	1	..
6	30·098	55·8	50·3	5·5	..	..		ESE	..	..	..	ENE	$\frac{1}{2}$	..	..	..	3	..
8	30·121	49·2	45·9	3·3	..	..	65·3	Calm	..	..	..	SE	$\frac{1}{4}$	..	..	..	2	Transit
10	30·160	45·4	43·2	2·2	41·0	4·4	37·1	Calm	..	..	..	Calm	..	..	..	..	$\frac{1}{2}$	..
12	30·197	41·8	40·5	1·3	..	..	92·1	Calm	..	..	..	Calm	..	..	..	..	1	..
14	..	..	..	..	..	..	29·0	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	30·252	57·6	49·2	8·4	..	..	..	Calm	..	..	..	NNE	$\frac{1}{4}$	3·77	0·00	6·895	3	..
Apr. 28. 0	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NNW	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		ESE	0 to 1	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	66·4	Calm	..	..	..	..	..	..	..	..	..	..
10	30·221	44·1	42·1	2·0	..	..	35·7	Calm	..	..	..	Calm	..	..	..	..	0	Transit
12	30·201	39·4	38·6	0·8	..	..	93·8	Calm	..	..	..	S by E	$\frac{1}{4}$	.	..	..	0	In Equator
14	30·187	38·3	37·8	0·5	..	..	26·0	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·176	35·9	35·7	0·2	36·5	–0·6		Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·187	38·7	38·2	0·5	..	..	..	Calm	..	..	..	ESE	$\frac{1}{4}$–	..	..	..	8	..
20	30·178	46·3	43·6	2·7	..	..	..	NE	..	..	..	ENE	$\frac{1}{4}$	..	..	..	0	..
22	30·179	50·8	45·8	5·0	39·0	11·8	..	E	0 to $1\frac{1}{2}$	..	..	ENE	$\frac{3}{4}$	3·77	0·00	6·895	3	..
Apr. 29. 0	30·168	52·0	46·2	5·8	..	..	..	ENE	0 to 2	..	..	NE	$\frac{1}{2}$	..	..	..	1	..
2	30·140	53·2	47·4	5·8	..	..	..	E	0 to 3	..	..	E by N	$\frac{3}{4}$	..	..	..	0	..

BAROMETER.—April 29d and 30d. The least difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.—April 26d. The mean daily temperature was the greatest in the month.

April 26d. The daily range was the greatest in the year. April 26d. 4h. The reading was the highest in the month.

April 26d. 4h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred at this time: this was also the greatest difference that had taken place since 1842, August 18d. 4h, and is the greatest in the year.

April 26d. 14h, 16h, and 18h. The readings were lower than those of the Wet Thermometer.

April 29d. The mean daily temperature was the lowest in the month.

TEMPERATURE OF THE DEW POINT.

April 26d. 4h. The dew point as observed is inconsistent with the difference of the Dry and Wet Thermometers at this time; the deduced dew point is 51°·6: from this circumstance, and also from the temperature of the dew point at the preceding and following observations, it is supposed the reading should be 49°.

April 28d. 16h. The reading was higher that that of the Dry Thermometer.

REMARKS.	Observer.
Large white cumuli scattered about the sky.	D
Cloudless, with the exception of a few small fleecy clouds.	J H
There are a few cirro-cumuli clouds, and a few cymoid cirri N.E. of the zenith, but to no numerical extent; the sky is of a fine deep blue.	G
Cloudless.	H B
,,	H B
,,	D
,,	
,,	
,,	
,,	D
A few light clouds scattered in various directions.	J H
A few light clouds in various directions, but to no numerical amount.	J H
Linear cirri, cumuli, and fleecy clouds.	H B
Cumuli and fleecy clouds.	D
The sky is nearly covered with cirro-stratus and fleecy clouds; a few cumuli are scattered in different directions.	
Cirro-stratus and scud.	
,,	D
,,	J H
,, very dark.	
,, rain falling.	
,, the rain has ceased.	
,,	J H
A few light cymoid cirri in the S. E.	H B
Cloudless.	
A few light cirri towards the N.	H B
,,	J H
Light clouds in various directions, but principally N. of the zenith.	
Scud scattered in various directions.	
A few light fleecy clouds.	J H
A few thin clouds scattered in every direction.	H B
Light clouds and haze.	D
Cloudless: light clouds have been prevalent throughout the day.	D
,,	H B
,,	
,,	
Fleecy clouds moving rapidly from the E. S. E.	
Cloudless.	H B
Light fleecy clouds in every direction.	J H
A few small cumuli in different directions.	D
Cloudless.	D

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

April 26d. The mean daily value was the greatest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

April 26d and 27d. The greatest difference in the mean daily values for consecutive days in the month occurred.

April 29d. The mean daily value was the greatest in the month.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

April 26d. At $8^h.50^m$ and $9^h.35^m$ gusts of 3 lbs. and $3\frac{1}{2}$ lbs. respectively took place.

WIND BY OSLER'S ANEMOMETER.

April 27d. 5^h. At this time the direction changed from N. N. E. to N. N. E. on the next set of divisions, or a direct motion took place of 360°; at $5^h.40^m$ the direction changed from N. N. E. to E. S. E.; and at $11^h.50^m$ it changed from S. S. E. to S. 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. of Free Therm. / of Rad. Therm. read at 22h.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Apr. 29. 4	30·126	51·8	46·9	4·9	41·2	10·6	..	ESE	0 to 1¾	..	..	SSE & SE	¾	..	..	..	0	..
6	30·112	49·9	45·6	4·3	..	..	..	E	0 to ¾	..	..	E by N	½	..	..	..	0	..
8	30·114	44·2	41·9	2·3	..	..	..	E	0 to ½	..	..	E by N	¾	..	..	..	0	..
10	30·105	42·0	40·5	1·5	38·3	3·7	57·4	E	..	..	..	ENE	¾	..	..	..	1	Transit
12	30·101	39·5	39·2	0·3	..	..	39·4	E by N	..	..	..	E	¼	..	..	..	2	..
14	30·090	42·6	42·4	0·2	..	..		NE	..	..	..	ENE	¼	..	..	..	0	..
							76·2											
16	30·098	42·6	42·7	−0·1	42·5	0·1	31·0	ENE	..	..	..	ENE	¼	..	..	..	5	..
18	30·120	43·0	43·2	−0·2	..	..	..	E by N	..	..	..	E	¼	..	..	..	3	..
20	30·146	51·0	49·0	2·0	..	..	..	E	..	..	..	E	¼	..	..	..	5	..
22	30·157	57·0	50·7	6·3	45·0	12·0	..	ESE	..	..	..	ESE	¾	3·77	0·00	6·895	2	..
Apr. 30. 0	30·153	59·4	48·7	10·7	..	..	..	..	..	..	..	ESE	¾	..	..	..	1	..
2	30·155	61·3	50·4	10·9	..	..	..	..	..	..	..	E by S	½	..	..	..	½	..
4	30·149	60·5	50·0	10·5	36·0	24·5	..	..	..	..	..	ENE	½+	..	..	..	½	..
6	30·141	56·4	47·3	9·1	..	..	..	..	..	..	..	E	¾	..	..	..	1	..
8	30·164	49·8	45·0	4·8	..	..	63·8	..	..	..	..	E	½	..	..	..	2	..
10	30·186	44·5	42·6	1·9	40·5	4·0	40·7	..	..	..	..	ESE	¼	..	..	..	0	Transit
12	30·190	44·2	43·7	0·5	..	..		..	..	..	..	ESE	¼	3·77	0·00	6·895	10	..
							83·8											
14	30·192	45·2	44·7	0·5	..	..	34·4					ESE	¾	..	..	..	3	..
16	30·198	41·8	42·0	−0·2	41·0	0·8	..	..	..	..	..	E	½	..	..	..	3	..
18	30·208	40·3	40·3	0·0	..	..	..	..	..	..	..	ENE	½	..	..	..	3	..
20	30·249	49·2	47·8	1·4	..	..	..	..	..	..	..	ENE	½	..	..	..	1	..
22	30·276	58·3	52·8	5·5	47·5	10·8	..	..	..	..	..	ENE	¼	3·77	0·00	6·895	0	..
May 1. 0	30·266	63·1	53·0	10·1	..	..	..	E by S	½ to 1½	..	..	NE	¼	..	..	..	½	..
2	30·267	64·2	52·7	11·5	..	..	..	ESE	0 to 2	..	..	ENE	¼	..	..	..	¼	..
4	30·256	62·6	51·7	10·9	40·0	22·6	..	ESE	..	..	..	E by N	¾	..	..	..	½	..
6	30·251	59·5	49·7	9·8	..	..	66·3	E by N	..	..	..	ENE	¾	..	..	..	½	..
8	30·292	53·1	46·7	6·4	..	..	40·9	Calm	..	..	..	ENE	½	..	..	..	0	..
10	30·296	49·5	44·5	5·0	37·0	12·5		Calm	..	..	..	E	¼	..	..	..	0	..
12	30·309	46·3	43·9	2·4	..	..	86·9	ENE	..	..	..	ENE	¼	..	..	..	0	Transit
14	30·316	44·8	43·9	0·9	..	..	33·6	Calm	..	..	..	E	¼	..	..	..	1	..
16	30·307	41·5	40·8	0·7	39·5	2·0		Calm	..	..	..	E	¼	..	..	..	0	..
18	30·325	40·5	40·0	0·5	..	..	..	Calm	..	..	..	ENE	¼	..	..	..	0	..
20	30·329	50·4	48·0	2·4	..	..	..	N	..	..	..	NE	¼	..	..	..	0	..
22	30·328	57·7	52·1	5·6	46·2	11·5	..	N by E	..	..	..	NE	¼	3·77	0·00	6·895	0	..
May 2. 0	30·312	64·6	54·3	10·3	..	..	..	E	..	..	..	ENE	¼	..	..	..	0	..
2	30·295	67·3	55·8	11·5	..	..	..	ENE	..	..	..	ENE	¼	..	..	..	¼	..
4	30·257	65·9	55·0	10·9	40·0	25·9	..	ENE	..	..	..	ENE	¼	..	..	..	¼	Full
6	30·224	62·0	53·6	8·4	..	..	69·4	Calm	..	..	..	ENE	¼	..	..	..	0	..
8	30·225	53·0	48·7	4·3	..	..	40·9	Calm	..	..	..	ESE	¼	..	..	..	1	..
10	30·211	48·7	46·5	2·2	44·0	4·7		Calm	..	..	..	ESE	¼	..	..	..	0	Perigee
12	30·182	45·5	42·6	2·9	..	..	93·0	Calm	..	..	..	NE	¼	..	..	..	0	Transit
14	30·149	42·2	40·2	2·0	..	..	31·6	Calm	..	..	..	NE	¼	..	..	..	2	..
16	30·125	41·0	39·8	1·2	39·0	2·0	..	N	..	..	..	N	¼	..	..	..	4	..
18	30·106	42·3	41·4	0·9	..	..	..	N by W	..	..	..	N	¼	..	..	..	5	..
20	30·098	50·7	48·3	2·4	..	..	..	N	..	..	..	N	¼	..	..	..	1	..
22	30·072	58·8	52·7	6·1	47·0	11·8	..	NNE	..	..	..	N	¼+	3·77	0·00	6·895	½	..
May 3. 0	30·059	59·8	50·7	9·1	..	..	..	NE	½ to 1	..	..	NNE	½	..	..	..	5	..

BAROMETER.
May 1d. 20h. The highest reading in the month occurred. May 2d. The mean daily height was the greatest in the month.

DRY THERMOMETER.—April 29d. 16h and 18h, and 30d. 16h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
May 2d. 4h. The dew point as observed is inconsistent when compared with the difference of the Dry and Wet Thermometers at this time: the greatest difference in the month between the temperature of the air and that of the dew point occurred at this time.
May 3d and 4d. The difference of the mean daily values was considerable.

DEGREE OF HUMIDITY.
May 1d. The mean daily value was the least in the month: the same value occurred on the 9th day.

MINIMUM THERMOMETER.
April 30d. 22h and May 1d. 22h. The reading was higher than that of the Dry Thermometer at 18h on each day.

REMARKS.	Observer.
Cloudless.	H B
,,	
,,	
Fleecy clouds near the S. horizon.	H B
The clouds are altogether in the S. and S. W. near the horizon, the rest of the sky being quite clear.	D
Ten minutes after the last observation the sky suddenly became overcast, and continued so for some time; the clouds, however, have again disappeared, and the sky is at present cloudless.	
Cirro-stratus and vapour.	
Light clouds in various directions.	
A great portion of the sky is covered with imperfectly formed cirri; in other parts a few linear cirri are visible.	D
Light clouds in various directions.	J H
Light clouds in various directions.	H B
Light cirri in various directions.	H B
,,	D
Cirri scattered over the sky.	
,,	
Cloudless.	D
Overcast: cirro-stratus: the clouds came up shortly after 10^h (the sky became clouded a little after this time last evening, after a brilliantly clear sky during the early part of the evening).	J H
Scud flying rapidly over.	
Scud and vapour.	
Scud and thin cirro-stratus.	
Vapour and light scud.	J H
Cloudless.	H B
A few light linear and cymoid cirri in various parts of the sky.	
Light cirri in the W.	H B
A few light fleecy clouds in various directions.	J H
,,	
Cloudless.	
Splendidly clear: the planet Mercury has been distinctly visible to the naked eye during the evening.	J H
Cloudless.	G
There are a few linear cirri E. of the zenith, whose lines are in the direction of N. and S.; all other portions of the sky are [cloudless.	
Cloudless.	
A few linear cirri in the East; with that exception the sky is cloudless.	
Cloudless.	G
,,	H B
Cloudless.	
A few cymoid cirri in the N.	H B
,,	G
A few linear cirri in the N. to no numerical extent.	
A low bank of slate-coloured cloud near the place of the setting Sun; with that exception the sky is cloudless.	
Cloudless: splendidly clear.	G
,,	H B
Light clouds in various parts of the sky, apparently cirri.	
Cirro-stratus: the West is quite free from cloud.	
Fleecy clouds and scud.	
With the exception of a thick bank of cloud near the N. horizon the sky is cloudless.	H B
Cumuli in the southern horizon, with patches of scud here and there: hazy in the S.	P
Cumuli and light scud scattered in every direction.	

PRESSURE OF THE WIND.

April $29^d. 10^h$ and 22^h. No pressures were shewn by the Anemometer, although the estimated forces were considerable.

April $30^d. 22^h$. The traversing board of the Anemometer was left unclamped.

RAIN.

April $30^d. 12^h$. The amount of rain collected in Rain Gauge No. 4 during the month of April was $0^{in}\cdot35$, and that collected in a gauge of the same construction at the Greenwich Hospital Schools, and read off by the Rev. G. Fisher, was also $0^{in}\cdot35$.

AMOUNT OF CLOUDS.

May 2^d. The mean daily value was the least in the month.

CLOUDS.

May $0^d. 20^h$ to $2^d. 12^h$. With a few exceptions the sky was cloudless: it is the longest period of clear sky in the month.

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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 3. 2	30·045	62·2	52·5	9·7	..	..	..	NE	½ to 2	..	..	NE	½+	..	..	..	4	..
4	30·035	58·9	50·9	8·0	38·3	20·6	..	ENE	½ to 2	..	..	ENE	½	..	..	..	4	..
6	30·019	55·8	48·7	7·1	..	..	..	ENE	½ to 1½	..	..	ENE	½	..	..	..	2	..
8	30·037	51·7	46·0	5·7	..	..	65·4	ENE	..	..	..	ENE	½	..	..	..	½	..
10	30·047	48·1	43·9	4·2	38·5	9·6	48·0	NE	..	..	..	ENE	¼	..	..	..	10	..
12	30·040	47·8	43·5	4·3	..	..		NNE	..	..	..	N	¼	..	..	..	10	..
14	30·018	47·5	44·7	2·8	..	..	87·0	NNE	..	..	..	Calm	..	..	..	..	10	Transit
16	30·006	48·2	46·2	2·0	44·0	4·2	40·2	NNE	..	..	..	N	¼	..	..	..	10	..
18	30·010	48·3	46·7	1·6	..	..	..	NNE	..	..	..	N	¼	..	..	..	10	..
20	30·020	48·4	48·0	0·4	..	..	..	NNE	..	..	..	N	¼	..	..	..	10	..
22	30·019	51·6	49·2	2·4	47·0	4·6	..	NNE	0 to ½	..	..	NE	¾	3·77	0·00	6·895	10	..
May 4. 0	30·001	51·5	50·8	0·7	..	..	..	NNE	0 to ½	..	..	NE by N	¾	..	..	..	10	..
2	29·989	56·3	53·5	2·8	..	..	..	NE	..	NE	0·70	ENE	¼	..	..	..	10	..
4	29·966	57·5	55·5	2·0	53·2	4·3	..	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·961	56·8	54·9	1·9	..	..		Calm	..	..	..	ENE	¼	..	..	..	8	..
8	29·973	53·8	52·2	1·6	..	..	59·1	Calm	..	ESE	0·50	ENE	¼–	..	..	..	10	..
10	29·975	51·0	49·2	1·8	47·5	3·5	48·4	N	0 to ½	..	..	N	¼+	..	..	..	10	..
12	29·989	49·0	47·9	1·1	..	..	79·0	N	..	..	..	NNE	¼	..	..	..	10	Greatest declination S.
14	..	..	..	..	..	..	47·0	N	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		N	..	..	..	..	..	..	..	..	..	Transit
18	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	..
22	29·916	59·7	56·2	3·5	..	..	..	N	..	NNE	2·80	N	¼	3·77	0·00	6·915	8	..
May 5. 0	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	Calm	..	NNE	0·20	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	72·2	Calm	..	ESE	1·10	..	..	..	..	..	..	..
10	..	..	..	..	..	..	44·6	Calm	..	E	0·28	..	..	..	..	..	..	..
12	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
14	29·776	48·0	47·7	0·3	..	..	94·7	Calm	..	..	..	Calm	..	..	..	..	3	..
16	29·735	44·3	44·2	0·1	43·5	0·8	40·4	Calm	..	..	..	NE	¼	..	..	..	5	Transit
18	29·734	45·3	44·9	0·4	..	..	..	Calm	..	..	..	NE	¼	..	..	..	4	..
20	29·741	53·0	50·4	2·6	..	..	..	N by E	..	..	..	NE	¼	..	..	..	8	..
22	29·734	62·6	56·0	6·6	50·5	12·1	..	NNE	..	NNE	0·51	NE	¼	3·77	0·00	6·915	½	..
May 6. 0	29·715	67·6	56·7	10·9	..	..	..	NE	..	..	..	NE	¼	..	..	..	8	..
2	29·695	65·3	57·4	7·9	..	..	..	E	..	..	..	ENE	¼	..	..	..	6	..
4	29·686	66·1	58·3	7·8	48·0	18·1	..	ENE	..	E	1·81	ENE	¼	..	..	..	2	..
6	29·671	64·1	56·9	7·2	..	..		Calm	..	..	..	E	¼	..	..	..	½	..
8	29·682	57·6	53·3	4·3	..	..	70·2	Calm	..	SE	0·20	E	¼	..	..	..	0	..
10	29·692	52·2	50·4	1·8	48·0	4·2	44·6	Calm	..	..	..	Calm	..	..		..	1	..
12	29·678	49·7	48·6	1·1	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·661	46·3	45·8	0·5	..	..	93·0	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·649	44·7	44·3	0·4	43·3	1·4	35·5	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·669	44·5	44·2	0·3	..	..	..	Calm	..	..	..	W	¼	..	..	..	0	Transit
20	29·678	53·2	50·6	2·6	..	..	..	Calm	..	W	0·45	W	¼	..	..	..	1	..
22	29·692	65·6	57·2	8·4	46·0	19·6	..	Calm	..	NNE	0·35	NNE	¼–	3·77	0·00	6·915	2	..
May 7. 0	29·692	69·2	57·7	11·5	..	..	..	NNW	..	..	..	N	¼	..	..	..	5	..
2	29·681	70·2	57·0	13·2	..	..	..	NNW	..	..	..	N	¼	..	..	..	5	..

BAROMETER.
May 6d. 16h. The reading was the lowest in the month.
May 7d. The mean daily height was the least in the month.

DRY THERMOMETER.
May 7d. 2h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred.

WEIGHT OF A CUBIC FOOT OF AIR.
May 7d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cumuli and light scud scattered in every direction.	P
Cumuli and light scud in the N. and N.W.: the southern sky is nearly free from cloud.	H B
Cumuli and light scud in the N.: gusts of wind to $\frac{3}{4}$.	
The sky is cloudless, with the exception of a thick bank of red coloured cloud near the S. and S. E. horizon.	
Overcast: cirro-stratus: a few stars near the zenith are visible.	H B
,, ,,	P
,, ,,	
,, ,, •	
,, ,,	
,, ,,	P
,, ,, a little rain has fallen since the last observation: no rain falling at the present time.	J H
Overcast: cirro-stratus and scud: rain commenced falling about $22^h. 45^m$, and still continues.	J H
,, ,,	H B
,, ,, the clouds are thin in the neighbourhood of the Sun, and the air is much warmer.	P
Breaks in every direction: the clouds are chiefly scud.	
Overcast: thin cirro-stratus and scud.	
,, ,,	P
,, cirro-stratus and scud.	J H
Thin cirro-stratus, scud, and haze: the clouds are gradually becoming thinner: the general character of the day was cloudy, with vapour and a somewhat strong breeze: a very hot day.	P
Vapour and light clouds.	J H
Vapour and scud.	
Scud in every direction.	
,,	J H
A few light clouds in the S.W.	H B
The greater part of the sky is covered with cumulo-stratus: there is an extensive break near the Sun's place.	
The S. and S.W. parts of the sky are covered with a dense cumulo-stratus; the eastern part is quite clear.	H B
Light fleecy clouds in various directions.	J H
Light fleecy clouds in the S. and S.W. horizon.	
Cloudless.	
Thin vapour.	J H
Cloudless: hazy.	H B
Thick haze all around the horizon, especially in the N.	
Cloudless.	
Cloudless, but hazy towards the N.	
Vapour and scud.	H B
Light scud and a species of cirro-cumuli in the S. E.: hazy.	P
Cumuli, cumulo-strati, scud, and haze.	
Cumuli, cirri, scud, and haze.	P

MINIMUM THERMOMETER.

May $3^d. 22^h$, the reading was higher than that of the Dry Thermometer at 12^h and 14^h.
May $5^d. 22^h$,, ,, 16^h.
May $6^d. 22^h$,, ,, 18^h.

WHEWELL'S ANEMOMETER.

May $3^d. 22^h$. The instrument had been received from Mr. Simms, and it was set to work 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. of Free Therm. / of Rad. Therm. read at 22h.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 7. 4	29·678	70·4	58·3	12·1	45·5	24·9	..	NNW	..	..	..	N	$\frac{1}{4}$	..	..	..	7	..
6	29·676	67·3	56·8	10·5	..	..	..	NNW	..	..	..	N	$\frac{1}{4}$	..	..	..	3	..
8	29·701	62·8	55·9	6·9	..	..	74·2	NW	..	..	..	NNW and NW	$\frac{1}{2}$	..	..	..	6	..
10	29·745	57·3	54·6	2·7	53·5	3·8	46·7	Calm.	..	..	..	Calm	..	..	..	..	10	..
12	29·755	54·5	52·2	2·3	..	..		NNW	..	..	..	Calm	..	..	..	..	10	..
14	29·769	50·0	48·9	1·1	..	..	99·7	Calm	..	..	..	Calm	..	..	..	..	$9\frac{3}{4}$	..
16	29·777	47·0	46·5	0·5	45·2	1·8	38·5	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·805	47·1	47·0	0·1	..	..		NNW	..	..	..	Calm	..	..	..	..	10	Transit
20	29·828	51·6	50·6	1·0	..	..	..	NNW	..	..	..	N	$\frac{1}{4}$–	..	..	..	10	..
22	29·849	57·2	54·5	2·7	50·8	6·4	..	N by W	..	N	3·00	N by E	$\frac{1}{4}$	3·77	0·01	6·930	10	..
May 8. 0	29·849	60·3	55·6	4·7	..	..	..	NNW	..	..	..	NNE	$\frac{1}{4}$	..	..	..	7	..
2	29·839	68·4	60·4	8·0	..	..	..	N	..	..	..	NNE	$\frac{1}{4}$	..	..	..	3	..
4	29·816	69·2	60·0	9·2	46·5	22·7	..	N	..	..	..	ENE	$\frac{1}{4}$–	..	..	..	6	..
6	29·805	65·7	56·2	9·5	..	..	..	Calm	..	..	..	E	$\frac{1}{4}$–	..	..	..	3	..
8	29·814	58·9	53·7	5·2	..	..	72·4	Calm	..	..	..	SE	$\frac{1}{4}$–	..	..	..	10	..
10	29·839	54·8	51·5	3·3	49·0	5·8	49·6	Calm	..	SE	0·98	SE	$\frac{1}{4}$–	..	..	..	3	..
12	29·850	51·2	49·8	1·4	..	..		Calm	..	..	..	Calm	..	..	..	..	9	..
14	29·851	51·2	50·2	1·0	..	..	94·8	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·842	50·6	49·0	1·6	46·5	4·1	41·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·843	48·0	47·0	1·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	1	Transit
20	29·849	56·0	52·7	3·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·857	66·1	56·5	9·6	46·0	20·1	..	Calm	..	SW	0·07	Calm	..	3·77	0·00	6·930	3	Last Quar.
May 9. 0	29·847	70·5	59·8	10·7	..	..	..	WSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	2	..
2	29·830	74·1	62·5	11·6	..	..	..	WSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	4	..
4	29·821	72·1	60·7	11·4	49·5	22·6	..	W by S	..	..	..	W	$\frac{1}{2}$	..	..	..	10	..
6	29·815	69·5	60·7	8·8	..	..	..	W by N	..	..	..	W	$\frac{1}{4}$	..	..	..	5	..
8	29·819	61·0	55·6	5·4	..	..	77·3 51·7	SW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..
10	29·835	57·2	52·0	5·2	45·0	12·2	103·7	W by S	..	..	..	WSW	$\frac{1}{4}$	..	..	..	6	..
12	29·829	52·5	48·9	3·6	..	..	40·3	W by S	..	..	..	WSW	$\frac{1}{4}$	..	..	..	3	..
14	29·819	51·3	49·2	2·1	..	..	..	WSW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	9	..
16	29·809	50·8	49·2	1·6	47·5	3·3	..	W by S	..	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
18	29·813	50·6	49·7	0·9	..	..	..	W by S	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..
20	29·826	54·6	53·8	0·8	..	..	..	W by N	..	W	2·62	SW	$\frac{1}{4}$	..	..	..	10	Transit
22	29·816	55·5	55·5	0·0	55·5	0·0	..	NNW	..	WNW	0·28	WNW	$\frac{1}{4}$	3·77	0·02	6·950	10	..
May 10. 0	29·811	57·1	56·0	1·1	..	..	..	N by W	..	..	..	NW	$\frac{1}{4}$	..	..	..	10	..
2	29·812	56·1	52·6	3·5	..	..	..	N by W	..	N	0·40	N by W	$\frac{1}{4}$	..	..	..	10	..
4	29·786	60·5	53·2	7·3	44·0	16·5		NNW	..	NW	0·39	NNW	$\frac{1}{2}$	..	..	..	9	..
6	29·785	57·6	50·2	7·4	..	..	47·2	N by W	..	..	..	NNW	$\frac{1}{2}$	..	..	..	8	..
8	29·791	53·5	46·7	6·8	..	..	45·2	N by W	..	NNE	0·44	N	$\frac{1}{2}$	..	..	..	7	..
10	29·801	49·2	44·2	5·0	37·0	12·2	80·3	NNW	..	..	..	N	$\frac{1}{4}$	..	..	..	0	..
12	29·787	47·7	43·7	4·0	..	..	37·5	NNW	..	N	0·70	N by W	$\frac{1}{2}$	..	..	..	1	..
14	29·761	44·5	42·5	2·0	..	..		Calm	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
16	29·748	44·7	43·7	1·0	42·8	1·9	..	Calm	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
18	29·775	45·9	44·9	1·0	..	..	..	Calm	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..

BAROMETER.
May 8d and 9d. The least difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.
May 9d. The mean daily temperature was the highest in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
May 9d. The mean daily value was the greatest in the month.

REMARKS.	Observer.
Cumuli, cumulo-strati, and portions of scud.	H B
Linear cirri, cumuli, and a quantity of dark scud over the Sun's place.	
Cirro-stratus and scud: wind in gusts.	
Overcast: rain fell at 8^h; at present a few drops only are falling.	H B
,, a few stars are faintly visible in the zenith, but they do not affect the notation.	P
A few stars are visible in and about the zenith, the rest of the sky overcast.	
Overcast: thin cirro-stratus.	
,, ,, a rather thick fog.	
,, ,, no fog: the cirro-stratus is in some parts very thin.	P
Cirro-stratus and scud: a few breaks in the E., but of no numerical amount.	H B
Thin cirro-stratus and scud in various parts of the sky.	
Thin cirro-stratus and haze generally.	H B
Cumulo-strati, scud, and haze.	P
Scud and haze.	
Cirro-stratus and scud, the cirro-stratus being in some parts very thin.	
Loose scud in every direction, but it appears to be gradually going off.	P
A few stars are shining around the zenith, the remainder of the sky is covered with a thin and high cirro-stratus.	G
Overcast: a high cirro-stratus.	
,, ,,	
Almost immediately after 16^h the clouds became broken, and from that time to the present they have become less and less in amount till only a few remain near the horizon in the N., the remainder of the sky being cloudless and of a clear blue.	
Cloudless: a fine morning.	G
Light fleecy clouds and vapour.	J H
Light fleecy clouds and vapour.	
Fleecy clouds in every direction.	J H
Scud and cirro-stratus cover the sky; the Sun occasionally gleams through the cloud: the eastern horizon is very dark, and the cloud rising above it is also very dark.	G
A considerable gloom continued for some time after the last observation; the clouds then became lighter in colour and less in density; at present scud and thin cirro-stratus cover nearly all the sky, yet, nevertheless, the Sun frequently shines brightly.	
The whole sky is covered with a thin and high cirro-stratus; under it in the N. are several patches of dark scud, and in the S. some linear fleecy clouds.	
The thin cirro-stratus continued to cover the sky till $8^h.30^m$, at which time Venus shone through it, and since that time the clouds have partially dispersed, and at present the zenith, and for 40° around it, is clear; the remainder of the sky is still cloudy.	G
Vapour.	J H
Cirro-stratus and scud.	
,,	
,,	
,, rain falling slightly: it commenced at $18^h.45^m$.	J H
Overcast: rain falling in slight drops.	H B
Overcast: no rain falling.	
,, ,,	H B
Fleecy clouds and scud.	J H
,,	
,,	
Cloudless.	J H
A bank of cloud near the N. horizon; with this exception the sky is cloudless.	H B
Overcast: rain falling.	
,,	
,, thin cirro-stratus.	

MINIMUM THERMOMETER.

May $8^d.22^h$. The reading is much higher than that of the Dry Thermometer at 18^h.

May $9^d.22^h$. The reading is higher than that of the Dry Thermometer at 14^h, 16^h, and 18^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. of Free Therm. / of Rad. Therm. read at 22h. / of Therm. in Water of the Thames.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 10. 20	29·810	50·8	49·0	1·8	..	..	..	Calm	..	NNE	0·32	N	$\frac{1}{4}$	..	..	..	6	Transit
22	29·828	58·3	51·2	7·1	42·0	16·3	..	Calm	..	E	0·85	E by N	$\frac{1}{4}$	3·77	0·00	6·975	$\frac{1}{4}$	..
May 11. 0	29·855	62·2	53·5	8·7	..	..	..	NNE	..	..	..	NE	$\frac{1}{4}$+	..	..	..	7	..
2	29·855	64·5	54·8	9·7	..	..	..	N by E	$\frac{1}{2}$ to 1	..	..	N by E	$\frac{1}{2}$	..	..	..	8	..
4	29·858	62·5	54·6	7·9	40·5	22·0	..	N by E	..	..	..	N by E	$\frac{1}{4}$	..	..	..	9	In Equator
6	29·872	58·7	54·5	4·2	..	..		N by E	0 to 1	..	..	NE	$\frac{1}{2}$	..	..	..	4	..
8	29·899	53·8	51·6	2·2	..	..	66·4	N by E	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
10	29·934	52·3	50·3	2·0	49·0	3·3	51·4	N by E	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
12	29·967	51·5	49·7	1·8	..	..		N	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
14	..	..	..	..	..	..	92·6	N by E	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	49·2	N by E	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	N by W	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	N	..	..	..	..	..	..	..	..	..	Transit
22	30·074	59·1	54·7	4·4	..	..	..	N	..	N	4·45	N	$\frac{1}{4}$	3·77	0·00	6·975	10	..
May 12. 0	30·096	62·2	56·8	5·4	..	..	..	N	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
2	..	..	..	..	..	..	..	N	..	N	1·25	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		N by E	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	72·4	Calm	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	44·4	Calm	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
14	30·184	46·2	46·1	0·1	..	..	90·7	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·199	45·5	45·4	0·1	44·3	1·2	38·8	Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·215	45·5	45·7	-0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	2	..
20	30·224	52·5	51·2	1·3	..	..	..	Calm	..	..	..	E	$\frac{1}{4}$—	..	..	..	0	..
22	30·230	62·8	57·7	5·1	53·0	9·8	..	N	..	NNE	1·05	N	$\frac{1}{4}$	3·77	0·00	6·975	$\frac{1}{2}$	Transit
May 13. 0	30·228	68·7	60·0	8·7	..	..	..	N by W	..	..	..	N	$\frac{1}{4}$	..	..	..	7	..
2	30·209	70·0	60·9	9·1	..	..	..	N	..	..	..	N	$\frac{1}{4}$	..	..	..	4	..
4	30·198	70·9	60·5	10·4	49·0	21·9	75·2	N	..	..	..	N	$\frac{1}{4}$	..	..	..	6	..
6	30·189	67·3	60·2	7·1	..	..	46·8	NE	..	..	..	NE	$\frac{1}{4}$	..	..	..	2	..
8	30·195	58·5	54·7	3·8	..	..		ESE	..	..	..	E by S	$\frac{1}{4}$	..	..	..	$\frac{1}{4}$	..
10	30·202	54·0	51·7	2·3	49·0	5·0	102·3	Calm	..	..	..	SE	$\frac{1}{4}$—	..	..	..	0	..
12	30·204	51·4	50·2	1·2	..	..	39·0	Calm	..	..	..	Calm	..	..	..	..	3	..
14	30·194	49·1	48·3	0·8	..	..		Calm	..	..	..	Calm	..	..	..	..	2	..
16	30·196	46·2	46·2	0·0	45·7	0·5	61·8	Calm	..	..	..	SE	$\frac{1}{4}$	..	..	..	1	..
18	30·202	47·8	47·0	0·8	..	..	61·0	Calm	..	..	..	SE	$\frac{1}{4}$	..	..	..	0	..
20	30·202	55·1	53·0	2·1	..	..	..	N by E	..	..	..	ESE	$\frac{1}{4}$	..	..	..	2	..
22	30·199	64·7	59·1	5·6	54·0	10·7	..	N by E	..	N	1·27	N	$\frac{1}{4}$	3·77	0·00	6·975	0	Transit
May 14. 0	30·181	73·8	63·8	10·0	..	..	..	N by E	..	..	..	N	$\frac{1}{4}$	..	..	..	2	..
2	30·172	74·6	65·0	9·6	..	..	..	N	..	N	0·69	N	$\frac{1}{4}$	..	..	..	4	..
4	30·167	72·3	64·3	8·0	54·0	18·3		N by E	..	NNE	0·18	ENE	$\frac{1}{4}$	..	..	..	8	..
6	30·155	64·1	59·2	4·9	..	..	77·4	Calm	..	..	..	SE	$\frac{3}{4}$	..	..	..	3	..
8	30·177	58·3	55·9	2·4	..	..	42·4	Calm	..	..	..	SE	$\frac{1}{2}$	..	..	..	10	..
10	30·194	55·2	52·9	2·3	50·0	5·2		Calm	..	ESE	0·98	SE	$\frac{1}{2}$	..	..	..	10	..
12	30·213	53·3	50·9	2·4	..	..	108·2	NNE	0 to $\frac{1}{2}$	..	..	NNE	$\frac{1}{2}$	..	..	..	10	..
14	30·224	46·6	44·6	2·0	..	..	36·0	NNE	..	NE	0·90	NNE	$\frac{1}{4}$	..	..	..	7	..
16	30·216	43·3	41·9	1·4	40·0	3·3	60·5	N	..	..	..	N	$\frac{1}{4}$	..	..	..	2	..
18	30·234	42·8	41·7	1·1	..	..	60·0	N	..	..	..	N	$\frac{1}{4}$	..	..	..	4	..

DRY THERMOMETER.

May 12d 18h. The reading was lower than that of the Wet Thermometer.
May 14d. The daily range was the greatest in the month.
May 14d. 2h. The reading was the greatest in the month.
May 14d and 15d. The greatest difference in the mean temperature for consecutive days in the month occurred.

TEMPERATURE OF THE DEW POINT.

May 14d. The mean daily value was the greatest in the month.
May 14d and 15d. The greatest difference in the mean values for consecutive days in the month occurred.

REMARKS.	Observer.
Fleecy clouds and scud: the northern sky is nearly free from cloud.	H B
Cumuli and light scud, chiefly in the north-western horizon.	P
Cumuli and large masses of scud in every direction.	
,,	P
Fleecy clouds and scud.	H B
Fleecy clouds and a great quantity of scud.	
Overcast: cirro-stratus: a few drops of rain are falling.	
,,	H B
,, cirro-stratus.	P
,, cirro-stratus and scud.	J H
Cirro-stratus and scud: the clouds are of a lighter character than at the last observation: in the afternoon the clouds generally dispersed, and the evening was nearly cloudless.	J H
Cirro-stratus: misty.	P
,, a thick fog; it began to collect at about 11^h. 55^m.	
Clouds of an indefinite character in the N. E. and S. E.: hazy, but the fog has nearly disappeared.	
Cloudless, but the haze is thick, and the mist, though thin, still hangs over the Park.	P
Fleecy clouds and vapour.	J H
Fleecy clouds and vapour.	
,,	J H
Cumuli, scud, and clouds of no definite modification: the air is very close.	P
Cumuli and scud.	
A few undefined clouds in the horizon in the N. and W.: hazy: the air is very close.	
Cloudless.	P
Vapour in every direction.	J H
,,	
Cloudless, except near the N. E. horizon, where vapour still remains.	
Cloudless.	
Light clouds.	
Cloudless: hazy.	J H
	H B
Cumuli and fleecy clouds in various directions.	
,,	H B
Cumuli and fleecy clouds.	J H
Light fleecy clouds and cumuli.	
Heavy scud and cumulo-strati moving from the E. N. E.: the air is very close.	
The clouds move from the E. N. E.: cirro-stratus and scud: the air is very close.	J H
Overcast: cirro-stratus and scud: gusts of wind to $\frac{1}{2}$.	H B
The only part of the sky free from cloud is in the E., the remainder is covered with a thin cirro-stratus, through which a few stars are occasionally visible.	
A bank of thick clouds near the S. horizon.	
Cirro-stratus in various directions.	

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

May 14^d. The mean daily values were the greatest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

May 14^d and 15^d. The greatest difference in the mean daily values for consecutive days in the month occurred.

MAXIMUM THERMOMETER.—May 10^d. 22^h. The reading is evidently wrong: it appears probable, from the similarity of the numbers on this and on the preceding day, that the index was not set: the number is not used.

MINIMUM THERMOMETER.—May 13^d. 22^h. The reading was higher than that of the Dry Thermometer at 16^h.

TEMPERATURE OF THE THAMES WATER.—May 13^d. 22^h. The highest reading in the month occurred.

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. of Free Therm. / of Rad. Therm. read at 22h. / of Therm. in Water of the Thames.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 14. 20	30·246	49·4	46·9	2·5	..	..	..	N by E	..	..	..	NNE and N by E	¼	..	..	..	4	..
22	30·251	55·2	50·0	5·2	43·0	12·2	..	NNE	0 to ½	NNE	1·10	N	½	3·77	0·00	6·975	8	..
May 15. 0	30·231	60·5	52·1	8·4	..	..	..	N	0 to 2½	..	..	N	¾	..	..	..	8	Transit
2	30·223	57·6	50·5	7·1	..	..	..	N	0 to 2	..	..	N	¾	..	..	..	10	..
4	30·206	56·2	49·7	6·5	39·5	16·7	61·4	N	0 to 2½	..	..	N	¾	..	..	..	9	..
6	30·201	55·4	49·1	6·3	..	..	44·6	N	0 to ½	..	..	N	½	..	..	..	9½	..
8	30·209	51·8	47·1	4·7	..	..	——	N	..	..	..	N	¼	..	..	..	10	..
10	30·225	46·7	44·0	2·7	40·3	6·4	87·0	N	..	..	..	N	¼	..	..	..	0	..
12	30·213	46·4	44·3	2·1	..	..	31·8	N	..	N	2·92	N	¼	..	..	..	8	..
14	30·193	46·6	43·7	2·9	..	..	—— 62·5	NE	..	..	..	N	¼+	..	..	..	10	..
16	30·165	46·0	43·9	2·1	41·0	5·0	58·5	N by W	..	..	..	Calm	..	..	..	..	9¾	..
18	30·152	44·6	43·2	1·4	..	..		N by W	..	..	..	N	¼–	..	..	..	10	..
20	30·142	49·4	46·6	2·8	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
22	30·114	55·1	49·3	5·8	40·5	14·6	..	NNE	..	NNE	1·53	NNE	¼	3·77	0·00	6·975	7	..
May 16. 0	30·048	58·1	51·4	6·7	..	..	..	N	..	..	..	N	¼	..	..	..	6	Transit
2	30·001	62·5	54·2	8·3	..	..	..	N by W	..	..	..	N	¼	..	..	..	9	..
4	29·940	62·5	55·0	7·5	..	..	67·7	N by W	..	..	..	N	¼	..	..	..	9¾	..
6	29·892	57·9	51·8	6·1	..	..	44·4	N by W	..	..	..	N	¼	..	..	..	10	..
8	29·862	55·6	50·7	4·9	..	..	——	Calm	..	NNW	1·08	N	¼	..	..	..	9¾	..
10	29·856	53·4	49·9	3·5	47·0	6·4	92·8	Calm	..	..	..	Calm	..	..	..	..	10	Apogee
12	29·845	50·7	49·0	1·7	..	..	36·0	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·811	49·6	48·6	1·0	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·791	47·5	46·0	1·5	45·0	2·5	61·2	Calm	..	..	..	Calm	..	..	..	..	8	..
18	29·777	44·0	43·2	0·8	..	..	55·0	Calm	..	..	..	WSW	¼–	..	..	..	2	..
20	29·762	49·0	47·4	1·6	..	..	..	W	..	..	..	WSW	¼–	..	..	..	3	..
22	29·738	58·1	53·5	4·6	50·3	7·8	..	N by W	..	N	0·34	N	¼	3·77	0·00	6·975	7	New
May 17. 0	29·754	52·0	49·0	3·0	..	..	..	N	1 to 4	..	..	N by E	½	..	..	..	10	Transit
2	29·786	46·8	43·9	2·9	..	..	..	N by E	1½ to 5	..	..	N	½	..	..	..	10	..
4	29·785	46·8	44·0	2·8	30·0	16·8	63·0	N	2½ to 4	..	..	N	1	..	..	..	10	..
6	29·778	46·8	43·2	3·6	..	..	33·9	N	1 to 6	..	..	N	1½	..	..	..	4	..
8	29·793	45·2	40·9	4·3	..	..	——	N	1 to 4	..	..	N	1½	..	..	..	6	..
10	29·819	40·6	38·2	2·4	35·5	5·1	87·0	N	0 to ½	..	..	N	¾	..	..	..	2	..
12	29·810	38·5	36·8	1·7	..	..	27·0	N	..	..	..	N	½	..	..	..	0	..
14	29·801	36·2	34·7	1·5	..	..	——	N	..	..	..	N	¼	..	..	..	0	..
16	29·784	34·6	33·7	0·9	32·0	2·6	61·0	N	..	..	..	N	¼	..	..	..	0	..
18	29·784	35·8	34·8	1·0	..	..	57·0	N	..	..	..	N	¼	..	..	..	6	..
20	29·799	41·8	39·9	1·9	..	..	..	N	0 to 1	..	..	N	¼	..	..	..	9	..
22	29·806	46·5	42·7	3·8	35·0	11·5	..	N	0 to 1½	NNE	6·61	N	¼	3·77	0·00	6·975	8	..
May 18. 0	29·802	52·1	46·5	5·6	..	..	..	NNE	1½ to 3	..	..	N	½	..	..	..	9	..
2	29·797	53·0	46·2	6·8	..	..	..	NNE	1½ to 5	..	..	N	½	..	..	..	8	Transit
4	29·799	48·8	43·7	5·1	37·6	11·2	57·4	NE	3 to 4½	..	..	N	½	..	..	..	10	..
6	29·825	48·1	43·6	4·5	..	..	39·7	NNE	½ to 3	..	..	NNE	¼	..	..	..	8	..
8	29·847	46·2	42·0	4·2	..	..	——	NNE	½ to 1½	..	..	N by E	½	..	..	..	3	..
10	29·871	41·0	38·2	2·8	35·3	5·7	80·8	N by E	0 to ½	..	..	N	½	..	..	..	0	..
12	29·853	40·2	38·7	1·5	..	..	32·2	N by E	½ to 2½	..	..	N	½	..	..	..	0	..
14	..	..	..	..	..	..	——	N by E	½ to 1½	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	57·5	N	2½ to 5	..	..	..	..	..	..	..	..	Greatest declination N.
18	..	..	..	..	..	..	54·0	N	3½ to 5	..	..	..	..	..	..	..	..	..

BAROMETER.—May 16d. The daily range was the greatest in the month.
May 16d and 17d. The greatest difference in the mean daily heights for consecutive days in the month occurred.
DRY THERMOMETER.—May 17d. 16h. The reading was the lowest in the month.
May 18d. The mean daily temperature was the lowest in the month.
TEMPERATURE OF THE DEW POINT.—May 16d. 4h. The observation was omitted by inadvertence.
May 17d. 4h. The reading as observed was the lowest in the month.
May 17d and 18d. The difference in the mean daily values was considerable.
May 18d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cirro-stratus and vapour in various directions.	H B
Cirro-stratus and dark scud.	P
Cumuli and large masses of dark scud; breaks in various directions.	
Cirro-stratus (thin in some places), cumuli, and dark scud.	P
Cirro-stratus and dark scud: there are a few breaks in the E. and E. S. E.: wind in gusts to 1.	H B
Cirro-stratus and scud: a few breaks in the E. and E. S. E.	
,, breaks in various parts of the sky.	
Cloudless.	H B
The stars are shining in and around the zenith, but they are faint: it clouded over soon after the preceding observation, and has remained unchanged up to this time.	P
Thin cirro-stratus and scud.	
A long narrow streak of light in the N. horizon, with a few small breaks elsewhere: the clouds are thin cirro-stratus and scud.	
Thin cirro-stratus and scud: there are several very small breaks, but they do not affect the notation.	
Cirro-stratus and scud: small breaks are occasionally visible.	P
Cirro-stratus and fleecy clouds.	J H
Cumuli and linear cirri.	H B
Cumuli and scud.	J H
Cumuli, cirro-stratus, and scud: a few breaks in the E., shewing beneath the lower stratum of clouds finely-attenuated cirri.	P
Cirro-stratus and scud.	
,, a long narrow break in the N.W.	
,,	P
,,	J H
Overcast: cirro-stratus and scud.	
Cirro-stratus and scud.	
Vapour principally in the S.W.	
Light clouds: hazy.	J H
Scud, fleecy clouds, and cumulo-strati in the N.W. especially.	H B
Overcast: cirro-stratus and dark scud.	
,, ,, the scud is passing rapidly from the N.	H B
Cirro-stratus and scud: passing showers of rain.	J H
Cumulo-stratus and scud: the clouds have gradually dispersed since 4^h.	
,, strong gusts of wind.	
Scud in various directions.	J H
Cloudless.	H B
,,	
,,	
Fleecy clouds and scud passing rapidly from the N.	
Cirro-stratus and scud: there is an extensive break near the S.W.	H B
Cumuli, cumulo-stratus, and dark scud: cold and gloomy.	P
Cumuli and heavy-looking scud: between this and the preceding observation, small showers of sleet have fallen.	
Scud and fleecy clouds.	P
Cirro-stratus and scud: wind in gusts to $\frac{3}{4}$.	H B
Cirro-stratus and dark scud: there is an extensive break near the zenith.	
The sky near the S. and S.E. horizon is covered with a dense bank of clouds, and there is also a considerable quantity of scud in the West.	H B
Cloudless.	P

ELASTIC FORCE OF VAPOUR, AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

May 18^d. The mean daily values were the least in the month.

MINIMUM THERMOMETER.

May $16^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

PRESSURES OF THE WIND IN POUNDS ON THE SQUARE FOOT.

May 18^d. At $21^h. 5^m$, the pressure recorded was 9 lbs.; and afterwards a constant pressure from 6 lbs. to 8 lbs. was shewn until May $19^d. 8^h$. At 19^d. 7h there was a gust of 10 lbs. pressure.

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. of Free Therm. of Rad. Therm. read at 22h. of Therm. in Water of the Thames.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 18. 20	..	..	..	..	..	..	..	N	3 to 7	..	..	..	..	..	..	..	..	..
22	29·827	51·5	45·4	6·1	..	..	..	NNE	4 to 9	NNE	7·92	NNE	1½	3·77	0·00	6·975	7	..
May 19. 0	..	..	..	..	..	..	..	NNE	6 to 8	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..		NNE	5 to 7	..	..	..	..	..	..	..	..	Transit
4	..	..	..	..	..	..	58·4	NNE	3 to 6	..	..	..	..	..	..	..	..	..
6	29·830	50·0	45·0	5·0	..	..	43·2	NNE	4 to 6	..	..	NNE	1½	..	..	..	10	..
8	..	..	..	..	..	..	——	NNE	½ to 3½	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	79·7	NNE	1 to 5	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	36·8	NNE	½ to 3	..	..	..	..	..	..	..	..	..
14	29·841	44·0	41·4	2·6	..	..	——	NNE	2 to 3	..	..	N	¾	..	..	..	1	..
16	29·836	44·5	41·7	2·8	40·0	4·5	59·0	NNE	2 to 4	..	..	N	¾	..	..	..	9	..
18	29·846	44·0	41·7	2·3	..	..	52·0	NNE	1 to 2	..	..	N	¾	..	..	..	2	..
20	29·841	49·2	45·3	3·9	..	..	..	NNE	3 to 4	..	..	N	¾	..	..	..	7	..
22	29·860	53·8	48·1	5·7	39·8	14·0	..	NNE	3 to 4	NNE	8·22	N	½	3·77	0·00	6·975	7	..
May 20. 0	29·844	57·6	50·4	7·2	..	..	..	N	3 to 4	..	..	NNE	¼	..	..	..	½	..
2	29·838	61·2	52·5	8·7	..	..	..	N	2½ to 4½	..	..	NNE	½	..	..	..	3	..
4	29·831	59·7	51·2	8·5	38·0	21·7	63·4	N	3½ to 5½	..	..	N	1	..	..	..	2	Transit
6	29·836	55·5	49·0	6·5	..	..	43·8	N	3 to 5	..	..	N by E	1	..	..	..	0	..
8	29·851	48·9	45·2	3·7	..	..	——	N	1½ to 4	..	..	N	¾	..	..	..	0	..
10	29·842	45·8	42·9	2·9	39·2	6·6	87·0	NNE	½ to 2½	..	..	N	¾	..	..	..	2	..
12	29·818	46·0	43·0	3·0	..	..	38·9	N	½ to 1	..	..	N	1	..	..	..	10	..
14	29·793	43·7	43·5	0·2	..	..	——	N	..	..	..	N	¾	..	..	..	10	..
16	29·759	44·0	44·2	–0·2	44·0	0·0	54·5	N	..	..	..	NE	½	..	..	..	10	..
18	29·747	45·1	44·7	0·4	..	..	52·0	N	..	..	..	NE	¼	..	..	..	10	..
20	29·733	47·2	46·6	0·6	..	..	..	N	..	..	..	NNE	¼	..	..	..	10	..
22	29·740	49·0	49·1	–0·1	47·0	2·0	..	N	..	N	6·00	NNE	¼	3·77	0·00	7·000	10	..
May 21. 0	29·755	52·5	51·7	0·8	..	..	..	Calm	..	..	..	N	¼–	..	..	..	10	..
2	29·798	55·8	53·9	1·9	..	..	..	E	..	..	..	E	¼	..	..	..	10	..
4	29·836	57·2	53·4	3·8	49·0	8·2	..	ENE	..	..	..	E by N	¼	..	..	..	7	Transit
6	29·850	59·3	54·1	5·2	..	..	61·4	NE	..	..	..	E	¼	..	..	..	0	..
8	29·882	56·1	52·7	3·4	..	..	57·4	NE	..	..	..	E	¼	..	..	..	3	..
							—— 69·3											
10	29·910	52·9	51·1	1·8	48·0	4·9	39·4	ENE	..	ESE	1·02	E	¼	..	..	..	10	..
12	29·944	49·0	48·6	0·4	..	..	—— 55·5	E by N	..	..	..	ENE	¼	..	..	..	1	..
14	29·955	46·3	46·4	–0·1	..	..	53·5	E by N	..	E	0·93	ENE	¼	..	..	..	2	..
16	29·972	48·2	48·0	0·2	47·8	0·4		NE	..	..	..	ENE	¼	..	..	..	10	..
18	29·995	49·1	48·8	0·3	..	..	..	NE	..	..	..	ENE	¼	..	..	..	10	..
20	30·027	52·5	50·9	1·6	..	..	..	NE	..	..	..	NE	¼–	..	..	..	10	..
22	30·053	55·7	53·0	2·7	49·0	6·7	..	NE	..	ENE	0·65	ENE	¼	3·77	0·00	7·005	10	..
May 22. 0	30·046	61·9	57·0	4·9	..	..	68·4	N	..	..	..	NE	¼–	..	..	..	9	..
2	30·041	65·9	59·2	6·7	..	..	47·4	N	..	..	..	N	¼–	..	..	..	8	..
4	30·037	64·2	58·6	5·6	51·8	12·4	——	N	0 to 1	..	..	N	¼	..	..	..	3	Transit
6	30·033	57·8	55·5	2·3	..	..	94·8	N by E	..	..	..	N	¼	..	..	..	10	..
8	30·026	54·7	53·0	1·7	..	..	46·2	N	..	..	..	N	¼	..	..	..	10	..
10	30·052	51·2	50·2	1·0	49·5	1·7	——	N by E	0 to ½	..	..	N by E	½	..	..	..	10	..
12	30·048	48·9	48·5	0·4	..	..	56·0	N by E	0 to ½	..	..	N	½	..	..	..	10	..
14	30·041	47·3	47·2	0·1	..	..	55·0	N by E	0 to ½	..	..	N	¼+	..	..	..	10	..

DRY THERMOMETER.

May 20d. 16h and 22h, and May 21d. 14h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

May 20d and 21d. The difference of the mean daily values was considerable.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

May 21d. The mean daily value was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

May 21d and 22d. The least difference in the mean daily values for consecutive days in the month occurred.

DEGREE OF HUMIDITY.—May 21d. The mean daily value was the greatest in the month.

REMARKS.	Observer.
Cirro-stratus and dark scud in every direction.	H B
Cirro-stratus and scud.	
	H B
Nearly cloudless.	P
Wild-looking scud scattered in every direction.	
Scud, chiefly E. of the zenith.	
Cumuli and masses of wild-looking scud, the latter scattered in every direction.	P
Cumulo-stratus and scud in every direction.	H B
Light fleecy clouds.	J H
Cumuli and light fleecy clouds.	H B
Cumuli and scud: the wind in gusts to $1\frac{1}{2}$.	P
Cloudless: the wind in gusts to $1\frac{1}{2}$.	
,, the wind in gusts to 1: a few patches of scud are floating here and there, but do not affect the notation.	
Much scud about, chiefly N. of the zenith.	P
The whole sky is covered with a dark cloud, which is high and thin, as many stars are occasionally visible for a few minutes at a time.	G
At about 13^h, a thin rain began to fall, and still continues.	
Overcast: cirro-stratus: no rain has fallen for some time.	
,, ,,	
,, ,,	G
,, ,, rain in slight showers	J H
Overcast: cirro-stratus: the rain has ceased.	J H
,, cirro-stratus and scud.	P
Scud in every direction: the sky between the breaks is of an unusually deep blue.	P
The sky is cloudless, with the exception of a few cymoid cirri to the N., but to no numerical amount.	G
There have been some fine specimens of cirri of the cymoid and of the linear character since 7^h: at present a fine specimen of cymoid cirrus has just passed the zenith, moving from E. to W.: the Sun is behind a cloud of a neutral tint, but whose prevailing colour is blue; towards its upper edge the prevailing colour is yellow, and at its extreme edge of a deep golden tint: cirro-stratus in the N. E.	
The sun-set was fine, all the clouds near the place being deeply coloured with orange: the sky is now wholly covered with scud.	G
With the exception of a thick bank of clouds near the N. horizon, the sky is still clear.	H B
Vapour in the N. and E.: the stars appear dim.	
Overcast: cirro-stratus and scud.	
,, ,, a thin rain falling.	
,, ,,	H B
,, ,,	P
Fleecy clouds and scud: a few small breaks.	
Cumuli and large masses of scud, with haze.	P
Cumuli, cirri, and portions of scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	H B
,, ,, a thin rain falling.	P
,, ,,	

MINIMUM THERMOMETER.

May $20^d. 22^h$. The reading was higher than that of the Dry Thermometer at 14^h.

May $21^d. 22^h$. The reading is evidently wrong.

PRESSURES OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

May $19^d. 7^h$. A pressure of 9 lbs. was recorded.

May $20^d. 0^h, 2^h, 4^h$, and 6^h. The estimated forces are small compared with those of the Anemometer.

TEMPERATURE OF THE THAMES WATER.

May $19^d. 22^h$ and $20^d. 22^h$. The lowest readings in the month occurred.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 22. 16	30·023	47·5	46·7	0·8	45·8	1·7	..	N by E	..	..	..	N	½	..	..	..	10	..
18	30·018	47·8	46·5	1·3	..	..	..	N by E	..	..	..	N	¼	..	..	..	10	..
20	30·022	50·2	48·4	1·8	..	..	..	N by E	0 to ½	..	..	N	¼	..	..	..	10	..
22	30·007	52·2	50·5	1·7	48·0	4·2	..	N	..	N	4·10	N	¼	3·77	0·00	7·005	10	..
May 23. 0	29·988	54·7	53·1	1·6	..	..	..	NNE	..	..	..	N	¼	..	..	..	10	..
2	29·966	66·3	60·9	5·4	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	9	..
4	29·965	66·3	61·7	4·6	58·0	8·3	69·9	E	..	..	..	E by N	¼	..	..	..	9	..
6	29·952	61·8	56·9	4·9	..	..	44·2	E	..	..	..	E by N	¼	..	..	..	0	Transit
8	29·942	58·1	53·7	4·4	..	..	——	E	..	..	..	E	¼	..	..	..	0	..
10	29·950	50·8	50·0	0·8	48·0	2·8	99·3	NE	..	..	..	Calm	..	..	..	..	¼	..
12	29·958	48·7	47·8	0·9	..	..	39·7	N	..	..	..	Calm	..	..	..	..	9	..
14	29·962	45·1	43·9	1·2	..	..	——	N	..	..	..	E	¼	..	..	..	10	..
16	29·933	46·0	45·3	0·7	43·5	2·5	55·5	NE	..	..	..	Calm	..	..	..	..	10	..
18	29·944	47·0	46·0	1·0	..	..	55·0	NNE	..	..	..	E by N	¼	..	..	..	10	..
20	29·942	49·6	47·0	2·6	..	..	..	N by E	..	..	..	ENE	½	..	..	..	10	..
22	29·934	56·4	51·5	4·9	45·3	11·1	..	N	..	NNE	3·45	NE	¼	3·77	0·00	7·005	9	..
May 24. 0	29·904	62·7	54·3	8·4	..	..	..	NNE	0 to ½	..	..	NNE	¼	..	..	..	2	..
2	29·873	66·8	56·9	9·9	..	..	..	NNE	0 to 1	..	..	N	¼	..	..	..	10	..
4	29·851	66·2	57·7	8·5	45·3	20·9		NNE	0 to 1	..	..	NE	¼	..	..	..	5	..
6	29·877	61·1	54·8	6·3	..	..	69·7	NNE	0 to 2	..	..	NE	¼	..	..	..	7	Transit
8	29·840	55·0	50·6	4·4	..	..	46·2	NNE	0 to 1	..	..	NE	¼	..	..	..	8	..
10	29·853	49·8	47·0	2·8	44·0	5·8	—— 98·0	NNE	..	..	..	NNE	½	..	..	..	10	..
12	29·853	49·2	46·2	3·0	..	..	46·5	NNE	¼ to 1	..	..	NNE	½	..	..	..	10	..
14	29·851	48·0	45·4	2·6	..	..	——	NE	0 to ¾	..	..	ENE	¼	..	..	..	10	..
16	29·862	46·7	44·2	2·5	43·0	3·7	56·0	NE	0 to 1	..	..	N by E	½	..	..	..	10	..
18	29·876	46·4	43·9	2·5	..	..	55·5	NE	0 to ¼	..	..	N	¼	..	..	..	10	..
20	29·891	50·8	47·3	3·5	..	..	..	NE	0 to ½	..	..	NE	¼	..	..	..	10	1st Qr.
22	29·905	53·4	49·8	3·6	46·5	6·9	..	NE	0 to ½	NNE	5·40	NE	½	3·77	0·00	7·005	10	..
May 25. 0	29·917	53·5	49·8	3·7	..	..	..	NNE	½ to 3	..	..	NNE	¼	..	..	..	10	..
2	29·911	61·0	53·6	7·4	..	..	..	NE	½ to 3	..	..	N	¼	..	..	..	8	..
4	29·900	63·8	52·0	11·8	39·0	24·8	65·6	NE	1 to 2½	..	..	NE	½	..	..	..	0	..
6	29·921	59·6	48·9	10·7	..	..	40·6	NNE	2 to 3½	..	..	N	½	..	..	..	0	..
8	29·968	51·7	45·8	5·9	..	..	——	NNE	0 to 2	NE	3·00	NNE	¾	..	..	..	0	Transit
10	29·992	46·0	42·4	3·6	38·5	7·5	91·9	NNE	0 to ½	..	..	NE	¾	..	..	..	0	..
12	30·005	42·8	40·6	2·2	..	..	33·5	N by E	..	..	..	N by E	½	..	..	..	0	..
14	..	..	..	..	..	..	——	N by E	0 to ½	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	56·5	N by E	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	55·0	N by E	0 to 1	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	N by E	1 to 1½	..	..	..	..	..	..	..	..	In Equator
22	30·037	51·6	45·9	5·7	..	..	..	N by E	2 to 5	NNE	3·92	N	1	3·77	0·00	7·005	10	..
May 26. 0	..	..	..	..	..	..	..	N	1 to 3½	..	..	..	..	..	..	..	..	..
2	30·055	56·5	47·4	9·1	..	..	..	N	3½ to 4	..	..	N	1	..	..	..	10	..
4	..	..	..	..	..	..	..	N	3 to 4	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	58·4	N by E	4 to 4½	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	42·0	N	½ to 3	..	..	..	..	..	..	..	..	Transit
10	..	..	..	..	..	..	——	N	1 to 4	..	..	..	..	..	..	..	..	..
12	30·080	42·6	40·9	1·7	..	..	77·5	N by E	½ to 2	..	..	N by E	½	..	..	..	1	..
14	30·070	43·2	41·4	1·8	..	..	34·2	N by E	..	..	..	N	½	..	..	..	9	..

TEMPERATURE OF THE DEW POINT.
May 23d. 4h. The reading as observed was the highest in the month.

MINIMUM THERMOMETER.
May 22d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

PRESSURES OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS PER SQUARE FOOT.
May 24d. At 3h. 30m a gust of 4 lbs. took place.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	P
,, ,,	
,, ,,	P
,, ,,	J H
Cirro-stratus and scud.	H B
Cumuli towards the N. W., and thin fleecy clouds in the remaining parts of the sky.	H B
Cumuli and scud: breaks in the S. and W. horizon.	P
Cloudless.	
,,	
A few finely pencilled clouds in N. horizon.	P
Scud nearly covers the sky.	J H
Cirro-stratus and scud.	
,,	
,,	
,,	J H
,, breaks in various directions.	H B
Cirri and light clouds in various directions.	
Cloudless.	H B
Scud and cumuli.	J H
,,	
Scud and cirro-stratus.	J H
A short time since the greater part of the heavens was free of clouds; within the last quarter of an hour so large a quantity of scud has come up from the N. as wholly to cover the sky.	G
Overcast: cirro-stratus.	G
,,	J H
,, cirro-stratus and scud.	J H
,, ,,	H B
Cirro-stratus (thin in many places) and scud: about five minutes since there were a few small breaks near the Sun.	P
Cirro-stratus and scud: gloomy.	G
Overcast.	J H
Cirro-stratus and scud: there is a very extensive break towards the N.	H B
Cloudless.	P
,,	H B
,,	J H
,,	G
,,	H B
The sky is covered with a cold-looking dark scud and cirro-stratus: the air feels keen and cold: a gloomy morning: the wind blows frequently to the strength of 2.	G
The weather has continued exactly similar to that at the last observation: very dull and gloomy: gusts of wind frequently to 2.	G
	G
Fleecy clouds near the Moon's place, and in other parts of the sky.	H B
Cirro-stratus and dark scud: a few stars in the S. E. and in some other parts of the sky are visible.	

TEMPERATURE OF THE THAMES WATER.

May 26^{d}. The instruments were out of order from this date to June 1^{d} inclusive.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 26. 16	30·060	42·2	40·8	1·4	39·8	2·4	..	N	..	..	..	N	¼	..	..	..	8	..
18	30·072	43·0	41·7	1·3	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
20	30·063	48·2	45·5	2·7	..	..	..	N by E	½ to 1	..	..	N	¼	..	..	..	7	..
22	30·061	48·3	45·5	2·8	40·5	7·8	..	N by E	½ to 3½	N	7·60	NNE	¾	3·77	0·00	7·005	8	..
May 27. 0	30·050	52·0	47·5	4·5	..	..	..	NNE	0 to 4½	..	..	NE	¾	..	..	..	10	..
2	30·023	47·2	47·2	0·0	..	..	..	NNE	0 to 3	..	..	N by E	¾	..	..	..	10	..
4	30·000	47·8	46·5	1·3	42·5	5·3	..	N by E	¼ to 2½	..	..	N	¼	..	..	..	6	..
6	29·973	50·2	45·9	4·3	..	..	56·7	NE	0 to 2	..	..	NNE	¼	..	..	..	3	..
8	29·996	50·3	45·8	4·5	..	..	42·1	NE	0 to ½	..	..	NE	¼	..	..	..	1	Transit
10	30·017	45·4	43·4	2·0	43·8	1·6		N by E	0 to 1	..	..	N	¼	..	..	..	0	..
12	30·007	42·8	41·5	1·3	..	..	71·8	N by E	0 to ¾	..	..	N	¼	..	..	..	0	..
14	29·965	42·1	41·7	0·4	..	..	35·8	N by E	½ to 1	..	..	N	½	..	..	..	0	..
16	29·936	43·1	42·5	0·6	..	..		N by E	½ to 1½	..	..	N	½	..	..	..	8	..
18	29·922	45·2	44·1	1·1	..	..	..	N by E	1 to 3	NNE	4·63	N	½	..	..	..	8	..
20	29·910	52·0	48·2	3·8	..	..	..	N by E	½ to 4	..	..	NNE	½	..	..	..	8	..
22	29·884	53·6	48·2	5·4	42·0	11·6	..	NE	2 to 5	NE	1·48	NNE	¾	3·77	0·00	7·005	10	..
May 28. 0	29·862	54·8	47·7	7·1	..	..	..	NE	½ to 3	..	..	NNE	½	..	..	..	10	..
2	29·835	56·5	48·0	8·5	..	..	..	NE	2 to 3½	..	..	NE	½	..	..	..	10	..
4	29·839	55·4	48·2	7·2	38·0	17·4	..	NE	½ to 4	..	..	NE	½	..	..	..	10	..
6	29·842	53·0	46·8	6·2	..	..	57·9	NE	½ to 3½	..	..	NE	¾	..	..	..	10	..
8	29·844	51·6	46·9	4·7	..	..	46·8	NE	0 to 1	..	..	ENE	½	..	..	..	10	..
10	29·861	47·2	44·0	3·2	40·5	6·7		NE	0 to 1½	..	..	ENE	¾	..	..	..	10	Transit
12	29·851	47·2	45·0	2·2	..	..	64·7	NNE	..	..	..	ENE	¼	..	..	..	10	..
14	29·814	47·0	45·4	1·6	..	..	43·3	NNE		..	..	E	¼	..	..	..	10	..
16	29·795	46·6	45·3	1·3	44·0	2·6		N by E	0 to 1	..	..	E	¼	..	..	..	10	..
18	29·798	46·0	45·2	0·8	..	..	..	NNE	0 to ½	..	..	E	¼	..	..	..	10	..
20	29·807	49·3	47·2	2·1	..	..	..	NNE	¼ to ¾	..	..	ENE	¼	..	..	..	10	..
22	29·808	51·6	50·4	1·2	46·5	5·1	..	NNE	0 to 1	NE	5·52	N by E	¼	3·77	0·00	7·050	10	..
May 29. 0	29·807	50·6	48·9	1·7	..	..	..	NNE	0 to ½	..	..	NNE	½	..	..	..	10	..
2	29·800	53·2	50·6	2·6	..	..	..	NNE	..	..	..	N by E	½	..	..	..	10	..
4	29·798	55·1	51·2	3·9	47·0	8·1	..	NNE	..	..	..	NNE	½	..	..	..	10	..
6	29·800	54·8	49·5	5·3	..	..	56·2	NE	..	..	..	NE	½	..	..	..	10	..
8	29·826	50·5	45·4	5·1	..	..	45·2	NE	¼ to 2½	NE	1·42	NE	½	..	..	..	10	..
10	29·843	46·2	44·5	1·7	42·0	4·2		N by E	0 to ¼	..	..	NE	¼	..	..	..	10	Transit
12	29·827	46·0	45·3	0·7	..	..	59·5	N	0 to ¼	..	..	N	¼	..	..	..	10	..
14	29·819	45·7	45·4	0·3	..	..	42·8	N	..	..	..	NE	¼	..	..	..	10	..
16	29·816	45·6	45·2	0·4	44·0	1·6		N by E	..	..	..	NE	¼	..	..	..	10	..
18	29·835	45·7	45·4	0·3	..	..	..	N by E	..	..	..	NE	¼	..	..	..	10	..
20	29·854	47·0	46·2	0·8	..	..	..	NNE	..	..	..	NE	¼	..	..	..	10	..
22	29·874	50·8	48·6	2·2	48·5	2·3	..	NNE	..	NNE	2·83	NNE	¼	3·79	0·12	7·180	10	..
May 30. 0	29·864	57·1	52·9	4·2	..	..	..	NNE	..	..	..	N by E	¼	..	..	..	10	..
2	29·887	58·5	53·2	5·3	..	..	..	N by E	..	..	..	NNE	¼	..	..	..	10	..
4	29·881	59·6	52·9	6·7	45·0	14·6	61·4	N	..	..	..	NNE	¼	..	..	..	7	..
6	29·892	57·2	51·5	5·7	..	..	45·9	N	..	..	..	NE	¼	..	..	..	10	..
8	29·903	53·2	48·7	4·5	..	..	78·0	N	..	..	..	NE	¼	..	..	..	6	..
							42·5											
10	30·921	48·4	45·9	2·5	42·5	5·9	..	NE	..	..	..	NE	¼	..	..	..	8	..

DRY THERMOMETER.

May 30d. The daily range was the least in the month.

TEMPERATURE OF THE DEW POINT.

May 27d. 16h. The observation was omitted by mistake.

WEIGHT OF A CUBIC FOOT OF AIR.

May 27d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.

May 28d. 22h. The reading was higher than that of the Dry Thermometer at 16h and 18h.

REMARKS.	Observer.
Cirro-stratus and scud in every direction.	H B
,,	
Fleecy clouds and large masses of scud.	H B
Cirro-stratus and scud: occasional slight showers of rain.	J H
Cirro-stratus and scud: occasional slight showers of rain or rather sleet falling.	P
,, a shower of rain has just commenced falling: at $0^h. 55^m$ a heavy shower of hail fell.	P
Cumulo-strati near the N.E. horizon, fleecy clouds and scud in other parts of the sky.	H B
Cumulo-strati towards the N. and N.W., the remainder of the sky being nearly clear: at $5^h. 0^m$ a slight shower of rain fell.	
A few cumuli in the W., and scud in other parts of the sky.	
Cloudless.	H B
,,	P
,,	
Cirri and scud flying low.	
Cirri, undefined clouds, and scud.	
Large quantities of scud in every direction.	P
Cirro-stratus and scud.	J H
Cirro-stratus and scud.	J H
,,	H B
,,	P
Cirro-stratus: a few cumuli and scud.	
Cirro-stratus and scud.	
,, rain has just begun to fall.	P
,, the rain has ceased falling.	J H
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	J H
Cirro-stratus and scud: a few drops of rain falling.	H B
Cirrro-stratus and scud: rain falling slightly.	
,, every appearance of rain.	H B
,, rain falling occasionally.	J H
,, no rain has fallen since $4^h. 20^m$.	
,, rain in slight showers.	
Overcast: cirro-stratus: rain has been falling with little intermission since $8^h. 0^m$, though the quantity was very small until $9^h. 20^m$.	J H
,, ,, rain has continued falling without intermission since the last observation, but the amount is small.	G
,, ,, ,, ,, ,,	
,, ,, ,, ,, ,,	
,, ,, ,, ,, ,,	
,, ,, no rain has fallen since the last observation at 18^h.	G
,, cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and scud.	J H
,,	J H
A thin and high cirro-stratus: there are occasionally faint gleams of sunshine.	G
At $7^h. 20^m$ a break appeared in the clouds near the N. horizon; since that time it has been gradually increasing in extent; at present it reaches to 40° above the N. horizon, and extends to the W. and E., within which limits the sky is clear: the remainder of the sky is still covered with a thin and high cirro-stratus.	
The break mentioned in the last observation has since then diminished by clouds rising above the horizon; at present a part of the break continues at about 30° elevation: the remainder of the sky is covered with a thin and high cirro-stratus, through which Venus is distinctly visible, but the Moon is not.	G

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

May 27^d. At $1^h. 15^m$ a pressure of 4 lbs. was shewn, and afterwards sudden gusts of $3\frac{1}{2}$ and 4 lbs. occurred: at $4^h. 25^m$ a gust of $3\frac{1}{2}$ lbs. was recorded, accompanied by a change in direction from N. by E. to E. S. E.; it, however, gradually returned to its former position: at $21^h. 20^m$ a pressure of 6 lbs. took place.

CLOUDS.

May $27^d. 22^h$ to May $30^d. 2^h$. The sky was covered with clouds; it is the longest cloudy period in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d	h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
May 30.	12	29·915	48·0	46·0	2·0	..	..	..	NNE	..	..	..	N by E	¼	..	..	..	10	Transit
	14	29·911	47·5	46·0	1·5	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	10	..
	16	29·909	45·7	44·8	0·9	44·0	1·7	..	N	..	..	..	N by E	¼	..	..	..	10	..
	18	29·905	46·3	45·2	1·1	..	..	..	N	..	..	..	N by E	¼	..	..	..	10	..
	20	29·910	48·4	46·5	1·9	..	..	..	N	..	..	..	N by E	¼	..	..	..	10	Perigee
	22	29·920	50·8	49·3	1·5	46·0	4·8	..	N	..	NNE	3·05	N by E	¼	3·79	0·00	7·185	10	..
May 31.	0	29·917	55·5	51·9	3·6	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
	2	29·898	57·4	53·2	4·2	..	..	..	E by N	..	..	..	E	¼–	..	..	..	9¾	..
	4	29·881	58·1	52·4	5·7	45·3	12·8	..	ENE	..	..	..	ENE	¼	..	..	..	10	..
	6	29·882	53·6	48·7	4·9	..	..	62·4	NE	..	..	..	ENE	¼	..	..	..	10	..
	8	29·887	51·7	48·6	3·1	..	..	44·0	ENE	..	..	..	E	¼	..	..	..	6	..
	10	29·896	50·2	46·9	3·3	44·8	5·4		ENE	..	..	..	ENE	¼	..	..	..	10	..
	12	29·905	48·7	46·7	2·0	..	..		NE	..	..	..	ENE	¼	3·79	0·00	7·185	10	Transit Full
	14	29·899	43·7	43·4	0·3	..	..	88·0	NNE	..	..	..	NE	¼–	..	..	..	10	..
	16	29·882	45·5	43·9	1·6	43·0	2·5	34·7	NNE	..	..	..	ENE	¼–	..	..	..	10	..
	18	29·880	46·3	45·5	0·8	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..
	20	29·877	55·3	51·5	3·8	..	..	..	NE	..	..	..	NE	¼	..	..	..	0	..
	22	29·870	61·1	53·8	7·3	47·5	13·6	..	NE	..	NE	3·00	NE	¼	3·79	0·00	7·185	½	Greatest declination S.
June 1.	0	29·852	65·0	56·2	8·8	..	..	..	NE	..	..	..	NE by N	¾	..	..	..	3	..
	2	29·832	69·8	58·5	11·3	..	..	..	ENE	¼ to 1	..	..	NE by E	½	..	..	..	½	..
	4	29·795	67·9	57·8	10·1	44·5	23·4	..	E by N	0 to ½	..	..	ENE	¾	..	..	..	1	..
	6	29·778	63·6	55·7	7·9	..	..	72·0	E	..	E	1·15	E by N	¼–	..	..	..	0	..
	8	29·788	58·0	53·7	4·3	..	..	44·1	E	..	ESE	1·14	E by S	¼	..	..	..	0	..
	10	29·823	50·5	48·7	1·8	48·0	2·5		E by N	..	..	..	E by N	¼	..	..	..	0	..
	12	29·844	44·8	43·7	1·1	..	..	91·0	NE	..	..	..	ENE	¼	..	..	..	0	..
	14	..	..	..	..	..	..	36·2	NE	..	..	..	..	..	..	..	..	..	Transit
	16	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
	18	..	..	..	..	..	..	..	NE	..	..	..	..	..	..	..	..	..	..
	20	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..
	22	29·831	55·4	51·0	4·4	..	..	..	ENE	..	NE	2·01	NE	¼	3·79	0·00	7·185	9½	..
June 2.	0	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
	2	29·826	59·0	53·7	5·3	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
	4	..	..	..	..	..	..	67·0	NNE	..	..	..	..	..	..	..	..	..	..
	6	..	..	..	..	..	..	43·4	N by W	0 to ¼	..	..	..	..	..	..	..	..	..
	8	..	..	..	..	..	..		N	0 to 1½	..	..	..	..	..	..	..	..	..
	10	..	..	..	..	..	..	92·8	N	0 to ½	..	..	..	..	..	..	..	..	..
	12	..	..	..	..	..	..	37·2	NNE	..	..	..	..	..	..	..	..	..	..
	14	29·841	44·6	42·7	1·9	..	..		NNE	..	..	..	NE	¼	..	..	..	9	Transit
	16	29·882	43·6	42·0	1·6	40·0	3·6	55·0	N	..	..	..	NE	¼	..	..	..	8	..
	18	29·900	44·6	42·6	2·0	..	..	54·0	N by W	..	..	..	NE	¼	..	..	..	8	..
	20	29·928	51·0	46·4	4·6	..	..	..	N	..	..	..	NE	¼	..	..	..	8	..
	22	29·948	55·7	49·5	6·2	45·0	10·7	..	NNE	..	NNE	4·47	NNE	¼	3·79	0·00	7·185	5	..
June 3.	0	29·957	60·5	51·7	8·8	..	..	68·6	N	..	..	..	N	¼	..	..	..	4	..
	2	29·965	64·5	55·0	9·5	..	..	47·7	N	..	..	..	N	¼	..	..	..	3	..
	4	29·997	64·0	54·5	9·5	42·5	21·5	94·0	N	..	..	..	NNE	¼	..	..	..	3	..
	6	29·982	61·8	54·0	7·8	..	..	42·9	N	..	N	0·86	NNE	¼	..	..	..	3	..
	8	30·004	56·0	51·4	4·6	..	..		ESE	..	NNE	0·16	NNE	¼	..	..	..	8	..
	10	30·025	51·6	48·5	3·1	46·0	5·6	57·0	ESE	..	ENE	1·58	ENE	¼	..	..	..	8	..
								55·0											

BAROMETER.

May 31d. The daily range was the least in the month.

DRY THERMOMETER.

June 2d. 16h. The reading was the lowest in the month.

June 3d. The mean daily temperature was the least in the month.

TEMPERATURE OF THE DEW POINT.

June 3d. The mean daily value was the least in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

June 3d. The mean daily values were the least in the month: the same values occurred on the 15th day.

REMARKS.	Observer.
Cirro-stratus and scud: the Moon's place is scarcely visible.	H B
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	H B
	P
Cirro-stratus and scud.	
,, a few small breaks here and there.	
,,	P
,, a small break near the N. E.	H B
The sky towards the N. and N. E. is nearly free from cloud, and there are various small breaks in other parts: dark masses of scud near the W. horizon.	
Overcast: cirro-stratus and scud.	
,, ,,	H B
Cirro-stratus; it appears, however, to be somewhat thinner.	P
Cirro-stratus and scud.	
,,	
Cloudless: the clouds have been gradually going off since the preceding observation.	
Light fleecy clouds.	P
	J H
Light fleecy clouds.	
White cumuli in every direction.	J H
A few small cumuli only are scattered about the sky.	
Cloudless.	D
,,	P
,,	
,, a very fine night.	P
	J H
Fleecy clouds and scud: breaks in various directions, the cirro-stratus slowly breaking up.	J H
	P
Cirro-stratus and scud: from the observation at 1d. 22h to the present time the sky has been for the most part clear: the sky during the latter part of the day was clear and cloudy at intervals, chiefly, however, the latter.	
	P
Cirro-stratus and scud.	
,,	J H
,,	
,,	
Cumuli, fleecy clouds, and scud.	J H
	H B
Cumuli and fleecy clouds in every direction.	
,,	
Light fleecy clouds and scud.	H B
,,	J H
,, the air close.	
Cirro-stratus and scud.	
	J H

WEIGHT OF A CUBIC FOOT OF AIR.
June 3d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.
May 30d. 22h. The reading was higher than that of the Dry Thermometer at 16h.
May 31d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

RAIN.
May 31d. 12h. The amount of rain collected in Rain Gauge No. 4 during the month of May was 0in·30, and that collected in one at the Greenwich Hospital Schools was 0in·37 in the same period.

TEMPERATURE OF THE THAMES WATER.—June 2d. 22h. The lowest reading in the month occurred.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 3. 12	30·033	49·7	47·3	2·4	..	..	..	SE	..	..	..	SE	¼	..	..	..	7	..
14	30·018	49·2	47·5	1·7	..	..	..	SSE	..	SSE	0·20	SE	¼	..	..	..	9	..
16	30·007	47·6	46·9	0·7	45·8	1·8	..	S	..	..	..	S	¼	..	..	..	3	Transit
18	30·016	49·5	47·7	1·8	..	..	..	S	..	..	..	S	¼	..	..	..	0	..
20	30·030	56·1	53·2	2·9	..	..	..	SW	..	..	..	WSW	¼	..	..	..	9	..
22	30·014	64·8	57·7	7·1	50·0	14·8	..	WSW	..	S	0·52	SW	½	3·79	0·00	7·185	7	..
June 4. 0	30·007	67·6	58·2	9·4	..	..	..	W	0 to ½	WNW	0·38	WSW	½	..	..	..	5	..
2	29·987	73·6	60·9	12·7	..	..	..	WSW	0 to ½	W	0·93	SW	½	..	..	..	4	..
4	29·958	69·8	58·5	11·3	43·8	26·0	75·8	WSW	0 to 1	WSW	0·35	WSW	¼	..	..	..	7	..
6	29·947	67·8	56·8	11·0	..	..	48·6	WSW	0 to ½	..	..	SW	½	..	..	..	2	..
8	29·948	60·2	52·0	8·2	..	..	——	SW	..	..	..	SW	¼	..	..	..	3	..
10	29·946	54·6	49·4	5·2	45·3	9·3	99·0	Calm	..	..	..	SSW	¼	..	..	..	3	..
12	29·931	52·6	49·1	3·5	..	..	39·5	Calm	..	..	..	SSW	¼	..	..	..	7	..
14	29·903	51·0	48·1	2·9	..	..	——	Calm	..	..	..	SSW	¼	..	..	..	5	..
16	29·865	49·1	46·8	2·3	44·0	5·1	56·2	Calm	..	..	..	SSW	¼	..	..	..	4	Transit
18	29·843	51·2	48·8	2·4	..	..	55·0	Calm	..	..	..	SSW	¼	..	..	..	4	..
20	29·843	62·5	57·6	4·9	..	..	..	Calm	..	..	..	SSW	¼	..	..	..	8	..
22	29·834	66·7	59·6	7·1	52·0	14·7	..	SW	..	SW	2·80	SW by S	¼+	3·79	0·00	7·185	9	..
June 5. 0	29·807	72·6	60·2	12·4	..	..	..	SW	..	..	..	SSW	¾	..	..	..	¼	..
2	29·792	73·8	58·5	15·3	..	..	..	SW	..	..	..	SSW	¾	..	..	..	3	..
4	29·774	70·4	60·8	9·6	53·5	16·9	76·2	WSW	..	..	..	SW	½	..	..	..	8	..
6	29·757	66·0	59·6	6·4	..	..	54·2	WSW	..	..	..	SW by S	½	..	..	..	9	..
8	29·747	60·8	56·9	3·9	..	..	——	SW	..	SW	2·62	SW	½	..	..	..	9½	..
10	29·737	57·4	54·8	2·6	50·0	7·4	97·2	Calm	..	..	..	SW	¼	..	..	..	10	..
12	29·696	55·8	53·8	2·0	..	..	49·2	Calm	..	..	..	S	¼	..	..	..	10	..
14	29·661	57·0	54·2	2·8	..	..	——	Calm	..	..	..	S	¼−	..	..	..	10	..
16	29·622	55·0	52·4	2·6	52·0	3·0	59·0	Calm	..	..	..	S	¼−	..	..	..	9½	..
18	29·615	55·6	53·2	2·4	..	..	57·5	Calm	..	..	..	SSW	¼−	..	..	..	10	Transit
20	29·607	56·1	54·9	1·2	..	..	..	SW	0 to ¼	..	..	S by W	½	..	..	..	10	..
22	29·610	59·7	58·2	1·5	56·0	3·7	..	SW	0 to ¼	SSW	2·80	S	1	3·79	0·02	7·215	10	..
June 6. 0	29·609	62·6	59·2	3·4	..	..	..	SW	½ to 1½	..	..	S by W	¾	..	..	..	10	..
2	29·599	68·2	60·9	7·3	..	..	..	SW	½ to 3	..	..	SSW	1	..	..	..	8	..
4	29·599	65·0	58·5	6·5	52·0	13·0	68·3	SW	0 to 3	..	..	SSW	¾	..	..	..	8	..
6	29·610	64·2	58·7	5·5	..	..	54·6	SW	0 to 2	..	..	SW	¾	..	..	..	10	..
8	29·654	60·8	57·2	3·6	..	..	——	SW	..	..	..	SSW	¼	..	..	..	10	..
10	29·694	56·7	54·8	1·9	52·8	3·9	83·5	SW	..	..	..	SW	¼+	..	..	..	3	..
12	29·750	56·4	55·0	1·4	..	..	51·6	SW	..	..	..	WSW	¼	..	..	..	9	..
14	29·749	56·0	54·7	1·3	..	..	——	SW	..	..	..	WSW	¼	..	..	..	10	..
16	29·735	55·3	54·0	1·3	50·0	5·3	60·0	SW	..	..	..	WSW	¼	..	..	..	10	..
18	29·750	57·0	54·7	2·3	..	..	58·5	SW	..	..	..	WSW	¾	..	..	..	10	Transit
20	29·766	59·2	56·0	3·2	..	..	..	SW	..	SW	5·60	WSW	½	..	..	..	10	..
22	29·767	62·0	57·8	4·2	53·0	9·0	..	SW	0 to 1	SSW	0·89	SSW	½	3·79	0·00	7·215	10	..
June 7. 0	29·760	64·3	57·9	6·4	..	..	71·7	SW	½ to 3	..	..	SW	¾	..	..	..	10	..
2	29·746	69·3	59·7	9·6	..	..	52·4	SW	2 to 5	..	..	WSW	1	..	..	..	6	..
4	29·753	66·8	59·3	7·5	52·0	14·8	90·3	WSW	3 to 5	..	..	WSW	1½	..	..	..	10	..
6	29·747	65·6	58·0	7·6	..	..	47·8	WSW	2½ to 8	..	..	WSW	1½	..	..	..	3	..
8	29·776	59·5	54·5	5·0	..	..	——	WSW	2 to 4	..	..	WSW	1½	..	..	..	8	..
10	29·806	57·5	54·4	3·1	52·0	5·5	60·8	WSW	½ to 1½	..	..	WSW	1	..	..	..	8	Last Quarter in Equator
12	29·835	54·2	52·7	1·5	..	..	59·0	WSW	0 to ½	..	..	SW	¾	..	..	..	1	..

DRY THERMOMETER.

June 5d. 2h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred: this is the greatest difference that has taken place since April 26d. 4h, from which it differs only 0°·2.

MINIMUM THERMOMETER.

June 3d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

REMARKS.	Observer.
Cirro-stratus and scud: there are various and extensive breaks in many parts of the sky, but principally in the S. E.	H B
Fleecy clouds and dark masses of scud covering the Moon: a few breaks near the zenith.	
Cirro-stratus and scud.	
Cloudless: hazy.	
Cirro-stratus and scud.	H B
Cumuli and fleecy clouds.	D
Cumuli and cumulo-strati.	
Large white cumuli cover the sky.	D
Cumuli, fleecy clouds, and scud.	H B
A few cumuli and light clouds in various directions.	
Linear cirri in every direction: fleecy clouds and scud near the W. horizon.	
Cirri and light clouds in various directions: dark scud near the N. horizon.	H B
Cirro-stratus, scud, and haze.	D
Cirrro-stratus and vapour.	
,,	
,,	
Cirro-stratus and scud.	D
Imperfectly formed cirro-cumuli in and around the zenith, with loose as well as compact scud: scud in other directions: light [airs frequently springing up.	P
A few cumuli in the N.W. horizon, and a few patches of scud here and there: the wind is gradually increasing.	
Curled cirri and fleecy clouds in every direction.	P
Cirro-stratus and fleecy clouds: a few small cumuli are in the horizon in the S.W.	D
Cirro-stratus and scud.	
,,	
,,	D
,, the clouds are very black and threatening.	P
,,	
Small breaks E. of the zenith; the cirro-stratus being broken also in many directions.	
Cirro-stratus and scud.	
,, at $6^h.30^m$ a shower of rain began falling, and continued about ten minutes: drops have continued to fall [occasionally up to this time.	P
,, the rain has ceased.	J H
Cirro-stratus and scud.	J H
Cirro-strati and cumulo-strati: the clouds have a dark and heavy appearance.	D
Cumuli, cirro-strati, and scud: the quantity of cloud is variable: the wind in gusts to 1.	P
Thin cirro-stratus and scud: there are a few small breaks here and there, but they do not affect the notation: wind in gusts to 1.	
Cirro-stratus and scud: very close and sultry.	
Cirri and thin clouds scattered in every direction.	P
Vapour and scud.	J H
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	J H
Overcast: cirro-stratus and scud.	H B
Overcast, cirro-stratus, and scud: gusts of wind to 1+.	
Fleecy clouds and large quantities of dark scud in every direction: extensive breaks in various parts of the sky: wind in gusts to [1½ or 2.	H B
Cirro-stratus and scud.	J H
Large fleecy clouds: the clouds have gradually dispersed since the last observation: strong gusts of wind.	
Fleecy clouds and scud: strong gusts of wind.	
Scud in every direction.	J H
Cloudless, with the exception of a bank of cirro-stratus near the S. 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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 7. 14	29·857	52·9	51·5	1·4	..	..	..	WSW	..	..	..	WSW	½	..	..	..	3	..
16	29·870	52·3	50·7	1·6	49·8	2·5	..	WSW	0 to ½	..	..	WSW	½	..	..	..	6	..
18	29·911	53·5	51·9	1·6	..	..	..	WSW	..	SW	6·86	WSW	½−	..	..	..	4	Transit
20	29·928	60·4	56·0	4·4	..	..	..	W	..	..	..	WSW	¼	..	..	..	3	..
22	29·958	62·6	57·8	4·8	54·5	8·1	..	W	..	W	0·45	WSW	¼	3·79	0·00	7·215	8	..
June 8. 0	29·940	68·6	60·0	8·6	..	..	..	WSW	..	..	..	SW	¼	..	..	..	10	..
2	29·924	74·1	61·9	12·2	..	..	..	WSW	..	..	..	SW	¼	..	..	..	5	..
4	29·895	72·6	60·3	12·3	48·7	23·9	75·4	SW	..	..	..	WSW	¼	..	..	..	4	..
6	29·879	69·1	56·4	12·7	..	..	52·8	Calm	..	..	..	SW	¼	..	..	..	1	..
8	29·880	63·8	55·4	8·4	..	..	——	Calm	..	..	..	SW	¼	..	..	..	8	..
10	29·867	57·1	52·0	5·1	48·5	8·6	95·5	Calm	..	..	..	SW	¼	..	..	..	6	..
12	29·863	57·1	52·7	4·4	..	..	44·5	Calm	..	SSW	1·40	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	61·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	59·0	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	Transit
22	29·869	63·2	58·8	4·4	..	..	..	Calm	..	SW	0·25	Calm	..	3·79	0·00	7·220	9½	..
June 9. 0	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
2	29·872	71·1	60·6	10·5	..	..	..	W	..	W	1·28	NW	¼	..	..	..	6	..
4	..	..	..	..	..	..	74·8	WSW	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	51·3	WSW	0 to ¼	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——	SW	..	WSW	2·16	..	..	..	..	..	..	..
10	..	..	..	..	..	..	98·5	SW	..	..	..	..	..	..	..	..	..	..
12	29·900	53·0	52·0	1·0	..	..	46·5	Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·909	52·1	51·5	0·6	..	..	——	Calm	..	..	..	Calm	..	..	..	..	4	..
16	29·906	52·8	52·2	0·6	51·5	1·3	61·0	SW	..	SSW	0·41	SW	¼	..	..	..	10	..
18	29·911	55·0	53·3	1·7	..	..	59·2	SW	..	..	..	SW	¼	..	..	..	10	..
20	29·912	61·9	57·3	4·6	..	..	..	SW	..	..	..	SW	¼	..	..	..	4	Transit
22	29·920	65·2	59·6	5·6	52·0	13·2	..	SW	..	WSW	0·35	W	½	3·79	0·00	7·220	9¾	..
June 10. 0	29·918	68·5	57·7	10·8	..	..	..	WSW	½ to 1½	..	..	W	1	..	..	..	8	..
2	29·906	71·5	59·4	12·1	..	..	..	WSW	½ to 1	..	..	W	¾	..	..	..	9	..
							..											
							73·2											
4	29·902	72·2	60·2	12·0	49·0	23·2	48·1	WSW	..	SW	1·70	SW	¼	..	..	..	3	..
6	29·904	68·4	55·7	12·7	..	..	——	WNW	0 to 1	..	..	WNW	½	..	..	..	1	..
8	29·920	63·4	52·3	11·1	..	..	95·0	W	..	..	..	WSW	¼	..	..	..	0	..
10	29·966	56·9	51·6	5·3	45·5	11·4	43·0	Calm	..	..	..	WSW	¼	..	..	..	0	..
12	30·000	53·5	50·2	3·3	..	..	——	Calm	..	..	..	WSW	¼	..	..	..	0	..
14	30·011	50·1	48·2	1·9	..	..	63·0	Calm	..	..	..	WSW	¼	..	..	..	0	..
16	30·028	47·5	46·7	0·8	45·0	2·5	59·8	Calm	..	..	..	WSW	¼	..	..	..	0	..
18	30·041	49·0	48·0	1·0	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	0	..
20	30·073	57·8	54·2	3·6	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	0	..
22	30·080	66·2	57·4	8·8	51·5	14·7	..	WNW	..	W	2·10	WNW	¼	3·79	0·01	7·240	½	Transit
June 11. 0	30·080	68·5	57·7	10·8	..	..	..	WNW	..	..	..	W	¼	..	..	..	½	..
2	30·067	74·5	61·0	13·5	..	..	..	WNW	..	SW	0·80	W by S	¼	..	..	..	1	..
4	30·046	74·4	61·4	13·0	47·0	27·4	..	WNW	..	..	..	W by S	¼+	..	..	..	1	..
6	30·034	71·3	59·4	11·9	..	..	..	WNW	..	..	..	WSW	½	..	..	..	7	..

BAROMETER.
June 10d. 22h and 11d. 0h. The readings at these times were the highest in the month.
June 11d. The mean daily height was the greatest in the month.

MINIMUM THERMOMETER.
June 7d. 22h and June 10d. 22h. The readings were higher than those of the Dry Thermometer at 16h.

AMOUNT OF CLOUDS.
June 11d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cirro-stratus and haze near the N. and S.E. horizon.	H B
Cirro-stratus and fleecy clouds in every direction, but especially in the S. and S.E.	
Light clouds and cirro-stratus in every direction.	
Light fleecy clouds and haze.	H B
Cirro-stratus and fleecy clouds.	D
The sky is covered with a thin kind of cirro-stratus, through which the place of the Sun is visible.	
Cumuli and haze : cirro-stratus in S.W., near the horizon.	D
Cirro-stratus and haze, especially in the W.	H B
With the exception of a thick bank of clouds near the S. horizon, the sky is clear.	
Cumuli and scud in every direction.	
Cirro-stratus, fleecy clouds, and scud.	H B
Overcast : cirro-stratus.	D
Cirro-stratus, scud, and haze : a little rain has fallen within the last two hours.	
Cumuli, cumulo-strati, and haze.	
Cirro-stratus and vapour : since the last observation the sky has been generally clear : this has been a very fine day.	
Cirro-stratus and heavy vapour.	
Overcast : cirro-stratus.	
,, ,,	
Cirro-stratus and haze : the clouds broke at about 18^h. 40^m.	D
Cumuli and dense scud.	P
Cumuli, cirri, and scud.	
Cumuli, cumulo-strati and dark scud : within the last three minutes the temperature has fallen 3° (the reading just before the observation having been 74°·5), and there was a sudden exhibition of negative electricity ; a large dark cloud was at the time passing over from the N.W. : at 2^h. 7^m a fine shower of rain began falling ; at 2^h. 9^m the temperature was 62°·0 ; and at 2^h. 26^m it was 59°·5.	P
Cumulo-strati and large white cumuli.	D
Cumuli S. of the zenith.	
Cloudless.	
,,	D
,,	P
,,	
,,	
A few cirri only in the N.W., but they do not affect the notation.	
A few thin cirri here and there ; with this exception cloudless : hazy in the N.W.	P
A few light clouds in various directions.	J H
A few light clouds in various directions.	
A few light clouds in various directions, but principally N. of the zenith.	J H
Cumuli and light scud, chiefly in the S.	P
Cumuli, imperfectly-formed cirro-cumuli, and scud : the numerical amount of cloud has been gradually increasing since the preceding observation.	

CLOUDS.

June 10^d. 6^h to 11^d. 4^h. With some few exceptions the sky was cloudless ; it is the longest period of clear sky in the month.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 11. 8	30·040	64·5	55·7	8·8	..	..	79·5	WSW	..	..	..	WSW	¼+	..	..	..	9	..
10	30·057	59·1	53·4	5·7	51·0	8·1	49·5	W by S	..	SSW	1·02	WSW	¼+	..	..	..	10	..
12	30·061	55·0	50·0	5·0	..	..	—	W	...	..	..	WSW	¼	..	..	..	3	..
14	30·050	51·6	48·8	2·8	..	..	105·5	W	..	..	..	WSW	½	..	..	..	4	..
16	30·052	49·5	47·5	2·0	45·5	4·0	45·0	W	..	..	..	SW	¼	..	..	..	0	..
18	30·056	52·0	49·0	3·0	..	..	—	Calm	..	..	..	SW	¼	..	..	..	1	..
20	30·057	60·0	53·5	6·5	..	..	63·5	Calm	..	..	..	SW	¼	..	..	..	1	..
22	30·044	68·6	57·4	11·2	47·0	21·6	61·5	Calm	..	SW	1·28	W	¼	3·79	0·00	7·240	0	Transit
June 12. 0	30·047	75·1	62·2	12·9	..	..	..	W	..	..	..	W	¼	..	..	..	0	..
2	30·021	77·3	62·3	15·0	..	..	..	W	..	..	..	W	¼	..	..	..	3	..
4	29·995	79·0	63·9	15·1	49·0	30·0	..	WSW	0 to 1	..	..	W	¾	..	..	..	3	..
6	29·986	73·3	61·4	11·9	..	..	..	WSW	0 to ¼	SW	1·28	W by S	¾	..	..	..	2	..
8	29·969	67·2	57·3	9·9	..	..	81·3	WSW	..	..	..	W by S	¼	..	..	..	8	..
10	29·968	61·8	53·2	8·6	45·0	16·8	52·7	WSW	..	..	..	W	¼	..	..	..	10	..
12	29·946	59·6	52·7	6·9	..	..	—	WSW	..	SSW	1·29	W	¼	..	..	..	10	..
							107·1											
							52·5											
14	29·919	57·5	52·2	5·3	..	..	65·5	SW	..	..	..	W	¼	..	..	..	10	..
16	29·902	58·3	54·2	4·1	50·0	8·3	62·0	WSW	..	..	..	W	¾	..	..	..	9	Apogee
18	29·889	58·2	54·2	4·0	..	..		WSW	0 to ½	SW	1·73	W	¾	..	..	..	8	..
20	29·887	63·0	58·4	4·6	..	..	..	W	½ to 3	..	..	W	1	..	..	..	6	..
							..											
22	29·870	70·4	60·8	9·6	54·5	15·9	..	W	½ to 3	WSW	0·68	WSW	1	3·79	0·00	7·240	2	Transit
June 13. 0	29·845	80·6	66·6	14·0	..	..	..	WSW	0 to 3½	..	..	W by S	1	..	..	..	½	..
2	29·822	83·1	69·5	13·6	..	..	..	WSW	1 to 3½	..	..	WSW	1	..	..	..	5	..
4	29·812	78·8	67·4	11·4	59·0	19·8	..	SW	1 to 3	SW	2·57	SSW and WSW	2	..	..	..	5	..
6	29·800	74·2	65·9	8·3	..	..	..	WSW	0 to 3¼	..	..	WSW	1½	..	..	..	10	..
8	29·807	68·5	64·6	3·9	..	..	..	WSW	0 to 2	WSW	1·11	W	1	..	..	..	8	..
							..											
							84·0											
							53·0											
							—											
							105·0											
							46·0											
10	29·835	62·5	58·2	4·3	55·0	7·5	65·8	W	..	..	..	W	½	..	..	..	2	..
							63·2											
12	29·839	57·1	53·4	3·7	..	..	..	W by S	0 to 1	SW	0·72	W	¾	..	..	..	0	..
14	29·837	55·1	53·0	2·1	..	..	..	W by S	0 to ½	..	..	W	¼	..	..	..	0	..
16	29·848	53·4	51·8	1·6	47·0	6·4	..	W by S	..	WSW	0·47	W	¼	..	..	..	0	..
18	29·875	54·0	52·3	1·7	..	..	..	W	..	..	..	W	¼	..	..	..	0	..
20	29·907	60·1	52·7	7·4	..	..	..	W by N	0 to 2	..	..	WNW	1	..	..	..	½	..
22	29·916	64·0	54·4	9·6	48·5	15·5	..	WNW	½ to 2½	W	0·83	W by N	¾	3·79	0·00	7·240	4	..
June 14. 0	29·909	68·5	56·2	12·3	..	..	72·8	W	½ to 3¼	..	..	W by N	1	..	..	..	7	Transit
2	29·895	70·6	58·0	12·6	..	..	49·2	W	1 to 4	..	..	W	1	..	..	..	7	..
4	29·880	68·8	57·2	11·6	46·0	22·8	— 93·6	W	½ to 3	..	..	WNW	¾	..	..	..	6	..
6	29·890	67·6	56·6	11·0	..	..	43·2	W	¼ to 1	..	..	W	¾	..	..	..	5	..
8	29·890	64·2	55·5	8·7	..	..	—	W by N	¼ to 1	..	..	W	¾	..	..	..	2	..
10	29·899	59·4	53·7	5·7	49·0	10·4	64·8	W	0 to ½	..	..	W	¾	..	..	..	5	..
12	29·893	54·5	51·2	3·3	..	..	62·5	W by S	..	NW	3·50	W	¼	..	..	..	0	..

BAROMETER.

June 14d and 15d. The least difference in the mean daily heights for consecutive days in the month occurred.

DRY THERMOMETER.

June 12d. The daily range was the greatest in the month.

REMARKS.	Observer.
Cirri and dark scud in every direction: in the W. and N.W. the clouds are dark and threatening.	P
Overcast by thin scud.	P
Vapour N.W. of the zenith.	J H
Vapour and thin scud.	
The clouds have entirely disappeared: cloudless.	
Light clouds.	
,,	J H
Cloudless.	D
Cloudless.	
Cirri and light fleecy clouds are scattered in various directions: a very hot day.	D
Light clouds in various directions.	J H
Light clouds principally N. and N.W. of the zenith.	
Cirro-stratus and scud.	
,,	J H
A light cirro-stratus: between $6^h. 40^m$ and $7^h. 40^m$ this evening there was a fine and large halo round the Sun, and at $8^h. 10^m$ there were two mock suns, one on each side of the Sun, at the distance of about 23°, and in the same horizontal plane as the Sun; that on the right side was well defined, and that on the left was more deeply tinged with colour than the other.	G
A high and thin cirro-stratus. [since the last observation.	
The clouds are broken in the N., the remainder of the sky being covered with cirro-stratus: the wind has increased in strength	
The sky is generally covered with cirro-stratus.	
There are large portions of blue sky in every direction; the other parts of the sky are covered with a white flat cirro-stratus, the edges of which are variously curved: since the observation at 18^h the wind at times has blown with the strength of 1½.	G
Light clouds in every direction.	D
A few light clouds.	
Cumuli and light fleecy clouds in every direction.	D
Cumuli and cumulo-strati in every part of the sky.	G
Overcast: cirro-stratus and scud: wind in frequent gusts to 2.	
Since the last observation great masses of scud have passed from the W. at a rapid rate; from many of the masses a thin small rain has fallen: at about $7^h. 40^m$, during the passage of an immense mass of dark scud, which occupied nearly the whole of the eastern hemisphere, and from which rain was falling, causing all the E. to be obscured by a great gloom, a beautiful rainbow formed, perfect from horizon to horizon, of about 2½° in width, exhibiting the prismatic colours with more than usual brilliancy; at the same time there were portions of another bow of about 1° in width, at about 15° without this one, and at the same time there were several fine beams of light through openings in the clouds below the Sun; since that time the rainbows have disappeared, and the scud has passed very quickly over every part of the sky; that passing over the Sun has been in detached portions, causing the beams to be sometimes above and sometimes below him.	
The scud continued passing as before till 9^h; at about that time the amount diminished, and since that time the sky has only been dotted with portions of light cloud as it is at present.	G
Cloudless.	D
,,	
,,	
,,	
A few small cumuli are scattered about the sky.	D
Cumuli and scud scattered in every direction: wind in gusts to 1.	P
Cumuli and large masses of light scud: wind in gusts to 1½.	
Cumuli, cumulo-strati, and scud: wind in gusts to 1½.	P
Cumuli and cumulo-strati in every part of the sky.	D
,,	
Cumuli and a few light fleecy clouds.	
Fleecy clouds and scud.	D
Cloudless.	P

TEMPERATURE OF THE DEW POINT.

June $12^d. 4^h$. The greatest difference between the temperature of the air and that of the observed dew point occurred: the dew point as observed differs upwards of 8° from the deduced dew point.

June 12^d and 13^d. The difference of the mean daily values was considerable.

June 13^d and 14^d. The greatest difference in the mean values for consecutive days occurred.

DEGREE OF HUMIDITY.

June 12^d. The mean daily value was the least in the year.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 14. 14	29·881	51·8	49·7	2·1	..	..	..	W by S	..	..	..	W	$\frac{1}{4}$+	..	..	..	6	..
16	29·876	50·5	49·2	1·3	48·0	2·5	..	W by S	..	..	..	W	$\frac{1}{2}$	..	..	..	0	..
18	29·891	51·5	49·7	1·8	..	..	..	W by S	..	..	..	WNW	$\frac{1}{2}$	..	..	..	0	..
20	29·905	57·5	51·1	6·4	..	..	..	WNW	$\frac{1}{2}$ to 2	..	..	WNW	$\frac{1}{2}$	..	..	..	6	..
22	29·920	60·9	51·5	9·4	43·5	17·4	..	NW	$\frac{1}{4}$ to 2	WNW	2·10	WNW	$\frac{1}{2}$	3·79	0·00	7·240	7	Greatest declination N.
June 15. 0	29·914	63·5	52·2	11·3	..	..	..	NNW	0 to 1	..	..	NW	$\frac{3}{4}$	..	..	..	7	Transit
2	29·905	67·6	53·3	14·3	..	..	..	NW	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	WNW	$\frac{3}{4}$	..	..	..	6	..
4	29·911	66·5	53·4	13·1	37·0	29·5	70·3	NNW	$\frac{1}{2}$ to 1	..	..	WNW	$\frac{3}{4}$	..	..	..	4	..
6	29·917	63·5	52·2	11·3	..	..	46·9	NNW	$\frac{1}{2}$ to 2	..	..	WNW	1	..	..	..	2	..
8	29·938	61·0	51·2	9·8	..	..	—	NNW	0 to $\frac{1}{2}$	..	..	WNW	$\frac{1}{2}$	..	..	..	2	..
10	29·956	58·0	50·5	7·5	43·0	15·0	90·3	NNW	0 to $\frac{3}{4}$	..	..	WNW	$\frac{1}{2}$	..	..	..	8	..
12	29·968	55·0	48·8	6·2	..	..	44·4	NW	..	NW	1·29	WNW	$\frac{1}{2}$	..	..	..	5	..
14	..	..	..	..	..	..	—	Calm	..	..	..	..	..	..	..	..	..	New
16	..	..	..	..	..	..	64·5	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	62·2	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	N	0 to 1	..	..	..	..	..	..	..	..	..
22	30·072	60·0	49·8	10·2	..	..	..	NNE	0 to 1	NNE	2·01	WNW	$\frac{3}{4}$	3·79	0·00	7·240	$9\frac{1}{2}$	..
June 16. 0	30·072	60·7	51·3	9·4	..	..	..	NNW	0 to $\frac{1}{2}$	..	..	NW	$\frac{1}{2}$	..	..	..	9	..
2	..	..	..	..	..	..	..	N by W	..	..	..	..	..	..	..	..	..	Transit
4	..	..	..	..	..	..	74·2	N	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	47·1	N	..	..	..	..	..	..	..	..	..	..
8	29·958	..	..	..	..	..	—	N	..	N	1·00	NW	$\frac{1}{4}$—	..	..	..	3	..
10	..	..	..	..	..	..	92·1	ENE	..	NE	0·05	..	..	..	..	..	..	..
12	..	..	..	..	..	..	37·6	Calm	..	SE	0·05	..	..	..	..	..	..	..
14	29·978	47·6	46·9	0·7	..	..	—	Calm	..	..	..	WNW	$\frac{1}{4}$—	..	..	..	0	..
16	29·999	46·8	46·2	0·6	45·0	1·8	64·0	Calm	..	..	..	Calm	..	..	..	..	2	..
18	30·062	47·7	47·0	0·7	..	..	62·0	Calm	..	..	..	Calm	..	..	..	..	3	..
20	30·054	61·0	55·0	6·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	6	..
22	30·024	69·5	57·8	11·7	42·0	27·5	..	S	..	S	0·12	S	$\frac{1}{4}$	3·79	0·00	7·240	3	..
June 17. 0	29·998	71·1	59·9	11·2	..	..	..	SSW	..	..	..	S	$\frac{1}{4}$	..	..	..	4	..
2	29·955	69·6	58·8	10·8	..	..	..	S	..	..	..	S	$\frac{1}{2}$	..	..	..	9	Transit
4	29·931	67·5	57·2	10·3	50·0	17·5	74.8	S	..	..	..	SSW	$\frac{1}{4}$	..	..	..	4	..
6	29·878	67·6	56·2	11·4	..	..	53·9	S	..	..	..	SSW	$\frac{1}{4}$	..	..	..	2	..
8	29·856	63·1	54·7	8·4	..	..	—	S by E	..	..	..	SSW	$\frac{1}{4}$	..	..	..	5	..
10	29·816	55·3	49·4	5·9	43·5	11·8	99·3	SE	..	..	..	SSW	$\frac{1}{2}$	..	..	..	9	..
12	29·761	55·2	50·8	4·4	..	..	49·8	SE	..	..	..	Calm	..	..	..	..	10	..
14	29·722	56·1	52·4	3·7	..	..	—	SSE	0 to $\frac{1}{4}$	..	..	Calm	..	..	..	..	10	..
16	29·693	55·0	52·1	2·9	49·0	6·0	63·5	S by E	..	..	..	Calm	..	..	..	..	10	..
18	29·658	53·8	51·8	2·0	..	..	62·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·643	56·6	54·1	2·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·614	62·2	58·5	3·7	53·0	9·2	..	Calm	..	..	..	SSE	$\frac{1}{4}$—	3·81	0·02	7·275	10	..
June 18. 0	29·604	65·3	60·0	5·3	..	..	71·4	E	..	..	..	ENE	$\frac{1}{4}$	..	..	..	9	..
2	29·568	67·7	58·9	8·8	..	..	52·5	ESE	..	..	..	Calm	..	..	..	..	10	Transit
4	29·549	62·6	56·7	5·9	49·5	13·1	—	ESE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
6	29·543	60·7	56·7	4·0	..	..	98·7	Calm	..	..	..	S	$\frac{1}{4}$	..	..	..	10	..
8	29·543	58·4	53·8	4·6	..	..	45·2	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·571	55·1	52·8	2·3	49·5	5·6	—	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·589	53·0	51·5	1·5	..	..	63·0	NNE	..	..	..	Calm	..	..	..	..	4	..
14	29·602	53·3	51·7	1·6	..	..	62·2	NNE	..	..	..	Calm	..	..	..	..	10	..

BAROMETER.

June 17^d and 18^d. The greatest difference in the mean daily heights for consecutive days occurred.

TEMPERATURE OF THE DEW POINT.

June $15^d. 4^h$. The reading as observed was the lowest in the month.

MINIMUM THERMOMETER.

June $17^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

REMARKS.	Observer.
Dark cloud scattered in every part of the sky, but especially in the N.	P
Cloudless: wind in gusts to ¾.	
,, ,,	
Cumuli, scud, and haze: wind in gusts to ¾.	P
,,	J H
Fleecy clouds and scud.	J H
Cumuli and scud.	P
,, wind in gusts to 1.	
,, wind in gusts to 1½.	
,, wind more moderate.	
Cirro-cumuli and scud.	
Scud and vapour.	P
Cirro-stratus, scud, and undefined clouds.	J H
A few light cumuli and scud.	
Cloudless, except a few very small fragments of scud.	
Scud principally W. of the zenith.	
Light scud.	
Light scud and vapour.	J H
Cumuli and light clouds.	D
Large white cumuli are equally distributed over the sky.	
The sky is nearly covered with cumulo-strati and light scud.	D
Cumulo-strati and scud.	J H
Light clouds and scud.	
,,	
Cirro-stratus and scud: the sky has the appearance of rain, at least more so than it has had during the last three weeks.	J H
Overcast: cirro-stratus.	D
,, rain falling.	
,, no rain falling.	
,, cirro-stratus.	
,, ,,	D
,, ,, a few small breaks are now and then visible in the zenith.	P
Cirro-stratus and scud: breaks of small extent in the zenith, and in many other directions: the clouds are obviously decreasing in [density.	
,, the clouds are slightly broken in the S.W.	P
,,	D
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	D
Dense clouds in the whole horizon, and slowly approaching the zenith, apparently as to a focus.	P
Overcast: cirro-stratus.	

WHEWELL'S ANEMOMETER.

June $17^d.22^h$. At this time the instrument was found with two of the fans broken off: it was sent to Mr. Simms to be repaired immediately, but it was not returned by him till August 20^d; therefore, between these times, there was no record of the wind by this instrument.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 18. 16	29·627	52·5	50·9	1·6	49·0	3·5	..	NNE	..	..	..	N	¼—	..	..	..	10	..
18	29·667	53·2	51·5	1·7	..	..	..	NNE	..	..	..	N	¼—	..	..	..	10	..
20	29·713	52·6	52·2	0·4	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..
22	29·739	53·1	51·6	1·5	50·0	3·1	..	N by W	..	..	..	NNW	½	3·81	0·03	7·315	10	..
June 19. 0	29·769	56·6	52·2	4·4	..	..	..	WNW	..	..	..	WNW	½	..	..	..	10	..
2	29·801	57·3	52·4	4·9	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	10	..
4	29·826	55·8	52·0	3·8	47·0	8·8		NNW	..	..	..	NW	¼	..	..	..	10	Transit
6	29·837	56·8	52·7	4·1	..	..	60·9	NW	..	..	..	W	½	..	..	..	10	..
8	29·873	54·7	52·9	1·8	..	..	47·9	W	..	..	..	W by S	¼	..	..	..	10	..
10	29·906	54·4	51·9	2·5	48·0	6·4	71·0	W	..	..	..	W	½	..	..	..	10	..
12	29·927	52·6	50·8	1·8	..	..	42·8	W	..	..	..	W	½	..	..	..	10	..
14	29·942	48·6	46·8	1·8	..	..	63·0	WSW	..	..	..	W	¾	..	..	..	7	..
16	29·939	47·9	46·2	1·7	44·5	3·4	61·5	WSW	..	..	..	Calm	..	..	..	..	9	..
18	29·950	50·1	48·4	1·7	..	..		SW	..	..	..	SW	¼	..	..	..	10	..
20	29·943	56·5	53·2	3·3	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
22	29·929	57·4	51·2	6·2	46·5	10·9	..	SW	..	..	..	W	½	3·81	0·00	7·315	10	..
June 20. 0	29·896	58·5	57·2	1·3	..	..	..	SSW	0 to ½	..	..	SW	¼	..	..	..	10	..
2	29·876	65·7	61·9	3·8	..	..	..	SW	0 to ½	..	..	SW	½	..	..	..	10	..
4	29·860	69·1	63·8	5·3	60·0	9·1	..	WSW	½ to 1	..	..	SW	¾	..	..	..	9	Transit
6	29·858	68·3	61·7	6·6	..	..	70·3	W by S	0 to 2	..	..	SW	1	..	..	..	10	..
8	29·868	65·0	59·3	5·7	..	..	(47·9)	W	½ to 1½	..	..	W by S	½	..	..	..	3	..
10	29·895	61·0	58·4	2·6	56·0	5·0		WSW	0 to 1	..	..	W	¾	..	..	..	9½	..
							91·1 49·5											..
12	29·887	56·3	54·7	1·6	..	..		SW	½ to 1½	..	..	WSW	¾	..	..	..	5	..
14	29·880	55·5	54·0	1·5	..	..	62·0	SW	¼ to ¾	..	..	WSW	¾	..	..	..	6	..
16	29·867	55·0	53·0	2·0	50·0	5·0	61·2	SW	½ constant	..	..	WSW	½	..	..	..	4	..
18	29·870	56·0	53·6	2·4	..	..	..	WSW	0 to 1	..	..	WSW	½	..	..	..	6	..
20	29·866	60·0	56·6	3·4	..	..	..	WSW	½ to 1	..	..	WSW	½	..	..	..	8	..
22	29·853	70·2	61·6	8·6	56·0	14·2	..	WSW	0 to ½	..	..	SW	½	3·81	0·00	7·330	5	..
June 21. 0	29·836	75·5	64·0	11·5	..	..	..	SW	0 to ½	..	..	SW	½	..	..	..	4	..
2	29·806	77·1	65·2	11·9	..	..	..	SW	0 to ½	..	..	SSW	½	..	..	..	2	..
4	29·769	76·0	63·3	12·7	53·2	22·8		SW	½ to 1	..	..	SSW	¾	..	..	..	6	..
6	29·724	72·0	61·5	10·5	..	..	82·8	SW	0 to 1	..	..	SSW	¾	..	..	..	4	Transit
8	29·694	69·3	61·3	8·0	..	..	57·3	SW	..	..	..	SW by W	½	..	..	..	8	..
10	29·678	62·8	58·8	4·0	56·0	6·8	101·7	Calm	..	..	..	WSW	¼	..	..	..	4	..
12	29·628	60·6	57·2	3·4	..	..	49·9	Calm	..	..	..	Calm	..	..	..	..	7	..
14	29·596	59·5	56·3	3·2	..	..	63·5	Calm	..	..	..	SW	¼	..	..	..	5	..
16	29·590	57·7	55·7	2·0	53·5	4·2	62·5	Calm	..	..	..	Calm	..	..	..	..	8	..
18	29·607	58·1	56·3	1·8	..	..		Calm	..	..	..	Calm	..	..	..	..	7	..
20	20·638	61·8	58·7	3·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	9½	..
22	29·659	68·8	61·2	7·6	57·0	11·8	..	W by N	..	..	..	W	¼	3·81	0·00	7·330	7	..
June 22. 0	29·658	75·2	63·6	11·6	..	..	..	W	..	..	..	SW	¼—	..	..	..	6	..
2	29·667	77·5	63·1	14·4	..	..	..	W	..	..	..	W	¼+	..	..	..	2	In Equator
4	29·649	79·6	65·9	13·7	52·5	27·1	..	W	..	..	..	WSW	¼	..	..	..	3	..
6	29·664	72·9	61·8	11·1	..	..	..	SW	..	..	..	SW	½	..	..	..	0	Transit

BAROMETER.

June 19d. The daily range was the greatest in the month.

DRY THERMOMETER.

June 19d. The daily range was the least in the month.

MINIMUM THERMOMETER.

June 20d. 22h. This reading is evidently wrong, and no probable correction of the reading can be applied; no further use has been made of the observation.

REMARKS.	Observer.
Overcast: cirro-stratus.	P
,, ,,	
,, ,, a thin rain falling: it began at about 19^h. 20^m in a brisk shower.	P
,, ,,	D
Overcast: cirro-stratus.	
,, ,,	D
Cirro-stratus and scud: at 3^h. 5^m a slight shower of rain fell, but continued a few minutes only.	P
,, a shower of hail has just fallen, which lasted but three minutes: heavy clouds in every direction.	
,, the clouds are slightly broken S. of the zenith.	P
Overcast: cirro-stratus and scud.	G
,, a thin and high cirro-stratus and scud: at about 11^h. 10^m several stars were visible near the zenith, and since that time a star or two have been occasionally visible for a short time.	G
Scud and undefined clouds.	J H
The sky is nearly covered with scud.	D
Overcast: cirro-stratus.	D
Cirro-stratus and scud.	P
,,	G
Overcast: a thin rain is falling.	D
Cirro-stratus and scud.	P
,,	J H
,,	D
Cirri and dark scud: the clouds broke almost immediately after the last observation.	P
The cirro-stratus mentioned in the observation at 9^h gradually became less and less dense, till a short time since there did not appear to be any upper cloud; the scud, however, continues the same, passing rapidly from the W. in large masses: near the horizon in the N. a portion of very clear sky is at times visible: the strength of the wind is increasing.	G
Cirro-stratus and scud.	J H
,,	
,,	
,,	
Fleecy clouds and scud.	J H
Cirri and cirro-cumuli in different directions: the clouds S.E. of the zenith are most beautiful specimens of the cirro-cumulus verging into cirro-stratus.	D
Cumuli, cirri, and small fleecy clouds are scattered in various parts of the sky.	
Cirri and small cumuli: the specimens of cirrus have been remarkably beautiful during the whole of the morning.	D
Fleecy clouds and badly-formed cirri.	J H
Fleecy clouds and cirri.	
Light scud.	
A bank of dark scud extending to an altitude of 30° between the W. and N.E. (round by N.); light scud scattered about in other directions.	J H
The stars are shining in, and in the neighbourhood of, the zenith; every other part is nearly covered with cirro-stratus.	D
Cirro-stratus and scud.	
,,	
,,	
,,	D
Cumuli and large masses of scud.	P
Cumuli and large masses of scud: haze in the N.	
Cumuli and scud.	P
Large white cumuli in all directions.	D
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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 22. 8	29·673	68·2	58·7	9·5	..	..	82·8	SW	..	..	..	SW	¼	..	..	..	0	..
10	29·697	61·1	55·3	5·8	50·0	11·1	54·0	Calm	..	..	..	SW	¼	..	..	..	0	..
12	29·708	57·5	53·7	3·8	..	..	——	Calm	..	..	..	SW	¼	..	..	..	0	..
14	..	..	..	..	..	..	108·5	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	44·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	64·0	Calm	..	..	..	..	..	..	..	..	..	..
22	29·690	78·1	66·2	11·9	..	..	63·2	SE	..	..	..	SSE	¼	3·81	0·00	7·330	1	..
June 23. 0	29·680	82·4	69·5	12·9	..	..	..	SSE	..	..	..	SSE	¼	..	..	..	2	..
2	29·661	85·3	70·6	14·7	..	..	..	S	0 to ½	..	..	S	¼	..	..	..	2	..
4	..	..	..	..	..	..	86·4	SSW	..	..	..	..	..	..	..	..	..	1st Qr.
6	..	..	..	..	..	..	63·1	Calm	..	..	..	..	..	..	..	..	..	Transit
8	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	108·0	Calm	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	56·5	Calm	..	..	..	..	..	..	..	..	..	..
14	29·584	64·0	61·8	2·2	..	..	——	Calm	..	..	..	Calm	..	..	..	..	9	..
16	29·539	62·5	61·2	1·3	61·0	1·5	66·5	Calm	..	..	..	Calm	..	..	..	..	8	..
18	29·540	63·3	62·7	0·6	..	..	64·2	Calm	..	..	..	Calm	..	..	..	..	8	..
20	29·547	72·5	65·5	7·0	..	..	..	S	0 to 3	..	..	SW	½	..	..	..	8	..
22	29·538	75·4	67·9	7·5	62·0	13·4	..	Calm	..	..	..	Calm	..	3·81	0·00	7·330	6	..
June 24. 0	29·529	83·3	69·2	14·1	..	..	..	SSW	0 to ¾	..	..	SSW	¼	..	..	..	½	..
2	29·542	80·5	68·5	12·0	..	..	..	WSW	0 to ½	..	..	SSW	¾	..	..	..	7	..
4	29·516	81·8	68·4	13·4	57·0	24·8	87·6	W	0 to ½	..	..	SW	½	..	..	..	5	..
6	29·526	78·3	65·4	12·9	..	..	58·9	WSW	0 to ¾	..	..	SW	½	..	..	..	¼–	..
8	29·534	71·5	62·1	9·4	..	..	——	WSW	..	..	..	SW	½	..	..	..	¼	Transit
10	29·541	63·2	56·7	6·5	52·1	11·1	111·7	SW	..	..	..	SW	½	..	..	..	5	..
12	29·521	59·5	56·2	3·3	..	..	57·0	WSW	..	..	..	SW	½	..	..	..	9	..
14	29·496	59·7	56·5	3·2	..	..	——	WSW	..	..	..	WSW	¼	..	..	..	10	..
16	29·484	60·2	57·2	3·0	54·5	5·7	67·8	Calm	..	..	..	WSW	¼	..	..	..	10	..
18	29·482	61·0	58·2	2·8	..	..	65·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·496	59·3	58·8	0·5	..	..	..	N by W	..	..	..	NNW	¼–	..	..	..	10	..
22	29·496	58·4	57·9	0·5	58·0	0·4	..	W	..	..	..	WSW	¼	4·33	0·55	7·855	10	..
June 25. 0	29·500	57·8	57·6	0·2	..	..	..	W by S	..	..	..	W	¼	..	..	..	10	..
2	29·500	58·8	58·2	0·6	..	..	..	Calm	..	..	..	W	¼	..	..	..	10	..
4	29·499	59·1	58·8	0·3	58·0	1·1	61·0	Calm	..	..	..	W	¼	..	..	..	10	..
6	29·494	57·2	56·5	0·7	..	..	47·7	N	..	..	..	NNW	¼	..	..	..	10	..
8	29·498	53·2	52·7	0·5	..	..	——	NNE	..	..	..	NNW	½	..	..	..	10	Transit
10	29·541	50·7	50·2	0·5	48·5	2·2	64·0	N	..	..	..	N	½	..	..	..	10	..
12	29·555	48·9	48·4	0·5	..	..	44·2	N	..	..	..	N	¼	..	..	..	10	..
14	29·558	48·6	48·2	0·4	..	..	——	N	..	..	..	N	¼	..	..	..	10	..
16	29·550	48·0	47·6	0·4	47·0	1·0	67·0	N	..	..	..	Calm	..	..	..	..	10	..
18	29·555	49·6	49·2	0·4	..	..	65·0	N	..	..	..	Calm	..	..	..	..	10	..
20	29·582	53·5	51·8	1·7	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
22	29·612	56·2	53·3	2·9	49·5	6·7	..	N	..	..	..	N	¼	5·08	0·93	8·660	10	..
June 26. 0	29·627	60·4	55·7	4·7	..	..	..	NNE	..	..	..	N by E	¼	..	..	..	10	..
2	29·632	63·2	57·0	6·2	..	..	..	NNE	..	..	..	N	¼	..	..	..	10	..
4	29·640	62·4	57·3	5·1	51·5	10·9	..	NNE	..	..	..	Calm	..	..	..	..	10	..
6	29·643	61·1	55·8	5·3	..	..	..	N by E	..	..	..	NNE	¼	..	..	..	10	..

BAROMETER.

June 24d. 18h. The reading was the least in the month. June 25d. The mean daily height was the least in the month.

DRY THERMOMETER.

June 23d. 2h. The reading was the highest in the year.

June 24d. 0h. The reading was the greatest in the month at the two-hourly observations: at 22h the reading of the Maximum Thermometer was the greatest in the year.

June 24d. The mean daily temperature was the greatest in the year.

June 24d and 25d. The greatest difference in the mean daily temperature for consecutive days in the month occurred.

TEMPERATURE OF THE DEW POINT.

June 23d. 22h. The reading as observed was the highest in the month. June 24d. The mean daily value was the greatest in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

June 24d. The mean daily values were the greatest in the month.

REMARKS.	Observer.
Cloudless.	D
,,	D
,,	P
A few light clouds in various directions.	D
Light clouds and cumuli.	
Light clouds: the thermometer exposed to the Sun now reads 107°; and one being placed on a small piece of raw wool rose in seven minutes to 153°, and was still rising when the thermometer was taken away.	D
Dark clouds covering the greater part of the sky; sheet lightning emanating from them at short intervals: the electrometers have not yet been affected: the lightning was first seen by the observer a little before midnight.	P
Scud in every direction, with curled cirri: the scud moves from the S. S. E.	
Cirro-cumuli covering the greater part of the sky, with scud.	
Cirro-stratus and scud; the breaks are chiefly in the N.	P
Light clouds and scud: sultry.	J H
A few light clouds in the S.: a very hot day.	
Fleecy clouds and light scud: the temperature has been as high as 86° this morning.	J H
Curled cirri and fleecy clouds.	P
A few cumuli and patches of light scud only.	
Thin cirri in the neighbourhood of the zenith.	
	P
Cirro-stratus and scud.	J H
,,	
,,	
Thin cirro-stratus.	
Cirro-stratus: rain commenced falling at 18^h. 15^m, and still continues.	J H
,, rain falling steadily.	D
Cirro-stratus: rain falling steadily.	
Overcast: rain falling.	D
,, ,,	J H
Cirro-stratus and scud: rain falling steadily.	
,, rain falling, but not so heavily.	
,, rain still falling: the scud appears very low.	J H
,, rain falling steadily.	D
,, rain falling.	
,, ,,	
,, the rain has ceased.	
,, the Sun's place is visible.	D
,,	J H
Cirro-stratus and scud.	P
,,	P
Overcast: cirro-stratus and scud.	D
,, ,,	

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
June 24^d. The mean daily value was the greatest in the year. June 25^d. The mean daily value was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.
June 24^d. The mean daily value was the least in the year.
June 24^d and 25^d. The greatest difference in the mean daily values for consecutive days in the month occurred.

DEGREE OF HUMIDITY.—June 25^d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.—June 23^d. 22^h. The reading was higher than that of the Dry Thermometer at 16^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.
June 23^d. 19^h. 50^m. At this time a sudden squall occurred; the direction of the wind gradually changed from S. E. to S. W., and a pressure of 3 lbs. was shewn.

CLOUDS.—June 24^d. 14^h to 28^d. 10^h. With few exceptions the sky was covered with cloud; it is the longest cloudy period in the month.

TEMPERATURE OF THE THAMES WATER.—June 24^d. 22^h. The highest reading in the month occurred.

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.	WIND. From Osler's Anemometer.		From Whewell's Anemometer.		By Estimation.		RAIN.			Amount of Clouds, 0—10.	Phases of the Moon.
								Direction.	Pressure in lbs. per square foot.	Direction.	Descent of the pencil during the continuance of each Wind.	Direction.	Force 0—6.	Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).		
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 26. 8	29·663	58·6	54·2	4·4	..	..	66·0	N	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
10	29·681	56·5	53·4	3·1	50·0	6·5	52·9	N by E	..	..	..	N	$\frac{1}{4}$	..	..	..	10	Transit
12	29·689	55·7	52·7	3·0	..	..	—	N	..	..	..	Calm	..	..	..	..	10	..
14	29·697	54·1	52·8	1·3	..	..	78·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·688	53·0	52·2	0·8	51·0	2·0	49·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·696	52·8	52·4	0·4	..	..	—	N	..	..	..	Calm	..	..	..	..	10	..
20	29·702	54·0	52·0	2·0	..	..	66·0	ENE	..	..	..	ENE	$\frac{1}{4}$	..	..	..	10	..
22	29·719	57·3	54·9	2·4	52·0	5·3	65·0	NNE	..	..	..	N	$\frac{1}{4}$	5·09	0·02	8·705	10	..
June 27. 0	29·725	60·9	56·4	4·5	..	..	..	NE	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
2	29·717	61·3	55·9	5·4	..	..	..	NNE	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
4	29·729	61·2	55·5	5·7	50·0	11·2	67·0	NNE	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
6	29·733	58·5	53·9	4·6	..	..	51·7	NNE	..	..	..	NE	$\frac{1}{4}$	..	..	..	10	..
8	29·739	57·6	53·5	4·1	..	..	—	NE	..	..	..	NNE	$\frac{1}{4}$	..	..	..	3	..
10	29·773	51·8	49·2	2·6	47·0	4·8	88·0	Calm	..	..	..	NNE	$\frac{1}{4}$	..	..	..	6	Transit
12	29·787	52·8	50·2	2·6	..	..	41·1	Calm	..	..	..	ENE	$\frac{1}{4}$–	..	..	..	10	..
14	29·784	51·8	50·2	1·6	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·785	51·8	49·9	1·9	48·0	3·8	65·5	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·814	51·5	50·0	1·5	..	..	64·8	Calm	..	..	..	SSW or Calm	very light	..	..	..	10	..
20	29·836	55·7	51·7	4·0	..	..	..	Calm	..	..	..	WNW	$\frac{1}{4}$–	..	..	..	10	..
22	29·855	59·4	54·6	4·8	51·0	8·4	..	Calm	..	..	..	NNW	$\frac{1}{4}$	5·09	0·00	8·705	$9\frac{1}{2}$	..
June 28. 0	29·854	61·3	55·4	5·9	..	..	..	N by W	..	..	..	NNW	$\frac{1}{4}$	..	..	..	10	..
2	29·858	66·3	58·2	8·1	..	..	..	NNW	..	..	..	N	$\frac{1}{4}$	..	..	..	10	Perigee
4	29·857	67·5	58·9	8·6	52·0	15·5	69·4	N	..	..	..	N	$\frac{1}{4}$	..	..	..	$9\frac{3}{4}$	..
6	29·860	66·3	55·9	10·4	..	..	49·9	N	..	..	..	N	$\frac{1}{4}$–	..	..	..	10	..
8	29·881	61·0	55·9	5·1	..	..	—	NE	..	..	..	NE	$\frac{1}{4}$–	..	..	..	10	..
10	29·908	57·0	54·1	2·9	54·0	3·0	91·0	Calm	..	..	..	NNE	very light	..	..	..	10	Greatest declination S.
12	29·924	55·1	53·2	1·9	..	..	41·8	Calm	..	..	..	Calm	..	..	..	..	9	Transit
14	29·928	53·7	52·4	1·3	..	..	—	Calm	..	..	..	NNE	$\frac{1}{4}$	..	..	..	8	..
16	29·929	51·2	50·8	0·4	49·0	2·2	65·5	Calm	..	..	..	NNE	$\frac{1}{4}$	..	..	..	3	..
18	29·944	52·5	52·0	0·5	..	..	64·8	Calm	..	..	..	ESE	$\frac{1}{4}$–	..	..	..	2	..
20	29·950	61·2	57·2	4·0	..	..	..	Calm	..	..	..	SSE	$\frac{1}{4}$	..	..	..	2	..
22	29·945	68·3	59·6	8·7	52·0	16·3	..	Calm	..	..	..	W	$\frac{1}{4}$	5·09	0·00	8·720	0	..
June 29. 0	29·940	74·1	63·2	10·9	..	..	..	SW	..	..	..	SW	$\frac{1}{4}$	..	..	..	3	..
2	29·927	77·8	64·4	13·4	..	..	..	W	..	..	..	W	$\frac{1}{4}$	..	..	..	4	..
4	29·911	73·5	61·4	12·1	..	..	79·7	Calm	..	..	..	W	$\frac{1}{4}$	..	..	..	4	..
6	29·889	71·7	61·5	10·2	..	..	54·9	Calm	..	..	..	SW	$\frac{1}{4}$	..	..	..	8	..
8	29·887	64·0	58·2	5·8	..	..	—	Calm	..	..	..	SSW	$\frac{1}{4}$	..	..	..	9	..
10	29·891	58·3	57·1	1·2	56·0	2·3	106·2	E by N	..	..	..	ESE	$\frac{1}{4}$	..	..	..	4	..
12	29·890	56·1	55·6	0·5	..	..	48·0	Calm	..	..	..	Calm	..	..	..	..	7	Transit
14	..	..	..	..	..	..	—	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	65·5	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	64·8	Calm	..	..	..	..	..	..	..	..	..	Full
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·795	71·5	62·0	9·5	..	..	..	ENE	..	..	..	E	$\frac{1}{4}$–	5·09	0·00	8·720	0	..
June 30. 0	..	..	..	..	..	..	..	NE	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	E	..	..	..	..	..	..	..	..	..	..
4	29·738	..	..	..	..	..	..	E	0 to $\frac{1}{2}$	..	..	ESE	$\frac{3}{4}$	..	..	..	7	..
6	29·725	65·0	59·7	5·3	..	..	..	E	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..

BAROMETER.

June 29d. The daily range was the least in the month.

TEMPERATURE OF THE DEW POINT.

June 29d. 4h. The observation was omitted by inadvertence.

WEIGHT OF A CUBIC FOOT OF AIR.

June 27d and 28d. The least difference in the mean daily values for consecutive days in the month occurred.

REMARKS.	Observer.
Cirro-stratus and scud: the clouds look much lighter.	D
,,	D
,,	G
Overcast: a very thin rain falling.	
,, ,,	
,, ,,	
,, the rain has ceased falling.	G
,, a thin rain falling.	P
Overcast: the rain has ceased, and the clouds in the zenith are very thin: there is a tendency in the clouds to break up.	
Cirro-stratus and scud.	
,,	P
,,	D
Fleecy clouds and scud.	J H
Fleecy clouds and scud, at times covering two-thirds of the sky, and at other times not more than one-third: at no time is the sky very clear, having a misty appearance.	G
Overcast: cirro-stratus and scud.	P
,, ,,	
,, ,, the cirro-stratus broken in many directions.	
A thin film of cloud covers the whole sky.	
Cirro-stratus and scud: a thin fog prevails.	P
Scud: hazy.	J H
Stratus.	
,, hazy.	J H
Cumulo-strati, scud, and haze.	P
Cirro-stratus, scud, and haze.	
Cirro-cumuli, closely formed, in and around the zenith, together with cirro-stratus.	
Cirro-stratus and scud.	P
,, the air very close.	J H
,,	
Scud in various directions.	
Light fleecy clouds.	
,,	J H
Cloudless, but very hazy.	D
Cumuli and haze.	
,,	D
Cumuli and scud.	J H
Light fleecy clouds and scud.	J H
Large dark masses of cumulo-stratus floating about, and haze everywhere: the clouds near the Sun are of a gold colour.	G
Fleecy clouds and scud.	D
,,	D
Cloudless: haze in the whole of the horizon.	P
The sky is covered for the greater part by a loose kind of cirri, with a thin cirro-stratus in some parts, the whole being of a loose texture.	G
Cirro-stratus, cirro-cumuli, and a thin film of cloud, lower down, covers the sky: hazy.	P

MAXIMUM THERMOMETER.

June 27^d. 22^h. It seems probable that this reading is 5° too great: the reading has been used as recorded.

MINIMUM THERMOMETER.

June 26^d. 22^h and 27^d. 22^h. The reading was higher each day than that of the Dry Thermometer at 18^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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
June 30. 8	..	..	..	..	..	..	77·4	E	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	52·6	E	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	——	E	..	..	..	..	..	5·09	0·00	8·720	..	..
14	29·739	54·8	53·4	1·4	..	..	104·3	E	..	..	..	E	¼	..	..	..	10	Transit
16	29·719	53·4	52·6	0·8	51·0	2·4	43·3	E	..	..	..	Calm	..	..	..	..	10	..
18	29·720	52·1	51·5	0·6	..	..	——	ENE	..	..	..	Calm	..	..	..	..	3	..
20	29·727	60·6	56·1	4·5	..	..	66·0	ESE	..	..	..	E	¼	..	..	..	8	..
22	29·748	65·8	59·2	6·6	53·2	12·6	65·2	Calm	..	..	..	ESE	¼−	5·09	0·00	8·720	10	..
July 1. 0	29·736	70·7	63·0	7·7	..	..	..	Calm	..	..	..	S	¼−	..	..	..	9	..
2	29·732	69·0	62·0	7·0	..	..	..	Calm	..	..	..	SSW	¼	..	..	..	10	..
4	29·706	70·1	62·3	7·8	57·0	13·1	76·7	ESE	..	..	..	SSE	¼	..	..	..	5	..
6	29·691	66·6	58·9	7·7	..	..	55·0	E	..	..	..	E	¼	..	..	..	6	..
8	29·722	57·1	56·3	0·8	..	..	——	Calm	..	..	..	E	¼	..	..	..	10	..
10	29·728	56·2	55·8	0·4	55·5	0·7	98·8	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·711	55·8	55·6	0·2	..	..	51·6	Calm	..	..	..	S	¼−	..	..	..	9½	..
14	29·700	55·2	55·1	0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	Transit
16	29·694	55·0	54·4	0·6	53·5	1·5	..	Calm	..	..	..	SW	very light.	..	..	..	10	..
18	29·696	56·2	56·2	0·0	..	..	63·0	Calm	..	..	..	SW	¼−	..	..	..	10	..
20	29·712	56·2	55·0	1·2	..	..	..	N	..	..	..	Calm	..	..	..	..	10	..
22	29·718	56·8	56·2	0·6	54·5	2·3	..	NNE	..	..	..	Calm	..	5·09	0·53	9·145	10	..
July 2. 0	29·724	59·6	58·2	1·4	..	..	..	N	..	..	..	NE	¼	..	..	..	10	..
2	29·721	61·4	58·8	2·6	..	..	..	N	..	..	..	NE	¼	..	..	..	10	..
4	29·725	63·5	59·2	4·3	56·0	7·5	67·2	N	..	..	..	Calm	..	..	..	..	10	..
6	29·707	63·8	59·4	4·4	..	..	52·5	NE	..	..	..	N	¼	..	..	..	9½	..
8	29·707	61·2	58·5	2·7	..	..	——	NE	..	..	..	N by E	¼−	..	..	..	8	..
10	29·743	56·5	55·1	1·4	53·5	3·0	78·7	E	..	..	..	E by N	¼−	..	..	..	10	..
12	29·755	55·0	52·9	2·1	..	..	49·2	E	..	..	..	NE	¼	..	..	..	10	..
14	29·752	54·2	53·0	1·2	..	..	——	E	..	..	..	NE	¼	..	..	..	10	..
16	29·750	54·0	53·0	1·0	51·0	3·0	65·0	E by S	..	..	..	NE	¼	..	..	..	10	Transit
18	29·747	53·5	53·1	0·4	..	..	64·2	E	..	..	..	ENE	¼−	..	..	..	10	..
20	29·758	55·5	54·3	1·2	..	..	..	ESE	..	..	..	ENE	¼−	..	..	..	10	..
22	29·764	61·2	58·0	3·2	56·0	5·2	..	SSE	..	..	..	S by E	¼	5·09	0·07	9·220	10	..
July 3. 0	29·759	66·6	60·7	5·9	..	..	..	S	..	..	..	SSE	¼	..	..	..	7	..
2	29·748	63·2	59·8	3·4	..	..	..	S	..	..	..	S	¼	..	..	..	9	..
4	29·716	63·5	58·9	4·6	56·0	7·5	68·7	SSE	..	..	..	S	¼	..	..	..	9	..
6	29·702	63·7	57·5	6·2	..	..	54·6	Calm	..	..	..	S	¼	..	..	..	7	..
8	29·695	60·0	55·7	4·3	..	..	——	Calm	..	..	..	S	¼−	..	..	..	7	..
10	29·699	56·6	54·8	1·8	54·0	2·6	91·6	Calm	..	..	..	S by W	¼−	..	..	..	10	..
12	29·692	54·7	54·0	0·7	..	..	49·6	Calm	..	..	..	S	¼	..	..	..	8	..
14	29·658	54·4	54·0	0·4	..	..	——	Calm	..	..	..	S	¼	..	..	..	10	..
16	29·617	54·4	53·8	0·6	53·0	1·4	65·2	Calm	..	..	..	Calm	..	..	..	..	10	Transit
18	29·579	54·6	54·4	0·2	..	..	64·8	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·551	58·5	57·7	0·8	..	..	..	E by S	..	..	..	Calm	..	..	..	..	10	..
22	29·503	61·6	59·9	1·7	59·5	2·1	..	SE	..	..	..	SSE	¼	5·17	0·08	9·315	10	..
July 4. 0	29·495	64·3	62·0	2·3	..	..	..	Calm	..	..	..	S by E	¼	..	..	..	10	..
2	29·489	66·4	62·1	4·3	..	..	..	WSW	..	..	..	SW	½	..	..	..	10	..
4	29·485	66·6	61·7	4·9	57·5	9·1	..	WSW	..	..	..	W	¼	..	..	..	10	..
6	29·488	63·2	60·0	3·2	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	10	..

DRY THERMOMETER.—July 2d. The daily range was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.—July 2d and 3d. The difference in the mean daily values for consecutive days was the least in the month.

MAXIMUM THERMOMETER.—July 1d. 22h. The reading is probably 5° too great.

MINIMUM THERMOMETER.—June 30d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

July 3d. 22h. The reading was higher than that of the Dry Thermometer at 14h and 16h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

July 1d. 6h. 45m. A squall occurred at this time, when a pressure of 9 lbs was shewn, and at the same time the registering pencil went off the rackwork; at 7h. 0m the squall ceased: the pressure at 6h. 40m was 7 lbs., which gradually decreased; and at 6h. 55m it was only 3 lbs.: the direction pencil was set right at 8h.

REMARKS.	Observer.
Cirro-stratus and scud.	D
,,	
Light clouds and scud.	
Fleecy clouds and scud.	D
Cirro-stratus and scud, with haze.	
Cirrro-stratus, cumuli, scud, and haze.	P
Cirro-stratus and scud: a few drops of rain falling.	P
Fleecy clouds, scud, and haze.	D
,,	
Cirro-stratus and scud: a thunder storm (see Section of Extraordinary Observations).	
Overcast: cirro-stratus: no rain falling.	D
Cirro-stratus and scud: clouds somewhat broken in the neighbourhood of the Moon, and a large clear break E. of the zenith: a	P
Cirro-stratus and scud, its motion being hardly perceptible. [thin mist.	
Cirro-stratus and scud.	
,, the clouds are slightly broken in the zenith: a thin mist in the Park.	
,,	P
Overcast: rain falling.	J H
Overcast: the rain has ceased.	
Cirro-stratus and scud.	J H
,, the cirro-stratus is slightly broken in the neighbourhood of the zenith, and seems to be breaking into cirro-cumuli.	P
Cirro-stratus, scud, and imperfectly-formed cumuli in the zenith. [the E. S. E.	
Cumulo-stratus and dark heavy scud very near the Earth: there are two currents, the lower from the E. N. E., the upper from	
Cirro-stratus and dark scud: the scud moves from E. by S.	P
Cirro-stratus and scud.	J H
Cirro-stratus: rain falling; it commenced about midnight.	
,, rain falling.	
,, the rain has ceased.	
,,	J H
Cirro-stratus and scud: the clouds are somewhat broken in and around the zenith.	P
Cumulo-stratus, cirro-stratus, and scud: the sky near the zenith is clear.	D
Cumulo-stratus and scud: a shower of rain fell at $1^h. 20^m$.	D
Cirro-stratus and scud.	J H
Light clouds and scud.	J H
Cirri, cirro-cumuli, and scud.	P
Cirro-stratus and heavy scud: a short time previously to the observation, there were extensive breaks in every direction.	P
An extensive break about the place of the Moon; every other part of the sky is overcast.	G
Overcast: cirro-stratus.	
A light rain commenced falling a short time since.	
,, ,,	
A very slight rain has been falling: within the last quarter of an hour there have been occasional light airs from the E.	G
Overcast: cirro-stratus.	D
Overcast: cirro-stratus.	
Cirro-stratus and scud.	D
,,	G
,,	

RAIN.

June $30^d. 12^h$. The amount of rain collected in rain-gauge No. 4 during the month of June was $1^{in}\,56$; and that collected in a gauge at Greenwich Hospital Schools for the same time was $1^{in}\cdot82$.

July $1^d. 22^h$ and $2^d. 22^h$, no rain was recorded by Osler's rain-gauge: at the latter time the gauge was examined by Mr. Glaisher, who did not discover the cause of failure; he, however, left it in good working order, and it acted very well afterwards: the amount of rain by the other gauges was half an inch; no alteration was made in the stand of the gauge on account of this rain, but it will be considered in the formation of the Abstracts.

MAXIMUM TEMPERATURE OF THE THAMES WATER.

July $1^d. 22^h$. The reading could not be taken, the index being at the top of the stem.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 4. 8	29·482	60·7	57·9	2·8	..	..	68·0 55·5	SW	..	..	..	WSW	¼	..	..	..	8	..
10	29·484	58·5	56·7	1·8	55·0	3·5	—	Calm	..	..	..	WSW	¼	..	..	..	9	..
12	29·468	56·6	55·8	0·8	..	..	79·0	Calm	..	..	..	Calm	..	..	..	..	9½	..
14	29·459	55·8	55·1	0·7	..	..	52·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·448	55·5	55·1	0·4	54·5	1·0	—	Calm	..	..	..	Calm	..	..	..	..	10	Transit
18	29·454	56·6	56·2	0·4	..	..	66·0	Calm	..	..	..	Calm	..	..	..	..	10	In Equator
20	29·463	59·4	58·1	1·3	..	..	62·5	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·454	62·4	59·2	3·2	58·0	4·4	..	Calm	..	..	..	NW	¼	5·17	0·00	9·320	9	..
July 5. 0	29·452	59·9	57·7	2·2	..	..	..	ENE	..	..	..	Calm	..	..	..	..	10	..
2	29·478	58·1	57·3	0·8	..	..	..	E by S	..	..	..	ESE	¼	..	..	..	10	..
4	29·484	61·2	59·0	2·2	57·5	3·7	68·2	E by S	..	..	..	ENE	¼	..	..	..	10	..
6	29·506	57·6	57·1	0·5	..	..	51·1	E by N	..	..	..	ENE	¼	..	..	..	10	..
8	29·541	55·6	55·2	0·4	..	..	—	NE	..	..	..	NE	¼	..	..	..	10	..
10	29·577	54·7	54·2	0·5	54·0	0·7	89·5	NE	..	..	..	Calm	..	..	..	..	10	..
12	29·610	53·5	52·4	1·1	..	..	44·5	NNE	..	..	..	Calm	..	..	..	..	10	..
14	29·615	51·7	51·2	0·5	..	..	—	N by E	..	..	..	N	¼	..	..	..	5	..
16	29·630	51·2	50·8	0·4	50·0	1·2	65·0	NE	..	..	..	N	¼	..	..	..	8	..
18	29·649	52·0	51·7	0·3	..	..	64·0	NE	..	..	..	N	¼	..	..	..	10	Transit
20	29·684	55·7	54·2	1·5	..	..	..	N by W	..	..	..	N	¼	..	..	..	10	..
22	29·718	60·2	56·9	3·3	53·0	7·2	..	NNE	..	..	..	NE	¼–	5·75	0·55	9·855	10	..
July 6. 0	29·731	63·5	57·7	5·8	..	..	..	NNE	..	..	..	NE	¼–	..	..	..	10	..
2	29·735	58·8	56·0	2·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·738	61·0	57·3	3·7	54·3	6·7	65·1	Calm	..	..	..	N	¼	..	..	..	10	..
6	29·737	61·2	58·4	2·8	..	..	55·0	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·747	58·6	56·3	2·3	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·769	57·0	55·6	1·4	55·2	1·8	78·0	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·784	56·2	54·9	1·3	..	..	51·8	Calm	..	..	..	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..	—	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	65·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	63·5	NE	..	..	..	..	..	..	..	..	..	Transit
20	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..
22	29·852	61·2	57·6	3·6	..	..	..	ENE	..	..	..	E	¼	5·75	0·00	9·855	10	..
July 7. 0	..	..	..	..	..	..	..	E by S	..	..	..	..	..	..	..	..	..	Last Qr.
2	..	..	..	..	..	..	..	E by S	..	..	..	..	..	..	..	..	..	..
4	29·839	61·5	57·5	4·0	..	..	69·0	ESE	..	..	..	E by N	¼	..	..	..	10	..
6	..	..	..	..	..	..	55·0	Calm	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	—	Calm	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	94·2	Calm	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	51·3	Calm	..	..	..	..	..	..	..	..	..	..
14	29·818	53·5	53·5	0·0	..	..	—	Calm	..	..	..	SW	¼–	..	..	..	10	..
16	29·806	52·8	52·7	0·1	52·0	0·8	64·0	Calm	..	..	..	SW	¼–	..	..	..	10	..
18	29·816	55·0	54·2	0·8	..	..	63·0	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·815	57·3	56·4	0·9	..	..	..	Calm	..	..	..	SW	¼–	..	..	..	10	Transit
22	29·812	58·9	56·3	2·6	53·5	5·4	..	Calm	..	..	..	Calm	..	5·79	0·05	9·930	10	..
July 8. 0	29·801	66·0	59·2	6·8	..	..	..	W	..	..	..	W by S	¼	..	..	..	6	..
2	29·780	68·9	59·9	9·0	..	..	..	NNW	..	..	..	WNW	¼	..	..	..	6	..
4	29·765	66·8	56·7	10·1	52·3	14·5	..	NW	..	..	..	WNW	½	..	..	..	4	..
6	29·750	66·4	57·0	9·4	..	..	..	NNW	..	..	..	NW	¼	..	..	..	7	..

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

July 5d. The mean daily value was the least in the month.

MAXIMUM THERMOMETER.

July 5d. 22h. It appears probable that the reading is 5° too great.

MINIMUM THERMOMETER.

July 7d. 22h. The reading is evidently wrong; it appears probable that the index was not set on the previous day.

REMARKS.	Observer.
The clouds near the zenith are a little broken; there is also a clear break near the horizon in the S.: the cirro-stratus in the other parts of the sky is thin.	G
The clouds have much the same appearance as they had at 8^h, with the exception of the breaks being less extensive.	G
The clouds are broken about the Moon, but the remainder of the sky is covered with cirro-stratus of a fleecy character.	D
Cirro-stratus and scud.	
,,	
,,	
,,	D
,,	J H
Overcast: cirro-stratus and scud, the latter dark and lowering, moving slowly from the North. [rain falling.	P
,, cirro-stratus and scud: a thunder shower has passed over since the last observation; the electrometer was affected:	J H
Cirro-stratus and scud.	D
,, rain has been falling heavily between $4^h. 35^m$ and $5^h. 40^m$.	
Overcast: cirro-stratus and scud: a thin rain falling: heavy rain between this and the last observation.	
,, ,,	D
,, ,,	J H
Fleecy clouds.	
Scud in every direction.	
Cirro-stratus and scud.	
,,	J H
,,	P
Cirro-stratus and scud.	P
,, very gloomy.	D
,,	J H
,, hazy.	
,,	D
,,	P
,,	
Thin cirro-stratus and scud.	J H
Cumulo-strati and scud: the day has been generally cloudy: rain fell between 6^h and 8^h, but ceased about the latter time.	J H
Dark scud covering the whole sky: that there is no upper stratum of cloud is evident from several stars being visible at intervals.	P
Cirro-stratus and scud.	
,,	
,, gloomy.	P
Overcast: cirro-stratus.	D
Cumulo-stratus: scud and haze.	B
Cumuli and fleecy clouds: hazy.	D
Cumuli, cumulo-strati, and scud.	P
Cumuli, scud, and haze.	P

CLOUDS.

July $4^d. 14^h$ to $6^d. 12^h$. With few exceptions the sky, during this period, was covered with cloud: it is the longest period of cloudy weather in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 8. 8	29·742	63·9	56·8	7·1	..	..	70·7	NW	..	..	..	WNW	¼—	..	..	..	10	..
10	29·739	61·0	56·5	4·5	56·0	5·0	57·1	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·743	60·8	56·0	4·8	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·736	59·4	56·0	3·4	..	..	95·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·721	58·5	55·6	2·9	53·5	5·0	52·3	NNW	..	..	..	Calm	..	..	..	..	10	..
18	29·726	57·4	54·7	2·7	..	..	——	NNW	..	..	..	Calm	..	..	..	..	10	..
20	29·732	58·9	54·4	4·5	..	..	65·0	NNW	..	..	..	N	¼	..	..	..	10	Transit
22	29·736	62·2	56·0	6·2	50·5	11·7	64·0	NNW	..	..	..	NNW	¼	5·79	0·00	9·930	9	..
July 9. 0	29·737	66·2	57·4	8·8	..	..	..	W	..	..	..	NNW	¼	..	..	..	7	..
2	29·738	66·0	57·2	8·8	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	7	..
4	29·736	67·0	59·1	7·9	49·5	17·5	71·6	NNW	..	..	..	NNW	¼	..	..	..	7	..
6	29·730	66·5	57·3	9·2	..	..	51·7	N by W	..	..	..	N by W	¼	..	..	..	7	..
8	29·736	63·4	55·5	7·9	..	..	——	NNW	..	..	..	NNW	¼	..	..	..	8	..
10	29·764	60·1	54·6	5·5	50·5	9·6	93·6	NNW	..	..	..	N	¼	..	..	..	9	..
12	29·780	56·5	53·2	3·3	..	..	43·8	Calm	..	..	..	N	¼	..	..	..	5	..
14	29·789	54·5	52·6	1·9	..	..	——	Calm	..	..	..	N	¼	..	..	..	9	..
16	29·802	53·5	52·3	1·2	50·5	3·0	65·0	Calm	..	..	..	N	¼	..	..	..	8	..
18	29·810	52·6	51·8	0·8	..	..	64·2	Calm	..	..	..	N	¼	..	..	..	3	..
20	29·840	57·6	54·8	2·8	..	..	..	N by W	..	..	..	N	¼	..	..	..	1	Transit
22	29·845	64·0	57·7	6·3	51·5	12·5	..	N	..	..	..	NNW	¼	5·79	0·00	9·930	6	..
July 10. 0	29·842	65·7	60·2	5·5	..	..	..	N by E	..	..	..	Calm	..	..	..	..	8	..
2	29·839	68·1	61·4	6·7	..	..	..	W	..	..	..	W	¼+	..	..	..	7	..
4	29·815	70·5	61·7	8·8	54·0	16·5	73·6	WSW	..	..	..	WSW	¼	..	..	..	3	..
6	29·793	70·2	59·7	10·5	..	..	60·5	WSW	..	..	..	WSW	¼	..	..	..	4	Apogee
8	29·774	66·0	59·1	6·9	..	..	——	SW	..	..	..	WSW	¼	..	..	..	8	..
10	29·778	63·2	58·3	4·9	54·5	8·7	99·1	SW	..	..	..	SW	½	..	..	..	10	..
12	29·764	61·6	57·6	4·0	..	..	59·0	SW	..	..	..	SW	½	..	..	..	10	..
14	29·729	60·5	58·4	2·1	..	..	——	SW	..	..	..	SW	¼+	..	..	..	10	..
16	29·711	60·6	59·2	1·4	58·0	2·6	65·2	WSW	..	..	..	SW	½	..	..	..	10	..
18	29·726	61·2	59·6	1·6	..	..	64.8	WSW	..	..	..	SW	½	..	..	..	10	..
20	29·751	63·3	60·2	3·1	..	..	..	W	..	..	..	WSW	½	..	..	..	10	Transit
22	29·754	67·2	60·0	7·2	55·0	12·2	..	W	..	..	..	W by N	½	5·79	0·00	9·930	7	..
July 11. 0	29·765	69·4	59·1	10·3	..	..	..	W	0 to ½	..	..	W	¾	..	..	..	8	..
2	29·763	72·0	60·2	11·8	..	..	..	W	0 to ¼	..	..	W by N	½	..	..	..	4	..
4	29·753	71·2	59·9	11·3	51·8	19·4	74·5	W	0 to ½	..	..	W by S	½	..	..	..	7	..
6	29·740	71·0	60·8	10·2	..	..	56·2	WSW	0 to 1½	..	..	W by S	¾	..	..	..	6	..
8	29·745	65·4	57·3	8·1	..	..	——	W by S	0 to ½	..	..	WSW	½	..	..	..	2	..
10	29·756	61·1	55·6	5·5	53·0	8·1	101·0	WSW	..	..	..	WSW	¼+	..	..	..	9¾	..
12	29·756	58·4	55·1	3·3	..	..	51·8	SW	..	..	..	WSW	¼	..	..	..	8	..
14	29·746	57·2	55·0	2·2	..	..	——	SW	..	..	..	SW	¼	..	..	..	9½	..
16	29·734	56·6	54·7	1·9	53·0	3·6	65·8	SW	..	..	..	SW	¼	..	..	..	10	..
18	29·734	56·4	54·7	1·7	..	..	64·2	WSW	..	..	..	SW	¼	..	..	..	10	..
20	29·748	59·6	55·8	3·8	..	..	..	WSW	..	..	..	WSW	½	..	..	..	7	..
22	29·753	62·4	55·4	7·0	50·5	11·9	..	W	0 to ½	..	..	WNW	¾	5·79	0·00	9·930	8	Transit
July 12. 0	29·765	62·7	57·4	5·3	..	..	..	W	0 to 3¼	..	..	WNW	½	..	..	..	9	..
2	29·771	61·0	57·8	3·2	..	..	..	W	0 to 1½	..	..	WNW	½	..	..	..	8	..
4	29·766	66·1	57·8	8·3	53·5	12·6	..	W by N	0 to 2	..	..	W	¾	..	..	..	5	..
6	29·792	58·5	55·6	2·9	..	..	..	WNW	0 to 1	..	..	NW	¼	..	..	..	10	Greatest declination N.

BAROMETER.
July 11d. The daily range was the least in the month.

DRY THERMOMETER.
July 11d and 12d. The greatest difference in the mean daily temperature for consecutive days in the month occurred.

TEMPERATURE OF THE DEW POINT.
July 12d. 4h. The greatest difference between the observed temperatures of the air and dew point occurred.

REMARKS.	Observer.
Cirro-stratus, imperfectly formed cirro-cumuli, scud, and haze.	B
Overcast: cirro-stratus and scud.	P
,, ,,	D
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
Fleecy clouds and scud.	B
Cumuli.	B
Thin scud in every direction.	J H
Fleecy clouds and scud.	D
Cirro-stratus and scud: hazy.	
Fleecy clouds and cirro-stratus.	
,,	D
Cirro-stratus and scud.	J H
,,	
,,	
Thin scud in every direction.	
Light scud in various directions.	J H
Cumuli and scud.	D
Cirro-stratus, scud, and haze.	P
Cumuli, cumulo-strati, scud, and haze.	P
Light clouds and scud.	J H
,,	J H
Cirri, cirro-cumuli, and scud.	P
Overcast: cirro-stratus and scud.	D
,, ,, the night is very dark.	J H
,, ,, ,,	P
,, ,, gloomy.	
,, ,,	
,, ,,	P
Cumuli and fleecy clouds.	B
Cumuli: sky of a dull blue.	B
Cumuli and thin scud.	J H
Cumuli, cirro-stratus, and scud.	P
Cumuli and large masses of scud.	P
Cirro-stratus in the N.W.: cirri scattered about the sky.	D
Cirro-stratus: loose scud near the zenith.	P
Cirro-stratus and scud.	D
,,	
,,	
,,	
,, a great portion of the sky N. of the zenith has become clear within the last ten minutes.	D
Cumuli and scud.	B
Cumuli and scud: hazy.	
Cirro-stratus, cumulo-stratus, nimbi, and dark scud: frequent squalls of rain: the sky seen between the breaks in the clouds is	
of a deep blue colour.	B
Cumulo-strati, nimbi, and scud.	D
Cirro-stratus and scud: rain falling.	

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

July $12^d.0^h.45^m$. At this time a squall occurred, when a pressure of 8 lbs. was shewn; the direction also suddenly changed from W.N.W. to N.N.W.: gusts of 2 lbs. frequently occurred until after 4^h.

The observations with the signature B were taken by Mr. H. I. Blackmore, he being at the time under instruction.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 12. 8	29·795	58·4	55·4	3·0	..	..	..	WNW	..	..	..	NW	¼	..	..	..	9	..
10	29·816	57·7	54·6	3·1	52·5	5·2	67·2	Calm	..	..	..	WNW	¼	..	..	..	10	..
12	29·820	55·5	53·0	2·5	..	..	54·1 ——	WSW	..	..	..	W	¼	..	..	..	9	..
14	29·815	54·2	52·2	2·0	..	..	85·2	WSW	...	..	..	W	¼	..	..	..	10	..
16	29·792	54·7	53·2	1·5	52·0	2·7	48·2	WSW	..	..	..	W	¼	..	..	..	10	..
18	29·806	54·4	53·2	1·2	..	..	——	WSW	..	..	..	W	¼	..	..	..	10	..
20	29·798	59·0	57·0	2·0	..	..	66·0 63·8	W by S	..	..	..	W	¼	..	..	..	8	..
22	29·765	64·4	59·1	5·3	57·0	7·4	..	W	..	..	..	W	½	5·83	0·06	10·005	5	Transit
July 13. 0	29·735	66·8	60·1	6·7	..	..	..	SW	..	..	..	SW	½	..	..	..	10	..
2	29·695	63·3	58·9	4·4	..	..		SW	0 to 2	..	..	WSW	¾	..	..	..	10	..
4	29·611	59·7	58·9	0·8	58·2	1·5	69·7	SSW	..	..	..	WSW	¼	..	..	..	10	..
6	29·534	60·0	59·4	0·6	..	..	59·0 ——	SW	0 to 1	..	..	WSW	¾	..	..	..	10	..
8	29·485	59·7	59·5	0·2	..	..	91·0	SW	0 to 1	..	..	WSW	¾	..	..	..	10	..
10	29·439	60·2	59·2	1·0	58·0	2·2	53·8	SW	½ to 3	..	..	WSW	1	..	..	..	10	..
12	29·369	60·3	59·9	0·4	..	..	—— 65·5	SW	2 to 4	..	..	WSW	1½	..	..	..	10	..
14	..	..	..	..	..	..	64·2	WSW	1 to 3	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..		WSW	½ to 1	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	WSW	½ to 2	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	WSW	2 to 5	..	..	..	..	..	..	..	..	..
22	29·412	63·8	56·0	7·8	..	..	..	W	3 to 9	..	..	W	2	6·19	0·55	10·525	6	..
July 14. 0	..	..	..	..	..	..	..	W	3 to 6	..	..	..	..	..	..	..	..	Transit
2	29·499	66·0	56·4	9·6	..	..	..	W	1 to 5	..	..	W	2	..	..	..	8	..
4	..	..	..	..	..	..	68·7	W	2 to 4	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	51·2	W by N	½ to 2	..	..	..	..	..	..	..	..	..
8	29·642	62·0	56·7	5·3	..	..	——	W	..	..	..	W	¼	..	..	..	9	..
10	..	..	..	..	..	..	91·0	W by S	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	44·5	Calm	..	..	..	..	..	..	..	..	..	..
14	29·692	52·4	51·2	1·2	..	..	——	Calm	..	..	..	Calm	..	..	..	..	¼	..
16	29·688	51·0	50·5	0·5	49·0	2·0	65·0	Calm	..	..	..	SW	¼–	..	..	..	½	..
18	29·700	52·5	51·9	0·6	..	..	63·2	Calm	..	..	..	SW	¼–	..	..	..	0	..
20	29·716	61·0	58·2	2·8	..	..	..	Calm	..	..	..	SW	¼	..	..	..	0	..
22	29·711	67·1	59·4	7·7	54·0	13·1	..	W by S	..	..	..	SW	¼	6·19	0·00	10·525	4	..
July 15. 0	29·699	66·4	59·2	7·2	..	..	..	WSW	..	..	..	SW	¼	..	..	..	7	Transit
2	29·690	72·2	61·5	10·7	..	..	73·7	WSW	½ to 1½	..	..	SW	¾	..	..	..	4	..
4	29·685	71·3	59·9	11·4	49·2	22·1	49·0	WSW	1 to 2½	..	..	WSW	¾	..	..	..	7	New
6	29·708	69·4	58·2	11·2	..	..	——	W	½ to 2	..	..	W	1	..	..	..	4	..
8	29·742	63·0	56·3	6·7	..	..	97·6	WNW	..	..	..	WNW	½	..	..	..	4	..
10	29·794	58·5	52·0	6·5	46·0	12·5	41·7	W by N	..	..	..	W by N	½	..	..	..	0	..
12	29·830	54·0	49·5	4·5	..	..	——	Calm	..	..	..	WNW	½	..	..	..	0	..
14	29·835	51·7	49·1	2·6	..	..	65·0	Calm	..	..	..	W	½	..	..	..	3	..
16	29·840	48·1	46·3	1·8	45·0	3·1	64·0	Calm	..	..	..	WSW	½	..	..	..	4	..
18	29·858	50·5	49·2	1·3	..	..	..	Calm	..	..	..	W	½	..	..	..	10	..
20	29·866	54·7	53·4	1·3	..	..	..	Calm	...	..	..	W by S	½	..	..	..	10	..
22	29·852	62·9	59·0	3·9	55·5	7·4	..	Calm	..	..	..	SW	¼	6·19	0·00	10·525	10	..

MINIMUM THERMOMETER.
July 14d. 22h and 15d. 22h. The readings were higher than those of the Dry Thermometer at 16h.

REMARKS.	Observer.
Cirro-stratus and scud: rain falling.	D
Overcast: cirro-stratus and scud.	D
A few breaks have appeared since the last observation in various parts of the sky; at present the sky is nearly overcast with a dark cirro-stratus, a portion near the horizon being the only part clear.	G
Overcast: a thin cirro-stratus.	
,, ,,	
Cirro-stratus and scud.	
During the last hour the clouds have been a good deal broken about the zenith, and they now are also broken near the place of the Sun; every other part of the sky continues overcast.	G
Cumuli and scud.	B
Cumuli, cirro-stratus, and scud.	B
Dark cumuli, cirro-stratus, and scud: a thin rain has been falling for the last few minutes.	P
Rain has been falling nearly continuously for the last hour, and it still continues.	G
The rain has ceased, having continued almost without intermission since the last observation; while writing this it has set in heavily again.	B
Heavy rain without ceasing since the last observation, with a prospect of continuance.	B
At times a heavy rain, and at other times the rain has been light, but it has been nearly continuous since 8^h.	G
Overcast: the wind rising: squalls of rain and wind.	J H
The morning has been very rough, a gale of wind with gusts frequently to 3, and very often to 2 and 2½: the sky at times is half covered with cloud, and sometimes less than half.	G
The gale has continued in a similar way since the last observation: a great deal of scud has passed, and also a loose kind of cumuli: the gusts are frequent to 2½.	
The clouds continued much as they were at 22^h, till the wind lulled at $7^h.40^m$, since which time a large quantity of cumulo-stratus has been about; at present cumulo-stratus, cirro-cumuli near the zenith, and scud.	G
A few dark clouds only in the horizon.	P
A few clouds scattered about the sky.	
Cloudless.	
,,	P
Massive cumuli and cumulo-strati.	D
Dark cumulo-strati line the horizon in the E. and the S. E., extending nearly to the zenith; fine white rocky cumuli are near the horizon in all other parts: the sky is of a deep blue between the clouds, and there does not appear to be any upper cloud.	B & G
Fine white cumuli scattered about the sky, the sky of a fine blue colour.	G
Cumuli, cumulo-strati, and large masses of scud: wind in gusts to 1.	P
Cumuli and large masses of scud: wind in gusts to 1½.	
Cumuli (not so numerous, however, as at the former observation) and scud.	
Cloudless.	P
Cloudless, but hazy in the N. and N.W. horizon.	J H
Scud in various directions.	
Scud, principally in the N. and N.W.	
Overcast: cirro-stratus.	
Cirro-stratus and scud.	J H
Cumuli and haze.	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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 16. 0	29·841	62·4	56·9	5·5	..	..	..	SW	..	..	..	SW	½	..	..	..	10	..
2	29·829	62·0	58·7	3·3	..	..	..	W	..	..	..	SW	½	..	..	..	10	Transit
4	29·819	64·3	58·0	6·3	51·0	13·3	69·1	WNW	..	..	..	SW	½	..	..	..	10	..
6	29·810	64·6	56·7	7·9	..	..	47·1	W	..	..	..	WSW	¼	..	..	..	3	..
8	29·841	56·0	53·0	3·0	..	..	—	NE	..	..	..	NNW	¼	..	..	..	8	..
10	29·866	52·0	51·2	0·8	50·5	1·5	79·0	Calm	..	..	..	Calm	..	..	..	..	5	..
12	29·884	51·3	49·9	1·4	..	..	41·2	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·885	49·0	48·5	0·5	..	..	—	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·878	47·2	46·9	0·3	46·5	0·7	65·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·898	48·2	48·2	0·0	..	..	63·2	Calm	..	..	..	Calm	..	..	..	..	3	..
20	29·910	56·8	54·3	2·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	9	..
22	29·890	61·0	55·0	6·0	49·0	12·0	..	Calm	..	..	..	Calm	..	6·19	0·01	10·550	9½	..
July 17. 0	29·875	64·4	58·2	6·2	..	..	..	E	..	..	..	Calm	..	..	..	..	9½	..
2	29·852	65·6	58·6	7·0	..	..	..	N by E	..	..	..	NE	¼−	..	..	..	9¾	Transit
4	29·815	61·7	58·3	3·4	57·5	4·2	..	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·791	59·6	56·4	3·2	..	..	72·4	Calm	..	..	..	S	¼−	..	..	..	10	..
8	29·758	56·8	54·6	2·2	..	..	54·7	Calm	..	..	..	S	¼−	..	..	..	9	..
10	29·730	56·2	54·8	1·4	54·0	2·2	—	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·704	56·0	54·4	1·6	..	..	96·0	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·689	55·7	54·4	1·3	..	..	48·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·635	55·0	53·4	1·6	51·0	4·0	—	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·628	54·2	53·4	0·8	..	..	64·0 63·5	Calm	..	..	..	Calm	..	..	..	..	9¾	..
20	29·642	55·6	53·0	2·6	..	..	..	Calm	..	..	..	N	½	..	..	..	10	..
22	29·620	60·4	54·5	5·9	51·0	9·4	..	Calm	..	..	..	WNW	¼	6·20	0·01	10·560	1	..
July 18. 0	29·606	65·8	56·0	9·8	..	..	..	W	..	..	..	W	½	..	..	..	3	..
2	29·602	65·3	58·6	6·7	..	..	..	W	..	..	..	W	½	..	..	..	6	..
4	29·592	67·2	59·6	7·6	45·0	22·2	..	WNW	0 to 2	..	..	W	¾	..	..	..	7	Transit
6	29·588	63·6	55·7	7·9	..	..	68·7 47·3	WNW	..	..	..	W	¼	..	..	..	6	..
8	29·580	57·3	52·9	4·4	..	..	—	Calm	..	..	..	WSW	¼	..	..	..	2	..
10	29·599	51·0	48·7	2·3	44·5	6·5	96·3 40·0	Calm	..	..	..	W	¼	..	..	..	2	..
12	29·590	52·0	49·6	2·4	..	..	—	Calm	..	..	..	S	¼−	..	..	..	8	..
14	29·583	49·5	48·2	1·3	..	..	63·5	Calm	..	..	..	Calm	..	..	..	..	8	..
16	29·565	47·5	46·7	0·8	45·0	2·5	62·5	Calm	..	..	..	SW	¼	..	..	..	4	..
18	29·582	48·8	47·6	1·2	..	..	..	Calm	..	..	..	SW	¼−	..	..	..	10	..
20	29·605	51·9	50·6	1·3	..	..	..	Calm	..	..	..	SW	¼−	..	..	..	10	..
22	29·611	56·7	53·6	3·1	50·5	6·2	..	W	..	..	..	WNW	¼	6·20	0·00	10·565	9	..
July 19. 0	29·618	62·0	56·7	5·3	..	..	..	NW	..	..	..	NW	¼	..	..	..	9	..
2	29·639	61·8	54·3	7·5	..	..	66·2	N by W	..	..	..	WNW	½	..	..	..	9	..
4	29·676	59·4	53·7	5·7	47·0	12·4	48·0	N	..	..	..	N	¼	..	..	..	10	Transit
6	29·710	61·0	56·1	4·9	..	..	—	NNW	..	..	..	W	¼	..	..	..	2	..
8	29·752	57·0	53·5	3·5	..	..	83·0	Calm	..	..	..	Calm	..	..	..	..	6	In Equator
10	29·781	52·3	50·7	1·6	50·9	1·4	40·6	Calm	..	..	..	Calm	..	..	..	..	3	..
12	29·816	51·1	50·5	0·6	..	..	—	Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·834	50·0	49·6	0·4	..	..	63·2	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·856	48·6	48·1	0·5	47·5	1·1	61·5	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·898	47·4	47·1	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..

BAROMETER.

July 19d and 20d. The greatest difference in the mean daily heights for consecutive days occurred.

DRY THERMOMETER.

July 16d. 16h. The reading was the least in the month.

July 19d. The mean daily temperature was the least in the month.

TEMPERATURE OF THE DEW POINT.

July 19d. The mean daily value was the least in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

July 19d. The mean daily values were the least in the month.

REMARKS.	Observer.
Cirro-stratus and scud: dark clouds in the W.	B
,,	B
,,	J H
Light fleecy clouds: the direction of the wind taken from the motion of the clouds.	
Scud: a shower of rain has fallen since 7^h.	
,, no rain since the last observation: the vane points S. S. E.	J H
Cloudless.	D
,,	
,,	
Thin clouds, chiefly cirri, are scattered over the sky.	
Thin cirro-stratus.	D
Cirro-stratus and haze.	B
Cirro-stratus and haze.	B
Cumuli, cumulo-strati, cirro-stratus, scud, and haze: the few breaks that are visible are S. of the zenith.	P
Cirro-stratus: rain falling slightly.	D
Cirro-stratus and scud.	
,,	
Overcast: cirro-stratus and scud.	D
,, ,,	G
,, ,,	
,, ,,	
A small portion of the sky N. of the zenith is clear; all other parts are covered with cloud, which in many places appears thin, and with a tendency to break.	
Since the last observation several small portions of the sky have been clear: about half an hour since a breeze sprang up from the N., and since that time the sky has been wholly covered with cirro-stratus.	G
A few light clouds and haze.	B
Cumuli and cirri: haze in the N.	B
Cirro-stratus in the S., and cumuli, cumulo-strati, scud, and haze in every other direction.	P
Cumuli all around within 15° of the horizon: above those to within 30° of the zenith are large quantities of cirri, particularly in the S.; the rest of the sky is clear, with the exception of a few tufts of cirri.	B
Nearly the whole of the northern parts of the sky is covered with white cumuli, and nearly all the S. is clear.	G
Cumuli and cirri in small tufts: at $8^h.20^m$ large, greenish-yellow cumulo-stratus in the S.	B
A few strati near the horizon in the N., and a few clouds of no definite modification in the S.; the remainder of the sky is cloudless: at the setting of the Sun there were many rich tints, and the cumuli near the horizon were much coloured (yellow).	G
Cirro-stratus and scud: the breaks are S. and S. E. of the zenith.	P
,, a few breaks S. and S. E. of the zenith.	
Scud in various directions.	
Loose scud covers the whole sky.	
Cirro-stratus and scud.	P
Cumuli and scud: haze: there was a considerable gloom a short time since, and a few drops of rain fell.	B
Cumulo-stratus and haze.	
Nimbi, cumuli, and scud; an unsettled looking sky.	B
Cirro-stratus and scud, with heavy cumulo-strati, from which, at intervals, emanates a rumbling of thunder: no rain.	P
Cumuli, scud, and haze.	
Cumulo-strati, cirro-stratus, and scud: the clouds move from the N. N. W.	
Scud in various directions.	P
Vapour and small fragments of scud.	D
Cloudless.	
,,	
,,	

MAXIMUM THERMOMETER.

July $17^d.22^h$. The reading appears to be 5° too great.

MINIMUM THERMOMETER.

July $17^d.22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

July $18^d.4^h$. Shortly after this time a squall occurred, when a pressure of 3 lbs. was shewn; the wind then gradually moderated until $4^h.30^m$. when only ½ lb. was shewn: at $4^h.40^m$ it again increased, and at $4^h.50^m$ a pressure of 3½ lbs. was recorded: a sudden gust of 2½ lbs. occurred at $5^h.40^m$: at $7^h.10^m$ and $7^h.15^m$ gusts of 3 lbs. and 3½ lbs. respectively occurred.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 19. 20	29·937	54·9	52·4	2·5	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	0	..
22	29·965	60·8	56·2	4·6	51·0	9·8	..	N	..	..	..	N	¼	6·22	0·01	10·585	7	..
July 20. 0	30·001	66·0	57·8	8·2	..	..	..	N	..	..	..	N	¼	..	..	..	9	..
2	30·038	66·8	60·2	6·6	..	..	..	N	..	..	..	NNW	¼	..	..	..	7	..
4	30·039	70·3	60·7	9·6	46·5	23·8	72·7	N	..	..	..	NW	¼	..	..	..	4	Transit
6	30·049	67·9	59·9	8·0	..	..	49·7	NNE	..	..	..	NNE	¼	..	..	..	2	..
8	30·073	63·5	57·6	5·9	..	..		E	..	..	..	Calm	..	..	..	..	1	..
10	30·096	57·0	53·3	3·7	52·0	5·0	95·0	Calm	..	..	..	Calm	..	..	..	..	½	..
12	30·110	52·5	50·9	1·6	..	..	42·0	Calm	..	..	..	Calm	..	..	..	..	0	..
14	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	64·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	61·0	Calm	..	..	..	..	..	..	..	..	..	..
20	30·170	67·5	59·1	8·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·166	72·1	59·5	12·6	..	..	..	Calm	..	..	..	WSW	¼	6·22	0·00	10·585	0	..
July 21. 0	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	79·4	SW	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	53·8	SW	..	..	..	..	..	..	..	..	..	Transit
8	30·126	63·2	57·0	6·2	..	..		Calm	..	..	..	W	¼	..	..	..	0	..
10	30·127	59·6	54·8	4·8	..	..	106·6	Calm	..	..	..	S	¼	..	..	..	0	..
12	..	..	..	..	..	..	43·7	Calm	..	..	..	..	..	..	..	..	..	..
14	30·096	54·7	52·4	2·3	..	..		Calm	..	..	..	SW	¼–	..	..	..	0	..
16	30·080	54·2	53·0	1·2	51·0	3·2	64·5	Calm	..	..	..	Calm	..	..	..	..	7	..
18	30·082	53·7	52·8	0·9	..	..	63·2	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·088	64·3	59·6	4·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·064	72·9	62·2	10·7	51·0	21·9	..	Calm	..	..	..	SW	¼	6·22	0·00	10·585	0	..
July 22. 0	30·045	77·0	64·2	12·8	..	..	..	..	..	..	..	SW	¼	..	..	..	0	..
2	30·014	78·0	68·2	9·8	..	..	..	..	..	..	..	SW	¼	..	..	..	0	..
4	29·986	79·3	71·4	7·9	50·0	29·3	83·7	..	..	..	..	SW	¼–	..	..	..	0	..
6	29·958	77·9	72·7	5·2	..	..	56·3	..	..	..	..	SSW	¼–	..	..	..	0	Transit
8	29·935	71·7	69·0	2·7	..	..		..	..	..	..	ESE	¼–	..	..	..	0	..
10	29·932	64·7	57·9	6·8	56·0	8·7	112·8	Calm	..	..	..	S	¼–	..	..	..	0	1st Q.
12	29·923	62·0	56·8	5·2	..	..	47·0	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·913	59·4	55·4	4·0	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·900	56·2	55·4	0·8	54·0	2·2	65·8	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·892	56·5	55·4	1·1	..	..	64·5	Calm	..	..	..	Calm	..	..	..	..	1	..
20	29·897	70·4	63·5	6·9	..	..		Calm	..	..	..	SE	¼	..	..	..	7	..
22	29·874	76·1	66·7	9·4	62·0	14·1	.. ..	Calm	..	..	..	Calm	..	6·22	0·00	10·585	7	..
July 23. 0	29·843	78·1	66·6	11·5	..	..	..	SSE	..	..	..	S by E	¼–	..	..	..	6	..
2	29·837	81·5	68·2	13·3	..	..	..	E	..	..	..	S	½	..	..	..	2	..
4	29·811	78·5	67·2	11·3	60·0	18·5	85·6	E by N	0 to 1	..	..	E	1	..	..	..	0	..
6	29·807	73·7	68·0	5·7	..	..	60·2	E	0 to 1½	..	..	E	½	..	..	..	0	..
8	29·807	67·7	64·7	3·0	..	..		E	..	..	..	E	¼	..	..	..	3	Transit
10	29·818	62·5	60·2	2·3	58·5	4·0	110·4	ENE	..	..	..	E	¼	..	..	..	3	..
12	29·806	60·1	59·4	0·7	..	..	52·5	ENE	..	..	..	Calm	..	..	..	..	0	..
14	29·785	60·4	59·7	0·7	..	..		Calm	..	..	..	Calm	..	..	..	..	1	..
16	29·779	62·5	61·3	1·2	62·0	0·5	67·0 66·0	Calm	..	..	..	Calm	..	..	..	..	9	..

BAROMETER.—July 20d. 12h. The highest reading at the two-hourly observations occurred.

DRY THERMOMETER.

July 23d. 2h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred; so great a difference did not happen again to the end of the year.

WEIGHT OF A CUBIC FOOT OF AIR.—July 20d. The mean daily value was the greatest in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

July 23d. The mean daily value was the greatest in the month.

MINIMUM THERMOMETER.

July 19d. 22h and 21d. 22h. The readings were higher than those of the Dry Thermometer at 18h.

REMARKS.	Observer.
Cloudless: hazy.	D
Cumuli, cumulo-strati, scud, and haze: the clouds move from the N. N. W.	B
Cumuli, cumulo-strati, scud, and haze.	
Cumuli, scud, and haze.	B
Cumuli and haze.	D
Cumuli and small fragments of scud.	
A few cumuli near the horizon in the S. and E. are the only clouds visible.	
Stratus in the horizon in the N. and W; every other part of the sky is clear.	D
A clear, calm, starlight night.	B
A very fine, calm, cloudless morning.	G
Cloudless.	D
[coloured yellow by the setting sun.	
The day has been cloudless, with the exception of some fine cirri to no numerical extent; at sunset the whole of the cirri were	G
Cloudless.	D
,,	P
Scud in every direction.	
Cloudless.	
,,	
The sky cloudless, and of a fine clear blue: a light air from the S.W.	B
The sky cloudless, and of a fine clear blue.	B
,,	B
Cloudless.	P
,,	
,,	
,,	P
,, a very fine night: the day has been remarkably fine: the Moon has been visible all day.	G
,,	
,, [cloudless.	
A few white mottled clouds within 20° of the horizon, extending from the S.W. to the N.W.; the other parts of the sky are	G
White mottled clouds, extending from the S.E. to the N.W., covering the whole S.W. part of the sky; the N.E. is the clearest: light airs from the S.E.	B
Scud plentiful, and in every direction, together with cirri.	P
Light fleecy clouds and scud: light airs from the S. E.	B
Cirri and scud.	P
A very few small clouds are scattered about the sky, but to no numerical extent.	G
Cloudless.	
Cirri in the S. S.W., S.W., and N.W.; also a bank of cirro-stratus near the horizon in the N.W.; otherwise cloudless.	
A thin veil of cloud in the W. hemisphere; otherwise cloudless.	G
A calm, clear, cloudless night; the stars are shining brightly.	B
With the exception of a long cloud, extending nearly from S. E. to N.W., which rises in rather a parabolic curve in the center, and is about 15° in width, dark but ill defined, the sky is cloudless.	
The sky is nearly covered with scud; there are a few red clouds in the W.	

MAXIMUM RADIATION THERMOMETER.
July 22^d. 22^h. The reading was the highest in the year.

OSLER'S ANEMOMETER.
July 21^d. 22^h. The observer inadvertently omitted to clamp the traversing board; on the 22^d, at 8^h. 10^m, it was clamped and set going.

CLOUDS.
July 21^d. 18^h to July 22^d. 18^h. Between these times the sky was nearly cloudless; and it was the longest clear period in the month.

AMOUNT OF CLOUDS.—July 22^d. The mean daily value was the least in the month.

TEMPERATURE OF THE WATER OF THE THAMES.
July 20^d. 22^h. The lowest reading in the month occurred.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 23. 18	29·762	62·7	61·5	1·2	..	..	..	ENE	..	..	..	ENE	¼–	..	..	..	10	..
20	29·802	67·0	64·5	2·5	..	..	..	Calm	..	..	..	E by N	¼–	..	..	..	9	..
22	29·815	75·6	68·4	7·2	64·5	11·1	..	E	..	..	..	ESE	¼	6·22	0·00	10·585	4	..
July 24. 0	29·813	79·7	70·5	9·2	..	..	..	NE	..	..	..	ENE	¼	..	..	..	½	..
2	29·817	77·6	69·6	8·0	..	..	..	NE	..	..	..	E	¼	..	..	..	6	..
4	29·796	75·2	66·8	8·4	64·5	10·7	83·7	NE	..	..	..	SW	¼	..	..	..	7	..
6	29·798	74·9	68·5	6·4	..	..	57·0	E	..	..	..	SW	¼	..	..	..	1	..
8	29·817	66·4	62·5	3·9	..	..	——	E by N	..	..	..	E	¼	..	..	..	0	Transit
10	29·850	63·2	61·0	2·2	59·0	4·2	110·0	E	..	..	..	SE	¼	..	..	..	0	..
12	29·855	61·2	60·2	1·0	..	..	48·5	Calm	..	..	..	SSE	¼	..	..	..	0	..
14	29·845	58·1	57·8	0·3	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·834	56·8	56·9	–0·1	56·0	0·8	68·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·837	59·0	59·0	0·0	..	..	66·8	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·840	68·1	64·9	3·2	..	..	..	Calm	..	..	..	SE	¼–	..	..	..	5	..
22	29·844	76·1	69·7	6·4	66·0	10·1	..	E	..	..	..	SE	¼	6·22	0·00	10·585	2	..
July 25. 0	29·824	82·4	72·3	10·1	..	..	..	S	..	..	..	S	¼	..	..	..	4	..
2	29·798	85·1	73·0	12·1	..	..	..	SSW	..	..	..	S	¼	..	..	..	7	..
4	29·788	81·3	68·9	12·4	61·0	20·3	87·4	SW	..	..	..	SSW	¼	..	..	..	7	..
6	29·765	76·0	66·4	9·6	..	..	62·0	Calm	..	..	..	S by W	¼–	..	..	..	9	..
8	29·777	71·9	63·9	8·0	..	..	——	Calm	..	..	..	Calm	..	..	..	..	9¾	..
10	29·773	68·0	63·4	4·6	60·0	8·0	115·0	Calm	..	..	..	Calm	..	..	..	..	10	Transit
12	29·775	65·9	62·7	3·2	..	..	56·5	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·779	63·8	62·5	1·3	..	..	——	Calm	..	..	..	WSW	¼	..	..	..	9¾	..
16	29·783	62·0	61·5	0·5	60·0	2·0	69·5	Calm	..	..	..	WSW	¼	..	..	..	10	..
18	29·798	61·6	60·9	0·7	..	..	67·0	Calm	..	..	..	W by S	¼	..	..	..	10	Greatest declination S.
20	29·814	63·8	61·7	2·1	..	..	..	W	..	..	..	WSW	¼+	..	..	..	10	..
22	29·842	64·8	61·4	3·4	59·0	5·8	..	W	..	..	..	WNW	½	6·22	0·00	10·585	10	..
July 26. 0	29·848	68·1	63·5	4·6	..	..	..	W	..	..	..	WNW	½	..	..	..	10	Perigee
2	29·877	69·0	64·3	4·7	..	..	..	WNW	0 to ½	..	..	W by N	½	..	..	..	10	..
4	29·889	72·4	65·4	7·0	61·8	10·6	73·2	NW	0 to ½	..	..	WNW	½	..	..	..	9	..
6	29·933	67·1	61·4	5·7	..	..	57·9	NW	0 to 1	..	..	NW	¾	..	..	..	10	..
8	29·976	64·8	59·4	5·4	..	..	——	NNW	0 to ½	..	..	N	½	..	..	..	4	..
10	29·989	62·8	58·2	4·6	56·5	6·3	86·5	NW	..	..	..	WNW	¼	..	..	..	2	Transit
12	30·011	60·4	55·7	4·7	..	..	50·6	WNW	..	..	..	NW	¼	..	..	..	7	..
14	30·008	58·4	54·8	3·6	..	..	——	NW	..	..	..	NNW	¼	..	..	..	3	..
16	30·018	58·7	55·0	3·7	52·5	6·2	69·2	NW	..	..	..	NW	¼	..	..	..	10	..
18	30·029	59·3	55·7	3·6	..	..	66·2	NW	..	..	..	NW	¼	..	..	..	10	..
20	30·044	60·8	57·6	3·2	..	..	..	NNW	..	..	..	NNW	¼	..	..	..	10	..
22	30·047	67·4	61·5	5·9	57·0	10·4	..	N by W	..	..	..	N by W	¼–	6·22	0·00	10·585	5	..
July 27. 0	30·046	72·3	62·8	9·5	..	..	..	N by W	..	..	..	N by W	¼+	..	..	..	8	..
2	30·052	73·0	63·7	9·3	..	..	75·0	NNW	..	..	..	W by N	¼	..	..	..	9	..
4	30·053	71·6	63·7	7·9	57·0	14·6	53·3	N	..	..	..	Calm	..	..	..	..	10	..
6	30·054	72·4	65·0	7·4	..	..	——	NNE	..	..	..	Calm	..	..	..	..	9	..
8	30·070	68·0	62·8	5·2	..	..	96·0	ENE	..	..	..	Calm	..	..	..	..	0	..
10	30·080	63·6	60·2	3·4	58·5	5·1	46·0	Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·084	59·3	58·2	1·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	Transit
14	..	..	..	..	..	..	69·2	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	67·5	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..

BAROMETER.
July 24d and 25d. The least difference in the year of the mean daily heights for consecutive days occurred.
July 27d. The mean daily height was the greatest in the month.

DRY THERMOMETER.
July 24d. 16h. The reading was lower than that of the Wet Thermometer.
July 25d. 2h. The reading was the highest in the year at the two-hourly observations; the reading on Sunday, June 23d, was slightly greater.
July 25d. The daily range was the greatest in the month. July 25d. The mean daily temperature was the highest in the month.

TEMPERATURE OF THE DEW POINT.
July 24d The mean daily value was the greatest in the year. July 24d. 22h. The reading as observed was the highest in the month.

REMARKS.	Observer.
Cirri and scud : a gloomy-looking sky.	B
Cirro-stratus and scud : light airs from the E.	B
Light fleecy clouds, cirri, and scud.	D
A few light clouds.	D
Massive cumuli and cumulo-strati. [E. by N.	B
Cumuli, cumulo-strati, and scud : the wind, as observed by the motion of the clouds, is S.W., but on the surface of the earth it is	
Cumuli and scud : the clouds still move from the S.W., but the direction on the surface of the earth is E.S.E.	
Cloudless, with the exception of two or three small cirri in the N. : a fine blue sky.	B
Cloudless.	G
,,	G
,,	D
,,	P
,,	P
The sky is half covered with a kind of fleecy clouds, many of them being long and branching off like cirri.	G
Cirri near the zenith, and ill-formed cumuli near the horizon.	G
Cumuli and thin fleecy clouds.	D
Cumuli, cirri, and light fleecy clouds.	
Cumuli, cirri, cumulo-strati, and thin fleecy clouds.	D
Cumuli and scud.	B
Cirro-stratus and scud : a single break E. of the zenith : light airs occasionally spring up from the S.W.	P
No change during the last hour : the whole of the sky is covered with cirro-stratus and scud.	G
Cirro-stratus and heavy clouds slowly moving from the S.W.	P
A few stars are visible about the zenith ; with this exception, the appearance of the sky is as before.	
Cirro-stratus and scud : gloomy : the clouds move from the W.	
,,	
,, a thin fog.	P
The sky is covered with a great mass of scud moving from the W. : the current of air which presses against the person is from the [W.N.W.	G
The sky is covered with scud : a very gloomy day.	B
,, ,,	B
Cumulo-strati, scud, and haze : wind in gusts to $\frac{3}{4}$.	P
Cirro-stratus and scud : the wind in gusts to 1.	P
Light fleecy clouds and scud.	D
Long feathery clouds extending in a N. and S. direction : the wind is remarkably fitful, its strength being insensible between the gusts.	B
Cirro-stratus and scud : the sky about the place of the Moon is clear.	D
Vapour and fragments of scud.	
Overcast : cirro-stratus.	
,, ,,	
,, ,,	D
Scud and haze.	B
Cumuli, scud, and haze : the clouds are regularly distributed over the whole sky.	B
Cumuli, cumulo-strati, and scud.	P
Cumulo-strati, cirro-strati, and scud.	D
Cirro-stratus and fleecy clouds.	
Cloudless : the clouds have been disappearing gradually since the last observation.	
,,	D
,,	G

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

July 24ᵈ. The mean daily values were the greatest in the year.

WEIGHT OF A CUBIC FOOT OF AIR.

July 25ᵈ. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.

July $23^d. 22^h$. The reading was higher than that of the Dry Thermometer at 12^h.
July $24^d. 22^h$. The reading was higher than that of the Dry Thermometer at 16^h.
July $25^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 27. 20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	30·083	72·7	63·5	9·2	..	..	..	Calm	..	..	..	Calm	..	6·22	0·00	10·585	8	..
July 28. 0	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	83·9	WSW	0 to ½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	58·1	WSW	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——	W	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	110·6	W	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	54·3	WSW	..	..	..	..	..	..	..	..	..	Transit
14	29·883	62·0	57·6	4·4	..	..	——	WSW	..	..	..	WNW	¼−	..	..	..	10	..
16	29·847	59·6	58·3	1·3	56·0	3·6	69·5	WSW	..	..	..	SW	¼	..	..	..	10	..
18	29·839	59·1	58·9	0·2	..	..	66·0	WSW	..	..	..	W by S	¼	..	..	..	10	..
20	29·833	58·4	55·5	2·9	..	..	..	NNW	0 to 1	..	..	NNW	¼	..	..	..	10	..
22	29·838	61·6	55·4	6·2	50·5	11·1	..	NNW	0 to ½	..	..	N	½	6·22	0·01	10·615	8	..
July 29. 0	29·830	66·8	57·1	9·7	..	..	..	NNW	0 to ½	..	..	WNW	½	..	..	..	7	..
2	29·823	68·2	57·0	11·2	..	..	..	NNW	0 to 2	..	..	NW	¾	..	..	..	7	..
4	29·799	68·9	56·9	12·0	46·0	22·9	69·7	NNW	0 to ¼	..	..	NNW	¾	..	..	..	3	Full
6	29·800	68·4	56·6	11·8	..	..	49·3	NNW	0 to 1	..	..	NW	¾	..	..	..	4	..
8	29·809	63·9	(60·0)	..	..	..	——	NNW	..	..	..	NW	½	..	..	..	1	..
10	29·817	59·1	(59·3)	..	44·0	15·1	88·2	NNW	..	..	..	NW	¼	..	..	..	½	..
12	29·830	56·4	51·4	5·0	..	..	39·3	NW	..	..	..	Calm	..	..	..	..	¼	..
14	29·803	50·5	47·7	2·8	..	..	——	Calm	..	..	..	Calm	..	..	..	..	1	Transit
16	29·775	49·0	46·9	2·1	43·5	5·5	68·8	Calm	..	..	..	SW	¼−	..	..	..	10	..
18	29·740	51·0	48·5	2·5	..	..	66·2	Calm	..	..	..	SW	¼−	..	..	..	10	..
20	29·722	55·2	52·0	3·2	..	..	..	Calm	..	..	..	SW	¼−	..	..	..	10	..
22	29·656	64·2	57·8	6·4	50·0	14·2	..	SW	..	..	..	SW	¼	6·22	0·00	10·615	9	..
July 30. 0	29·607	64·8	58·0	6·8	..	..	..	WSW	0 to 1½	..	..	SW	½	..	..	..	10	..
2	29·509	67·2	59·8	7·4	..	..	..	SSW	0 to 3½	..	..	SSW	1	..	..	..	10	..
4	29·416	64·8	61·5	3·3	59·5	5·3	67·2	SW	0 to 3	..	..	SW	1	..	..	..	10	..
6	29·364	63·2	61·7	1·5	..	..	56·8	SW	0 to 3	..	..	WSW	1	..	..	..	6	..
8	29·354	59·2	57·8	1·4	..	..	——	WSW	0 to 1½	..	..	WSW	1	..	..	..	10	..
10	29·350	57·7	56·5	1·2	55·0	2·7	80·8	SW	0 to 1	..	..	WSW	1	..	..	..	10	..
12	29·320	56·9	56·4	0·5	..	..	51·8	SW	½ to 2	..	..	SW	1½	..	..	..	10	..
14	29·305	56·6	56·3	0·3	..	..	——	SW	½ to 2	..	..	SW	1½	..	..	..	9	Transit
16	29·312	57·7	56·8	0·9	56·5	1·2	66·5	WSW	0 to 1½	..	..	WSW	1	..	..	..	9	..
18	29·352	59·0	56·7	2·3	..	..	65·8	WSW	½ to 3	..	..	WSW	1½	..	..	..	9½	..
20	29·402	61·4	58·1	3·3	..	..	..	WSW	0 to 2	..	..	WSW	1	..	..	..	9¾	..
22	29·448	64·4	59·0	5·4	55·5	8·9	..	W	½ to 3	..	..	W	1	6·43	0·37	10·910	10	..
July 31. 0	29·503	62·8	57·4	5·4	..	..	..	W	0 to 1½	..	..	NW	1½	..	..	..	10	..
2	29·526	65·6	57·5	8·1	..	..	..	W	½ to 4	..	..	W	1½	..	..	..	9¾	..
4	29·538	66·1	57·8	8·3	50·5	15·6	67·8	W	1 to 3	..	..	W	1+	..	..	..	6	..
6	29·556	62·3	55·3	7·0	..	..	48·7	W	1 to 4	..	..	W	1½	..	..	..	8	..
8	29·583	59·3	54·5	4·8	..	..	——	WSW	½ to 2	..	..	WSW	1	..	..	..	7	..
10	29·596	54·1	51·9	2·2	49·5	4·6	88·8	WSW	0 to 1	..	..	WSW	¾	..	..	..	½	..
12	29·611	52·7	50·4	2·3	..	..	41·0	WSW	0 to 1	..	..	W	¾	6·43	0·02	10·930	1	..
							66·0											
14	29·613	49·8	48·7	1·1	..	..	64·2	WSW	..	..	..	W	1	..	..	..	0	Transit
16	29·612	48·5	47·7	0·8	46·5	2·0	..	WSW	..	..	..	WSW	½	..	..	..	0	..

BAROMETER.—July 30d. The daily range was the greatest in the month.

July 30d. 14h. The reading was the lowest in the month. July 31d. The mean daily height was the least in the month.

WET-BULB THERMOMETER.—July 29d. 8h and 10h. After these observations were taken it was found that the wet bulb was not sufficiently moist, and the observations are therefore erroneous.

TEMPERATURE OF THE DEW POINT.—July 29d. 10h. The reading as observed was the lowest in the month.

RADIATION THERMOMETER WHOSE BULB IS EXPOSED TO THE SKY.

July 30d. 22h. It is supposed that this reading is in error 5°: the reading of a thermometer on long grass was 54°·1, that on short grass was 54°·5, that on raw wool was 53°·5; and these readings are invariably found to be lower than those of the Radiation Thermometer: 56°·8 has been used in subsequent calculations.

REMARKS.	Observer.
Cumuli, scud, and haze.	P
Scud and haze all over the sky: a steady breeze,	B
,, wind in long gusts to $\frac{3}{4}$.	
Scud over the whole sky: rain falling fast.	
Cumuli and scud: a very gloomy morning: the rain has ceased, it continued falling for about half an hour.	B
Cumuli, cirro-stratus, and scud.	D
Cumuli, cumulo-strati, and scud: wind in gusts to $\frac{3}{4}$.	P
,, the wind frequently lulls to $\frac{1}{4}$.	P
Cumuli, scud, and a few long, indistinct, bar-like clouds, extending in the direction of the wind.	B
Cumuli, cirri, and haze: wind in gusts to $1\frac{1}{4}$.	
There are only a few light cirri about the sky: a fine sunset.	
With the exception of a few cirri in the N.W. the sky is cloudless.	B
A long attenuated line of cloud near the horizon in the S.S.W.; with this exception the sky is cloudless.	P
A few clouds near the horizon in the S.W., and about the zenith.	
Cirro-stratus and scud.	
,,	
,,	P
,, fleecy clouds.	B
Cirro-stratus and scud: a little rain fell between 22^{h} and 23^{h}.	B
Overcast: cirro-stratus and scud.	D
,, ,,	P
Cumuli and heavy scud: squally: numerous heavy showers of rain have fallen between this and the preceding observation.	
Cirro-stratus and scud: squally.	
,, ,, wind in gusts to $1\frac{1}{2}$ and 2.	P
Overcast: cirro-stratus and scud: a thin rain falling.	D
Large fleecy clouds and scud: the Moon is visible through the clouds.	
Cirro-stratus and scud.	
,,	
,,	D
,, wind in gusts to $1\frac{1}{2}$.	P
Cirro-stratus, scud, and nimbi: occasional squalls of rain and wind: the wind in frequent gusts to 2.	G
Cumuli, cirro-stratus, and scud: the wind in gusts to 2.	P
,, the wind in frequent gusts to $1\frac{1}{2}$ and 2.	D
Cirro-stratus and scud: squalls of rain and wind since the preceding observation: occasional gusts of wind to 2.	
Cirro-stratus and very heavy scud.	
A few fragments of dark scud.	D
Since the last observation there has been a large quantity of dense scud, or a loose kind of white cloud passing from the W., at times covering the greater part of the sky; and at other times, as at present, covering only a small portion of it: the wind in occasional gusts to 1.	G
There have been a few clouds since the last observation, but at present the sky is cloudless.	
Cloudless.	

WEIGHT OF A CUBIC FOOT OF AIR.
July 31^{d} and August 1^{d}. The difference in the mean daily values for consecutive days was the greatest in the month.

DEGREE OF HUMIDITY.—July 29^{d}. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.—July $29^{d}.22^{h}$. The reading was higher than that of the Dry Thermometer at 16^{h}.
July $30^{d}.22^{h}$. The reading was higher than that of the Dry Thermometer at 14^{h}.

TEMPERATURE OF THE WATER OF THE THAMES.
July $28^{d}.22^{h}$. The highest reading between May and December: the same reading occurred July $25^{d}.23^{h}$.

RAIN.—July $31^{d}.12^{h}$. The amount of rain collected in rain-gauge No. 4 during the month of July was $2^{in}\cdot18$, and that collected in the gauge at Greenwich Hospital Schools was $2^{in}\cdot82$ for the same period.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
July 31. 18	29·612	49·2	48·2	1·0	..	..	..	WSW	..	..	..	WSW	1	..	..	..	0	..
20	29·616	54·2	51·5	2·7	..	..	..	WSW	0 to 1	..	..	WSW	1	..	..	..	1	..
22	29·599	59·0	53·2	5·8	48·0	11·0	..	W by S	0 to 2	..	..	W	¼	6·43	0·00	10·935	10	..
Aug. 1. 0	29·610	58·8	53·2	5·6	..	..	..	W by S	1 to 3½	..	..	W	½	..	..	..	10	..
2	29·623	59·7	53·8	5·9	..	..	..	W	1 to 3	..	..	W	¾	..	..	..	10	..
4	29·644	55·2	53·9	1·3	51·5	3·7	..	W by S	0 to 1	..	..	W	¼	..	..	..	10	In Equator
6	29·632	58·7	55·6	3·1	..	..	..	WSW	..	..	..	W	¼	..	..	..	10	..
8	29·658	57·2	53·8	3·4	..	..	62·4 45·6	WSW	0 to 1	..	..	W	¼	..	..	..	10	..
10	29·681	52·7	51·2	1·5	49·0	3·7	83·0 39·0	WSW	..	..	..	W	¼	..	..	..	1	..
12	29·696	50·5	49·6	0·9	..	..	65·0	WSW	..	..	..	W	¼	..	..	..	½	..
14	29·706	47·9	48·2	-0·3	..	..	63·2	Calm	..	..	..	W	¼–	..	..	..	0	..
16	29·713	47·4	47·1	0·3	(48·5)		..	Calm	..	..	..	W	¼–	..	..	..	2	Transit
18	29·728	46·5	46·2	0·3	..	..	..	Calm	..	..	..	SW	¼–	..	..	..	0	..
20	29·745	54·3	51·3	3·0	..	..	..	WSW	..	..	..	W	¼	..	..	..	0	..
22	29·762	61·0	54·0	7·0	49·0	12·0	..	W	..	..	..	W	½	6·43	0·00	10·960	5	..
Aug. 2. 0	29·760	64·0	55·0	9·0	..	..	..	W by S	..	..	..	W	¼+	..	..	..	6	..
2	29·749	63·5	56·9	6·6	..	..	..	SW	..	..	..	W by S	¼	..	..	..	8	..
4	29·732	62·2	58·3	3·9	53·0	9·2	70·4	W by S	..	..	..	W by S	¼	..	..	..	10	..
6	29·691	63·1	58·3	4·8	..	..	52·8	Calm	..	..	..	Calm	..	..	..	..	5	..
8	29·695	58·0	54·7	3·3	..	..		Calm	..	..	..	S by W	¼	..	..	..	9	..
10	29·688	54·9	52·8	2·1	51·5	3·4	93·6	Calm	..	..	..	S by W	¼–	..	..	..	7	..
12	29·650	52·4	51·6	0·8	..	..	44 6	Calm	..	..	..	Calm	..	..	..	..	6	..
14	29·591	53·5	52·3	1·2	..	..		Calm	..	..	..	S	¼	..	..	..	10	..
16	29·513	54·9	52·4	2·5	52·2	2·7		Calm	..	..	..	S	¼	..	..	..	10	Transit
18	29·442	55·7	54·4	1·3	..	..	....	SE	..	..	..	SE	½	..	..	..	10	..
20	29·383	56·8	55·4	1·4	..	..	....	S by E	0 to 1	..	..	SSE	½	..	..	..	9¾	..
22	29·340	62·1	59·9	2·2	58·5	3·6	..	SSW	0 to 3	..	..	SW	¾	6·48	0·09	11·080	8½	..
Aug. 3. 0	29·344	58·4	57·0	1·4	..	..	..	SW	1½ to 6	..	..	SW	1½	..	..	..	9	..
2	29·326	64·7	56·5	8·2	..	..	..	SW	½ to 6	..	..	S by W	1½	..	..	..	9	..
4	29·301	62·0	56·5	5·5	51·0	11·0	66·0	SW	2 to 6	..	..	SSW	2	..	..	..	6	..
6	29·250	58·2	53·7	4·5	..	..	54·2	SW	1 to 5	..	..	SSW	2	..	..	..	10	..
8	29·236	54·5	52·5	2·0	..	..		SW	1 to 4	..	..	SSW	2	..	..	..	10	..
10	29·213	55·7	53·2	2·5	52·8	2·9	82·8	SW	3 to 5	..	..	SSW	3	..	..	..	10	..
12	29·225	55·5	53·3	2·2	..	..	47·0	WSW	2½ to 6	..	..	SW	2½	..	..	..	10	..
14	..	..	..	..	..	..	63·0	W by S	2 to 3	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	62·0	W	0 to 1½	..	..	..	..	..	..	..	..	Transit
18	..	..	..	..	..	..		W	½ to 2½	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	W by N	½ to 2	..	..	..	..	..	..	..	..	..
22	29·599	63·6	57·1	6·5	..	..	..	NW	½ to 3	..	..	W	1	6·58	0·06	11·195	8	..
Aug. 4. 0	..	..	..	..	..	..	..	W	½ to 1	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	WSW	½ to 3	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	SW	½ to 5	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..

BAROMETER.

Aug. 2d and 3d. The greatest difference in the mean daily heights for consecutive days occurred.

Aug. 3d. The daily range was the greatest in the month.

DRY THERMOMETER

Aug. 1d. 14h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Aug. 1d. 16h. The reading is evidently erroneous; the observer was inexperienced.

MAXIMUM FREE THERMOMETER.

Aug. 2d. 22h. The reading appears to be 5° too great.

REMARKS.	Observer.
Cloudless.	G
A few white clouds near the horizon in the E., and also in the W.; with these exceptions the sky is cloudless.	G
Cumuli and scud: the sky is rather gloomy.	B
Cumuli and scud: rather gloomy.	
Nimbi, cumuli, and cirro-strati: a few drops of rain falling: there is one large nimbus crossing the zenith.	B
Overcast: rain falling.	G
,, the rain ceased falling a short time after the last observation.	
Since the last observation the uniform stratum of cloud which had covered the sky changed to large masses of detached cloud, so closely connected as to continue to cover the sky; at present the same masses of cloud continue, with the addition of much scud.	
The sky near the setting sun was clear and very red; since that time the amount of cloud has become less and less; the clear part which first appeared in the N.W. gradually increased, and the sky is now clear, excepting a few dark clouds near the horizon all round.	G
With the exception of a few clouds (cirri) about the Moon and to the W. the sky is cloudless: a beautiful night.	B
Cloudless: a beautiful, fine, blue sky.	
A few dark masses of scud about the sky: a very large meteor shot along in the W. since the last observation.	
Cloudless: a beautiful sunrise: dew abundant.	
,,	B
Cumuli, cumulo-strati, and scud.	P
Cumuli, cumulo-strati, and scud.	
Cumuli, cirro-stratus, and scud: gloomy.	P
Nimbi, cumulo-strati, and scud: a very wild sky: the wind in gusts to $\frac{3}{4}$.	B
Nimbi in the western horizon; cirri and scud scattered about the sky.	
Cirro-stratus, scud, and haze.	
,, a hazy sky.	B
Cirro-cumuli, cirro-stratus, and scud.	P
Overcast: cirro-stratus, and scud.	
,, ,,	
,, ,, a thin rain falling.	
A single break E. of the zenith, through which finely formed cirri are seen; the rest of the sky is covered with cirro-stratus and scud: no rain is now falling.	P
Nimbi and scud, with frequent heavy showers of rain.	B
Nimbi and scud: a very large nimbus in the East: there have been gusts to $2\frac{1}{2}$ since the last observation.	
Cirro-stratus and scud: the wind in gusts to 2: a heavy shower of rain at $2^h. 45^m$.	B
Cumuli and dark scud: heavy gusts of wind to $2\frac{1}{2}$.	P
Cirro-stratus and scud: a heavy shower of rain is now falling: gusts of wind to $2\frac{1}{2}$.	
,, squally: gusts of wind to 3.	
Overcast: cirro-stratus and scud: nimbi frequently passing across the zenith: wind in heavy gusts to $3\frac{1}{2}$.	P
,, nimbi and scud: the wind is occasionally blowing in heavy gusts to 3: the appearance of the sky is unusually unsettled, the clouds being very low, and passing over with great rapidity: the reflexion from the London lights is very strong.	D
Cumuli, cumulo-strati, and small fragments of scud: the wind blows in gusts to $1\frac{1}{2}$.	

MINIMUM FREE THERMOMETER.

July $31^d. 22^h$. The reading was higher than that of the Dry Thermometer at 16^h.

Aug. $2^d. 22^h$. The reading was higher than that of the Dry Thermometer at 12^h.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Aug. 3^d. At $3^d. 10^h$ there was a gust to 8 lbs., and at $5^h. 10^m$ a pressure of $9\frac{1}{2}$ lbs. was shewn, which was the greatest during the day.

TEMPERATURE OF THE THAMES WATER.

July $31^d. 22^h$. The highest reading in the month of August occurred.

Aug. $2^d. 22^h$. A barge had floated against the ship, and the indexes of the instruments were disturbed.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 4. 8	29·704	58·1	55·5	2·6	..	..	72·2	SW	..	..	..	SW	½	..	..	..	3	..
10	..	..	..	..	..	..	49·7	SW	..	..	..	..	..	..	..	..	..	..
12	29·732	52·8	52·1	0·7	..	..	——	Calm	..	..	..	WSW	¼	..	..	..	0	..
14	29·739	51·1	50·7	0·4	..	..	95·1	Calm	..	..	..	Calm	..	..	..	..	½	..
16	29·734	49·9	49·6	0·3	49·5	0·4	41·3	Calm	..	..	..	Calm	..	..	..	..	7	..
18	29·728	49·7	49·6	0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	5	Transit
20	29·733	59·0	56·8	2·2	..	..	62·5	Calm	..	..	..	Calm	..	..	..	..	2	..
22	29·721	67·2	60·4	6·8	51·5	15·7	61·0	Calm	..	..	..	S by W	¼−	6·58	0·00	11·200	9	..
Aug. 5. 0	29·713	67·2	61·4	5·8	..	..	..	Calm	..	..	..	S	¼	..	..	..	10	..
2	29·704	66·0	60·7	5·3	..	..	..	Calm	..	..	..	S by W	¼	..	..	..	10	..
4	29·687	62·5	58·3	4·2	55·0	7·5	..	Calm	..	..	..	S by E	¼	..	..	..	10	..
6	29·646	59·3	58·4	0·9	..	..	..	Calm	..	..	..	SE	¼	..	..	..	10	..
8	29·600	57·6	57·5	0·1	..	..	70·5	E	..	..	..	ENE	¼	..	..	..	10	..
10	29·552	58·3	58·3	0·0	58·0	0·3	57·8	SE	..	..	..	Calm	..	..	..	..	10	..
12	29·519	62·4	62·0	0·4	..	..	—— 95·0	SSW	0 to 1	..	..	SSW	1	..	..	..	10	..
14	29·489	61·6	60·9	0·7	..	..	54·5 —— 63·5	S	½ constant	..	..	SSW	1	..	..	..	10	..
16	29·459	62·2	60·3	1·9	58·0	4·2	62·0	S by W	0 to 1½	..	..	SSW	1	..	..	..	10	Last Quar.
18	29·446	63·2	61·7	1·5	..	..	..	S by W	½ to 2½	..	..	SSW	1	..	..	..	10	Transit
20	29·424	64·8	62·9	1·9	..	..	..	SSW	½ to 2	..	..	SSW	1	..	..	..	10	..
22	29·440	62·0	61·4	0·6	59·5	2·5	..	S by W	½ to 1	..	..	SSW	¼	6·77	0·22	11·400	10	..
Aug. 6. 0	29·420	63·4	60·4	3·0	..	..	..	SSW	0 to 2	..	..	SSW	¾	..	..	..	10	..
2	29·428	67·7	62·0	5·7	..	..	..	SSW	½ to 4	..	..	SSW	½	..	..	..	7	..
4	29·444	68·0	60·9	7·1	55·0	13·0	69·9	SW	½ to 4	..	..	SSW	¾	..	..	..	5	..
6	29·442	64·4	57·4	7·0	..	..	52·3	SW	1½ to 3½	..	..	SSW	½	..	..	..	½	..
8	29·468	58·7	54·3	4·4	..	..	——	SSW	½ to 2½	..	..	SSW	¾	..	..	..	0	..
10	29·486	55·5	53·7	1·8	53·0	2·5	88·0	SSW	½ to 1½	..	..	SSW	¼	..	..	..	3	..
12	29·485	54·4	51·9	2·5	..	..	45·3	SSW	½ to 2	..	..	SSW	¼+	..	..	..	0	..
14	29·496	53·3	51·6	1·7	..	..	——	SW	½ to 2	..	..	SSW	¼+	..	..	..	0	..
16	29·453	53·5	51·7	1·8	52·0	1·5	62·5	SW	¼ to 1½	..	..	SSW	½	..	..	..	6	..
18	29·518	52·0	51·0	1·0	..	..	61·5	SW	0 to 1	..	..	SSW	½	..	..	..	0	..
20	29·536	59·0	55·1	3·9	..	..	..	SW	½ to 3½	..	..	SSW	½	..	..	..	½	Transit
22	29·533	65·4	57·5	7·9	51·0	14·4	..	WSW	1 to 3½	..	..	WSW	½	6·77	0·04	11·450	9	Apogee
Aug. 7. 0	29·556	59·3	56·4	2·9	..	..	..	SW	0 to 3½	..	..	WSW	½	..	..	..	7	..
2	29·565	57·6	56·1	1·5	..	..	..	WSW	½ to 1	..	..	SW	¼	..	..	..	8	..
4	29·551	65·5	59·3	6·2	51·2	14·3	66·6	WSW	1 to 4½	..	..	SW	½	..	..	..	2	..
6	29·546	61·5	54·7	6·8	..	..	50·9	SW	0 to 3	..	..	SW	½	..	..	..	4	..
8	29·550	57·0	52·0	5·0	..	..	——	SW	0 to 1	..	..	SW	½	..	..	..	¼	..
10	29·559	53·2	51·0	2·2	49·0	4·2	86·6	SSW	..	..	..	SSW	½	..	..	..	0	..
12	29·541	51·4	50·4	1·0	..	..	43·6	SSW	..	..	..	SSW	¼	..	..	..	0	..
14	29·508	50·5	49·5	1·0	..	..	——	SSW	..	..	..	SSW	½	..	..	..	0	..
16	29·426	51·1	50·7	0·4	49·0	2·1	63·0	SSW	..	..	..	SSW	¼	..	..	..	0	..
18	29·428	51·8	51·2	0·6	..	..	61·5	..	..	..	..	SSW	¼	..	..	..	1	..
20	29·489	57·7	55·2	2·5	..	..	..	..	..	..	..	WSW	¼	..	..	..	7	Transit
22	29·516	60·6	56·7	3·9	52·5	8·1	..	..	..	..	..	SW	¾	6·91	0·16	11·615	8	..
Aug. 8. 0	29·522	64·8	57·6	7·2	..	..	..	WSW	..	..	..	SW	1	..	..	..	5	..

TEMPERATURE OF THE DEW POINT.

August 6d and 7d. The difference of the mean daily values was considerable.

WEIGHT OF A CUBIC FOOT OF AIR.

Aug. 6d. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.

Aug. 5d. 22d. The reading was higher than that of the Dry Thermometer at 8h.

Aug. 6d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

Aug. 7d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

REMARKS.	Observer.
Large dark cumulo-strati N. and N.W. of the zenith; with those exceptions the sky is clear.	D
Cloudless.	
A few light clouds S. E. of the zenith.	
Thin cirro-stratus covers the greater portion of the sky.	
Cirro-stratus, cirri, and light scud.	
Cirri and light fleecy clouds.	D
In the S. there are dark white-edged cumuli and cumulo-stratus, in the N. cirri, seen through thin scud.	B
Cumuli and scud.	B
Cirro-stratus and scud: half an hour after the observation the wind was W. N.W.	P
Overcast: cirro-stratus: a thin rain falling.	D
,, ,, rain falling.	
,, ,, rain falling steadily.	
,, ,, a thin rain falling.	D
,, cirro-stratus and nimbi; at times a thin rain falling: the wind in gusts to 1+: a rise in the temperature of 4°·1 since the last observation.	G
The sky continued overcast till $13^h. 35^m$, when it suddenly became clear, but remained in that state for about five minutes only, and since that time the clouds have become uniform all over the sky, and rain is now falling: the wind is blowing in gusts to 2.	
Overcast: no rain has been falling for some time.	
Overcast, but the clouds have a tendency to break in many directions: the wind in frequent gusts to 2.	
,, cirro-stratus and a large quantity of scud: a very large quantity of scud has passed over since the observation at 18^h.	G
Cirro-stratus and scud: a heavy rain falling.	P
Cirro-stratus and scud: the rain ceased about an hour since.	
Cumuli, fleecy clouds, and scud: the wind in gusts to $\frac{3}{4}$.	P
Nimbi near the horizon; rather dense cumuli scattered in other parts of the sky of a loose texture.	G
Cloudless, except a few scattered small cumuli: the wind in gusts to 1.	G
Cloudless, with the exception of a small portion of scud in the W.: a fine sunset.	B
Scud about the zenith, and towards the S.; the horizon clear: wind in gusts to $1\frac{1}{2}$.	B
Cloudless.	P
,,	
Dark scud in every direction.	
Cloudless.	
A few patches of scud scattered over the sky.	P
Cumuli and cumulo-strati regularly distributed over the sky.	B
Nimbi, cumuli, and scud: a few large drops of rain have just fallen but they have now ceased: the northern part of the sky is the [most clear.	B
Cirro-stratus, nimbi, and scud: several heavy electrical showers have fallen since the last observation; one is falling at the present time.	D
Cumuli and scud.	P
Cumuli, cirro-cumuli, cirri, and scud: the wind in gusts to $\frac{3}{4}$.	
A few lines of cirri are scattered over the sky.	
Cloudless.	P
,, the stars are very bright: a good deal of lightning from the S. E.	B
,, ,,	
With the exception of a few cirri the sky is cloudless.	
A few scattered cirri.	
Cirri and scud in tufts.	B
Cirro-strati, cumulo-strati, and scud.	D
Cirro-strati, cumulo-strati, and scud.	

OSLER'S ANEMOMETER.

Aug. $7^d. 17^h. 10^m$. The clock stopped 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. / of Rad. Therm. / of Therm. in Water of the Thames.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 8. 2	29·532	66·7	58·4	8·3	..	..	..	WSW	½ to 4	..	..	WSW	¾	..	..	..	3	..
4	29·536	66·4	58·5	7·9	49·0	17·4	68·9	WSW	½ to 3	..	..	WSW	¾	..	..	..	9	..
6	29·550	63·5	53·9	9·6	..	..	49·2	WSW	½ to 3½	..	..	WSW	¾	..	..	..	4	..
8	29·590	57·4	52·5	4·9	..	..	———	WSW	..	..	..	WSW	¼	..	..	..	½	..
10	29·602	54·0	50·7	3·3	48·0	6·0	88·3	WSW	0 to ½	..	..	WSW	¼	..	..	..	0	..
12	29·629	51·7	49·8	1·9	..	..	41·8	WSW	..	..	..	SW	¼	..	..	..	0	..
14	29·625	50·1	49·1	1·0	..	..	———	WSW	..	..	..	SW	¼	..	..	..	0	Greatest declination N.
16	29·612	49·8	49·1	0·7	48·5	1·3	61·5	WSW	..	..	..	WSW	½	..	..	..	0	..
18	29·623	49·0	48·7	0·3	..	..	60·8	WSW	..	..	..	WSW	½	..	..	..	0	..
20	29·643	55·9	53·2	2·7	..	..		WSW	0 to ½	..	..	WSW	½	..	..	..	¼	Transit
22	29·639	62·4	55·4	7·0	48·5	13·9	..	WSW	0 to 1	..	..	WSW	¼	6·91	0·00	11·615	5	..
Aug. 9. 0	29·640	65·7	56·7	9·0	..	..	..	SW	0 to ½	..	..	WSW	¼	..	..	..	7	..
2	29·631	65·7	56·7	9·0	..	..	..	SW	0 to ½	..	..	WSW	¼	..	..	..	9	..
4	29·612	66·5	57·5	9·0	48·5	18·0	69·5	SW	½ to 2½	..	..	WSW	1	..	..	..	6	..
6	29·591	63·5	56·0	7·5	..	..	47·8	SW	..	..	..	SW	½	..	..	..	3	..
8	29·595	59·8	54·7	5·1	..	..	———	W	..	..	..	WSW	½	..	..	..	7	..
10	29·614	54·0	51·8	2·2	49·5	4·5	94·7	WSW	..	..	..	SW	¼	..	..	..	4	..
12	29·604	53·0	51·7	1·3	..	..	39·2	Calm	..	..	..	Calm	..	..	..	..	9¾	..
14	29·569	49·5	48·2	1·3	..	..	———	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·559	48·0	47·4	0·6	45·0	3·0	61·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·540	48·0	47·2	0·8	..	..	60·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·529	52·5	51·4	1·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·515	58·5	56·2	2·3	50·0	8·5	..	Calm	..	..	..	Calm	..	6·91	0·00	11·615	10	Transit
Aug. 10. 0	29·494	65·0	57·5	7·5	..	..	..	Calm	..	..	..	SW	¼	..	..	..	9	..
2	29·471	67·5	58·2	9·3	..	..	..	W by S	..	..	..	SW	¼	..	..	..	9	..
4	29·450	66·1	57·7	8·4	49·0	17·1	71·0	NNE	..	..	..	Calm	..	..	..	..	3	..
6	29·469	64·0	57·0	7·0	..	..	45·3	N	..	..	..	N	¼–	..	..	..	9¾	..
8	29·508	59·5	55·7	3·8	..	..	———	Calm	..	..	..	E by N	¼–	..	..	..	8	..
10	29·551	55·0	53·4	1·6	52·0	3·0	99·5	Calm	..	..	..	E	¼	..	..	..	7	..
12	29·592	52·6	51·9	0·7	..	..	36·5	Calm	..	..	..	Calm	..	..	..	..	4	..
14	..	..	..	..	..	..	———	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	62·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	60·8	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·686	61·7	57·2	4·5	..	..	..	Calm	..	..	..	Calm	..	6·91	0·00	11·615	½	Transit
Aug. 11. 0	..	..	..	..	..	..	..	WSW	..	..	..	..	..	..	..	..	..	..
2	29·658	68·0	59·0	9·0	..	..	..	WSW	..	..	..	SW	¼–	..	..	..	10	..
4	..	..	..	..	..	..	69·0	WSW	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	56·2	SSW	..	..	..	..	..	..	..	..	..	..
8	29·597	57·0	57·0	0·0	..	..	———	SSW	..	..	..	SW	½	..	..	..	10	..
10	..	..	..	..	..	..	89·3	SSW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	52·5	SSW	..	..	..	..	..	..	..	..	..	..
14	29·434	56·1	55·8	0·3	..	..	———	SSW	..	..	..	SSW	½	..	..	..	10	..
16	29·368	57·3	56·8	0·5	57·0	0·3	62·0	SSW	..	..	..	SSW	½	..	..	..	10	..
18	29·330	57·2	56·4	0·8	..	..	61·5	SSW	..	..	..	S	½	..	..	..	10	..
20	29·285	58·5	58·2	0·3	..	..	..	SSW	..	..	..	S	½	..	..	..	10	..
22	29·262	62·3	61·8	0·5	61·5	0·8	..	SSW	..	..	..	SSW	½	7·11	0·27	11·895	10	..
Aug. 12. 0	29·265	61·3	60·6	0·7	..	..	..	WSW	..	..	..	SW	½	..	..	..	9	Transit

MINIMUM THERMOMETER.

Aug. 8d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

Aug. 11d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

REMARKS.	Observer.
Cumuli, cumulo-strati and scud: a shower of rain at $2^h. 15^m$.	D
,, no rain.	B
Cumuli and cirri.	
A few cirro-strati in the N.: a fine sunset.	
With the exception of two small cirro-strati in the N. the sky is cloudless.	B
Cloudless.: within the two preceding hours several flashes of lightning were seen in the S. E.	D
,,	
,,	
,,	
Cloudless, with the exception of a few cirri.	D
Cumuli and scud.	B
Cumulo-stratus, cirri, and scud: a large nimbus in the N. E.: the zenith is the most free from clouds.	
,, no nimbus.	B
Fleecy clouds and cirro-stratus.	D
Cumuli in the N.; light fleecy clouds are scattered over the remainder of the sky.	
The whole of the sky N. of the zenith is covered with massive cirro-strati and dense scud; the southern portion is mostly clear; light clouds and small fragments of scud are scattered here and there.	
Cirro-stratus in the N.; the southern portion of the sky is clear.	D
A few stars only visible S. and S.W. of the zenith.	P
Cirro-stratus and scud.	
,,	
,,	P
,,	
,, haze.	B
Cumuli, cirro-stratus, and scud.	
Scud and haze.	B
Cirro-cumuli, scud, and haze.	P
Cirro-stratus, scud, and haze.	
Scud and undefined clouds.	
Loose scud in every direction.	P
A great haze, no celestial object being visible within 20° of the horizon; the remainder of the sky is nearly cloudless, but a great haze prevails, so that the large stars are only visible: meteors have been well looked for, but two only have been seen; both were exceedingly minute, and in the N.	G
The sky is nearly free from clouds, with the exception of many linear cirri scattered about, principally to the N.	
The sky is covered with a thin veil of cloud and a little scud; the clouds came up at about $23^h. 40^m$: the day is warm; occasionally a gentle air is stirring.	
The clouds mentioned in the last observation became more and more dense, and at $3^h. 40^m$ changed to nimbi and scud; at $4^h. 50^m$ light rain began to fall: at $7^h. 40^m$ it rained very heavily, and has continued ever since with slight intermission.	G
The sky is covered with scud: there is a slight rain.	B
Cumuli and scud: no rain.	
Scud covers the whole sky: there have been gusts of wind to 2 since the last observation.	
,, a drizzling rain with gusts of wind to $\frac{3}{4}$.	B
Rain falling heavily.	H B
With the exception of a break in the N.W. the sky is completely covered with cirro-stratus and scud.	

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Aug. $11^d. 21^h. 10^m$. At this time a sudden gust of 4 lbs. occurred; the rain (which had been falling previously) also fell with greater violence.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 12. 2	29·293	65·7	61·0	4·7	..	..	..	WSW	½ to 2½	..	..	WSW	½	..	..	..	8	..
4	29·330	62·2	60·2	2·0	59·5	2·7	68·5	W	0 to 4	..	..	W	½	..	..	..	10	..
6	29·379	63·7	60·1	3·6	..	..	54·5	W	..	..	..	W	½	..	..	..	9½	..
8	29·423	61·0	58·4	2·6	..	..		W	..	..	..	W	¼	..	..	..	10	..
10	29·476	59·4	57·9	1·5	57·0	2·4	85·4	WSW	..	..	..	Calm	..	..	..	..	10	..
12	29·509	58·1	57·0	1·1	..	..	49·1	WSW	..	..	..	WSW	¼—	..	..	..	10	..
14	29·511	57·3	55·8	1·5	..	..		WSW	..	..	..	SW	¼—	..	..	..	10	..
16	29·524	56·6	55·6	1·0	54·5	2·1	62·0	WSW	..	..	..	SW	¼—	..	..	..	10	..
18	29·536	54·5	53·7	0·8	..	..	61·2	SW	..	..	..	SW	¼—	..	..	..	10	..
20	29·536	59·4	57·4	2·0	..	..		SW	..	..	..	SW	¼—	..	..	..	9½	..
22	29·532	60·8	58·3	2·5	57·2	3·6	..	SW	..	..	..	WSW	¼	7·14	0·02	11·930	10	..
Aug. 13. 0	29·522	63·1	60·0	3·1	..	..	..	SW	..	..	..	WSW	¼	..	..	..	10	Transit
2	29·504	60·4	59 1	1·3	..	..	..	SSW	..	..	..	WSW	¼	..	..	..	10	..
4	29·453	59·5	59·0	0·5	58·5	1·0	..	Calm	..	..	..	SSW	¼	..	..	..	10	..
6	29·390	59·8	59·6	0·2	..	..	..	Calm	..	..	..	S by W	¼	..	..	..	10	..
8	29·398	59·4	59·4	0·0	..	..	63·9 52·8	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·407	56·6	57·0	–0·4	56·5	0·1	75·0	Calm	..	..	..	Calm	..	..	..	..	6	..
12	29·399	54·5	54·9	–0·4	..	..	48·7	Calm	..	..	..	SW	¼	..	..	..	0	..
14	29·393	55·4	55·6	–0·2	..	..	62·0 61·2	SW	..	..	..	SW	¼	..	..	..	10	..
16	29·372	53·0	53·2	–0·2	53·8	–0·8	..	SW	..	..	..	SW	¼	..	..	..	2	New
18	29·342	53·2	53·2	0·0	..	..	..	SSW	..	..	..	SSW	½	..	..	..	9	..
20	29·278	55·6	55·4	0·2	..	..	..	SSW	..	..	..	SSW	¼	..	..	..	7	..
22	29·218	56·1	55·3	0·8	54·5	1·6	..	Calm	..	..	..	SSW	½	7·24	0·15	12·075	9	..
Aug. 14. 0	29·136	57·6	56·9	0·7	..	..	..	Calm	..	..	..	SSW	¼	..	..	..	10	Transit
2	29·119	55·3	52·7	2·6	..	..	..	W	0 to 1½	..	..	NW by W	¼	..	..	..	10	..
4	29·110	52·3	52·0	0·3	52·2	0·1	..	WNW	0 to 2½	..	..	W	¾	..	..	..	10	..
6	29·190	56·5	54·7	1·8	..	..	..	NW	0 to 3	..	..	W by N	1	..	..	..	10	..
8	29·256	57·0	55·3	1·7	..	..	60·7	WNW	..	..	..	WNW	¾	..	..	..	10	..
10	29·314	56·3	53·5	2·8	51·0	5·3	49·0	NW	..	..	..	W by N	½	..	..	..	6	..
12	29·351	52·0	51·2	0·8	..	..	66·8	W	..	..	..	W	¼—	..	..	..	1	..
14	29·367	51·3	50·8	0·5	..	..	44·1	W	..	..	..	W	¼	..	..	..	0	..
16	29·383	50·2	49·7	0·5	49·0	1·2		W	..	..	..	W	¼	..	..	..	0	..
18	29·393	49·6	49·4	0·2	..	..	61·5 60·8	W by S	..	..	..	W	¼	..	..	..	7	..
20	29·420	53·9	52·5	1·4	..	..	..	NW	0 to ½	..	..	NNW	½	..	..	..	8	..
22	29·449	58·7	54·9	3·8	53·0	5·7	..	NW	0 to 2½	..	..	NW by W	¾	7·48	0·34	12·394	10	..
Aug. 15. 0	29·463	59·5	55·2	4·3	..	..	..	WNW	0 to 3	..	..	NW by W	¾	..	..	..	10	..
2	29·471	60·6	55·8	4·8	..	..	..	WNW	0 to 3	..	..	NW by W	1½	..	..	..	10	Transit
4	29·506	57·5	56·0	1·5	54·0	3·5	..	NW	0 to 2	..	..	N	½	..	..	..	10	..
6	29·542	58·5	56·2	2·3	..	..	..	WNW	0 to 1	..	..	NW	1	..	..	..	10	..

BAROMETER.
Aug. 14d. The mean daily height was the least in the month.
Aug. 14d. 4h. The reading was the lowest in the month.
DRY THERMOMETER.
Aug. 13d. 10h, 12h, 14h, and 16h. The readings were lower than those of the Wet Thermometer.
Aug. 14d. The daily range was the least in the month.
TEMPERATURE OF THE DEW POINT.
Aug. 13d. 16h. The temperature as given by the observation was higher than that of the air.

REMARKS.	Observer.
Large masses of scud in every direction: breaks towards the zenith and N.W.	H B
Nimbus and scud: showers of rain at intervals.	B
Cirri and scud: a break in the N.W.: the rain has ceased falling.	
Scud and haze.	
Scud covers the whole sky.	B
Overcast: cirro-stratus.	D
,, ,,	
,, ,,	
,, cirro-stratus and scud.	
Cirro-stratus and scud: the sky is clear about the place of the Sun.	D
Overcast: cirro-stratus and scud.	H B
Overcast, but the clouds are less dense near the Sun's place.	
Overcast: cirro-stratus and scud: a thin rain is now falling.	H B
,, ,, rain falling.	D
,, ,, the rain ceased falling about ten minutes before this observation.	
,, ,, the amount of cloud has been variable since the last observation, though at present the sky is quite covered.	
The sky in and 30° around the zenith is clear, the remaining portion being covered with cirro-stratus: there is at present a great haze, causing the stars to shine very dimly; it amounts almost to a light fog.	D
The sky about twenty minutes since became nearly clear, and has continued so to the present time: at $11^h. 50^m$ a faint meteor was seen passing to the E. of Polaris; duration half a second: at $12^h. 0^m$, a bright meteor near Jupiter; duration one second: there have been five small meteors seen, principally in the E.	H B
The sky continued clear till $12^h. 35^m$, when it became completely covered with cirro-stratus and scud.	
Light clouds towards the N., and haze in various other parts of the sky: at $15^h. 35^m$ the greater part of the sky had become cloudy.	
Cirro-stratus and scud in every direction.	
Nimbus, fleecy clouds, and scud: a shower of rain fell at 19^h.	H B
Cirro-stratus and scud: rain falling.	D
The whole sky is covered with scud: a very heavy rain is falling.	B
,, no rain.	B
Cirro-stratus and scud: a heavy shower of rain is now falling.	H B
Cirro-stratus and scud, but the clouds are lighter in every direction, and there is a break near the Sun's place.	
Cirro-stratus and scud: large masses of dark looking scud moving rapidly from the N.W.	
Cirro-stratus, scud, and haze, in every direction.	H B
Shortly after 10^h the clouds all passed away, and within the last hour many small clouds have appeared and disappeared; at present there is a large bank of cloud near the S. horizon: the stars all look dim: much vapour about.	G
Cloudless.	
,,	
Immediately after the observation at 16^h the clouds began to collect, and at present the greater part of the sky is covered with small undefined clouds; the horizon all round is generally clear.	
The sky has been nearly covered since the last observation with cirro-cumuli, within 40° of the zenith, and below that with stratus clouds: at present cirro-stratus and scud: the wind about ten minutes since veered to the N. N.W.; the scud has been passing from that quarter since $18^h. 30^m$.	
Scud covers the whole sky.	B
The sky is covered with cirro-stratus and scud.	
Cirro-stratus and scud: a few drops of rain are falling.	B
Since $3^h. 15^m$ there have been several dashing showers of rain: scud has passed quickly from the N.: at present it is squally, and the sky is covered with so dark a cloud as to cause a great gloom.	G
Immediately after the observation at 4^h a heavy shower of rain fell and continued for about fifteen minutes; since that time no rain has fallen, and the clouds have been much broken exhibiting large portions of pale blue sky; at present the sky is covered with scud: there are occasional gleams of sunshine.	

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Aug. 14^d. The mean daily value was the least in the month.

DEGREE OF HUMIDITY.

Aug. 14^d. The mean daily value was the greatest in the month.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 15. 8	29·590	58·7	56·2	2·5	..	..	61·9	WNW	0 to ½	..	..	N	1	..	..	..	9	..
10	29·628	58·0	55·7	2·3	54·0	4·0	50·3	NW	..	..	..	NW	1	..	..	..	10	..
12	29·669	57·0	55·2	1·8	..	..	69·2	WNW	..	..	..	NW	¼	..	..	..	10	..
14	29·694	55·8	53·9	1·9	..	..	42·5	WNW	..	..	..	NW	¼	..	..	..	10	In Equator
16	29·703	54·5	52·6	1·9	52·5	2·0		WNW	..	..	..	NW	½	..	..	..	10	..
18	29·761	50·2	49·3	0·9	..	..	61·0	W by N	..	..	..	W	¼-	..	..	..	½	..
20	29·783	53·6	51·8	1·8	..	..	60·8	W	..	..	..	W	¼-	..	..	..	0	..
22	29·808	58·4	55·0	3·4	51·0	7·4		W	..	..	..	SW	¼	7·55	0·08	12·505	7	..
Aug. 16. 0	29·817	63·4	58·0	5·4	..	..	..	W	..	..	..	WSW	¼	..	..	..	7	..
2	29·828	67·5	60·5	7·0	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	5	Transit
4	29·814	65·8	58·9	6·9	50·7	15·1		WSW	..	..	..	W	¼	..	..	..	9	..
6	29·788	65·3	58·5	6·8	..	..	71·5	SW	..	..	..	SW	¼	..	..	..	2	..
8	29·777	59·4	56·1	3·3	..	..	57·2	S by W	..	..	..	SW	¼	..	..	..	3	..
10	29·759	57·5	55·4	2·1	54·0	3·5	96·7	SSW	..	..	..	SW	½	..	..	..	5	..
12	29·730	57·9	57·1	0·8	..	..	51·8	SSW	..	..	..	SSW	¾	..	..	..	10	..
14	29·673	58·5	58·2	0·3	..	..	61·2	S by W	½ to 1½	..	..	SSW	¾	..	..	..	10	..
16	29·650	60·2	59·7	0·5	59·5	0·7	60·5	SSW	1 to 4	..	..	SSW	1½	..	..	..	10	..
18	29·630	60·1	59·8	0·3	..	..		SW	½ to 2	..	..	SW	1	..	..	..	10	..
20	29·650	61·8	57·8	4·0	..	..	..	WSW	2 to 4	..	..	WSW	2	..	..	..	6	..
22	29·665	63·2	58·2	5·0	54·8	8·4	..	WSW	2 to 3½	..	..	W by S	1¼	7·55	0·00	12·510	8	..
Aug. 17. 0	29·679	65·0	58·7	6·3	..	..	..	W	½ to 3	..	..	W	1	..	..	..	9	..
2	29·725	60·6	54·5	6·1	..	..	..	W	½ to 3½	..	..	W	1	..	..	..	10	..
4	29·731	64·0	56·8	7·2	48·0	16·0	65·2	W	¾ to 3	..	..	WSW	1	..	..	..	4	Transit
6	29·752	62·9	54·9	8·0	..	..	47·3	W by N	0 to 1½	..	..	W by N	½	..	..	..	4	..
8	29·781	58·8	52·8	6·0	..	..		W by S	..	..	..	WSW	¼	..	..	..	1	..
10	29·809	55·2	51·3	3·9	48·0	7·2	81·8	WSW	..	..	..	W	¼	..	..	..	0	..
12	29·838	53·2	51·7	1·5	..	..	40·4	WSW	..	..	..	W	½	..	..	..	0	..
14	..	..	..	..	..	..		WSW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	61·0	WSW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	60·2	WSW	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	W	..	..	..	..	..	..	..	..	..	..
22	29·950	55·6	50·7	4·9	..	..	..	WNW	½ to 2	..	..	WNW	1	7·55	0·00	12·510	10	..
Aug. 18. 0	..	..	..	..	..	..	..	WNW	0 to 1½	..	..	..	..	..	..	..	..	..
2	29·981	60·1	53·0	7·1	..	..	..	NW	0 to 1	..	..	W	¾	..	..	..	7	..
4	..	..	..	..	..	..	63·1	NW	½ to 1½	..	..	..	..	..	..	..	..	Transit
6	..	..	..	..	..	..	45·4	NW	0 to ¾	..	..	..	..	..	..	..	..	..
8	30·004	58·6	53·1	5·5	..	..		NW	..	..	..	NW	½	..	..	..	8	..
10	..	..	..	..	..	..	80·8	W	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	38·7	W	..	..	..	..	..	..	..	..	..	..
14	30·028	49·5	48·0	1·5	..	..		W	..	..	..	W	¼	..	..	..	0	..
16	30·022	47·7	47·0	0·7	46·0	1·7	60·8	WSW	..	..	..	WSW	¼	..	..	..	0	..
18	30·024	45·7	45·6	0·1	..	..	59·8	WSW	..	..	..	W	¼	..	..	..	0	..
20	30·021	52·0	49·9	2·1	..	..	..	W	..	..	..	WSW	¼	..	..	..	0	..
22	30·012	57·4	52·7	4·7	49·5	7·9	..	NNW	0 to 1	..	..	NNW	½	7·55	0·00	12·510	3	..
Aug. 19. 0	30·005	62·4	54·9	7·5	..	..	..	NW	0 to 1	..	..	NW by W	¼	..	..	..	0	..

TEMPERATURE OF THE DEW POINT.

Aug. 19d and 20d. The difference of the mean daily values was considerable.

WEIGHT OF A CUBIC FOOT OF AIR.

Aug. 19d and 20d. The difference of the mean daily values for consecutive days was the greatest in the month.

MINIMUM THERMOMETER.

Aug. 15d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

REMARKS.	Observer.
The sky is covered with cirro-stratus and scud, except a long break a little above the horizon extending from N. to W.: the clouds immediately above this break are much coloured by the setting sun.	G
Overcast: cirro-stratus and scud.	G
,, ,,	B
,, ,,	
,, ,,	
With the exception of a few cirro-strati in the N.W. the sky is cloudless: rather a cold morning: a very fine sunrise.	
Cloudless; there is rather a dense fog.	B
Thin cirro-stratus and haze: the Sun is shining through the clouds.	D
Cumuli, scud, and haze.	D
The clouds are principally cumuli breaking up into cirro-cumuli; of the latter there are some fine specimens in the N.W.: scud and haze near the horizon.	H B
Cirro-cumuli, cirro-stratus, and scud, evenly distributed over the sky.	B
Cirri in lines in the S. E. and N.W.: fleecy clouds are scattered about the sky.	
Dark cirro-cumuli in the N.W., and cirri in the S., extending nearly to the zenith.	
Cirro-stratus around the horizon: the zenith is more free from cloud than any other part of the sky: at $11^h. 35^m$ the sky was covered with cirro-stratus, and very small rain began to fall.	B
Overcast: cirro-stratus.	D
,, ,,	
,, ,, the wind is in gusts to 2.	
Overcast: cirro-stratus and scud: the clouds are thinner than they have been.	
Cumuli and large masses of scud are in all parts of the sky.	D
The sky to the N. is completely covered with cirro-stratus and scud, and there is also a large quantity of scud towards the S. and the W.	H B
Cirro-stratus and scud in every direction; there are also a few cirro-cumuli in the S.W.	
Overcast: cirro-stratus and dark scud: wind in gusts to 1½.	H B
Cumuli and scud.	D
Cumuli and fragments of scud.	
Patches of scud in the N.W. and W. near the horizon; the sky is otherwise clear.	
Cloudless.	D
Splendidly clear.	H B
Overcast: cirro-stratus and scud.	D
Cumuli, cirro-stratus, and scud.	
Cirro-stratus and scud: the afternoon has been very fine; the amount of cloud has been small, cumuli and small fragments of scud being scattered about the sky: shortly after $8^h. 40^m$ the sky became cloudless and continued so.	D
Cloudless.	H B
,,	
,,	
A few cumuli near the Sun's place, but of no numerical amount: hazy near the horizon.	H B
Cumuli are scattered over the sky.	D
Cloudless, with the exception of a few very thin tufts of scud.	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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 19. 2	29·978	66·2	56·2	10·0	..	..	..	WNW	½ to 2	..	..	NW	½	..	..	..	1	..
4	29·948	67·3	57·0	10·3	46·2	21·1	..	WNW	0 to 1	..	..	W by N	½	..	..	..	1	..
6	29·913	66·4	57·2	9·2	..	..	70·8	W	0 to ¾	..	..	W	½	..	..	..	10	Transit
8	29·888	64·7	57·5	7·2	..	..	57·7	W	..	..	..	W by S	½	..	..	..	9	..
10	29·892	62·6	58·4	4·2	54·0	8·6	——	W	..	..	..	W	¼–	..	..	..	10	..
12	29·866	60·5	58·1	2·4	..	..	86·7	WSW	..	..	..	W	½	..	..	..	9½	..
							56·6											
14	29·847	59·5	58·2	1·3	..	..	——	SW	..	..	..	W	¾	..	..	..	10	..
16	29·813	59·7	59·0	0·7	58·0	1·7	60·8	SW	..	..	..	W	½	..	..	..	10	..
18	29·804	61·0	60·0	1·0	..	..	58·2	SW	..	..	..	W	½	..	..	..	10	..
20	29·804	62·9	61·5	1·4	..	..	..	SW	..	..	..	W	¼	..	..	..	10	..
22	29·763	66·5	63·4	3·1	61·6	4·9	..	SW	0 to ¼	..	..	W	¼	7·55	0·00	12·510	9½	..
Aug. 20. 0	29·719	70·5	65·5	5·0	..	..	..	WSW	0 to 1	..	..	W	¼	..	..	..	8	..
2	29·690	71·8	64·9	6·9	..	..	..	W	0 to 2	..	..	W	½	..	..	..	7	..
4	29·655	72·5	63·7	8·8	57·0	15·5	..	W	0 to 3½	..	..	W	1½	..	..	..	5	..
							75·4											
6	29·634	71·5	63·7	7·8	..	..	51·6	W by N	0 to 2½	..	..	NNW	½	..	..	..	7	Transit
8	29·657	64·0	57·4	6·6	..	..	——	NW	0 to 2	..	..	NW	1	..	..	..	7	..
							95·5											
10	29·680	57·3	52·8	4·5	51·0	6·3	43·7	NW	..	..	..	NNW	½	..	..	..	10	..
12	29·660	56·5	52·1	4·4	..	..	——	W	..	..	..	WSW	¼	..	..	..	10	..
14	29·644	53·8	50·2	3·6	..	..	61·0	WSW	..	..	..	WSW	¼	..	..	..	9½	1st Qr.
16	29·628	51·6	49·4	2·2	47·5	4·1	60·8	WSW	..	..	..	WSW	¼	..	..	..	10	..
18	29·623	51·8	49·9	1·9	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	7	..
20	29·624	54·0	51·0	3·0	..	..	..	W	0 to ½	..	..	W	½	..	..	..	1	..
22	29·626	57·9	52·7	5·2	48·0	9·9	..	WNW	0 to ¼	..	..	WNW	¼	7·55	0·00	12·510	4	..
Aug. 21. 0	29·630	60·3	54·0	6·3	..	..	..	WNW	0 to ½	..	..	WNW	¼	..	..	..	10	..
2	29·622	61·6	55·0	6·6	..	..	..	WNW	½ to 1	WNW	0·32	WNW	¾	..	..	..	10	..
4	29·615	63·4	56·7	6·7	47·5	15·9	63·3	W	0 to ½	W	0·06	WNW	¼	..	..	..	10	Perigee
6	29·604	59·4	54·7	4·7	..	..	52·8	W by S	..	..	..	W	½	..	..	..	10	..
8	29·614	57·6	53·9	3·7	..	..	——	WNW	..	WNW	0·40	WNW	½	..	..	..	10	Transit
10	29·618	55·3	52·8	2·5	50·0	5·3	78·1	WSW	..	W	0·22	W	¼	..	..	..	10	..
12	29·622	53·8	52·5	1·3	..	..	49·0	WSW	..	..	..	WSW	¼	..	..	..	10	..
14	29·606	53·3	52·1	1·2	..	..	——	SW	..	WSW	0·51	WSW	¼	..	..	..	10	..
16	29·600	52·8	51·4	1·4	50·5	2·3	61·0	SW	..	..	..	SW	¼	..	..	..	10	..
18	29·588	52·6	51·3	1·3	..	..	60·5	SW	..	SW	0·31	SW	¼	..	..	..	10	..
20	29·592	54·1	52·5	1·6	..	..	..	SW	..	WSW	0·29	WSW	¼	..	..	..	10	..
22	29·593	58·3	54·8	3·5	53·0	5·3	..	WSW	..	W	0·59	SW	¼	7·55	0·00	12·510	10	..
Aug. 22. 0	29·591	61·6	57·6	4·0	..	..	..	WSW	..	..	..	SSW	¼	..	..	..	9¾	..
2	29·584	59·8	55·1	4·7	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	10	Greatest declination S.
4	29·572	61·3	55·6	5·7	50·0	11·3	64·0	WSW	..	..	..	WSW	¼	..	..	..	10	..
6	29·570	60·3	55·9	4·4	..	..	48·2	WSW	..	..	..	WSW	¼	..	..	..	10	..
8	29·580	57·0	53·9	3·1	..	..	——	SW	..	..	..	WSW	¼	..	..	..	10	Transit
10	29·593	55·6	53·4	2·2	51·5	4·1	82·5	SW	..	..	..	WSW	¼	..	..	..	10	..
12	29·601	53·4	52·0	1·4	..	..	41·5	SW	..	WSW	1·05	WSW	¼–	..	..	..	4	..
14	29·590	52·0	51·2	0·8	..	..	——	Calm	..	..	..	WSW	¼–	..	..	..	1	..
16	29·592	50·7	50·2	0·5	51·0	-0·3	61·0	Calm	..	..	..	Calm	..	..	..	..	3	..
18	29·605	48·4	48·0	0·4	..	..	60·2	Calm	..	..	..	SW	¼–	..	..	..	5	..
20	29·612	56·0	53·7	2·3	..	..	..	Calm	..	..	..	SW	¼–	..	..	..	8	..
22	29·599	60·0	55·1	4·9	50·0	10·0	..	Calm	..	W	1·65	W by N	¼	7·55	0·00	12·510	7	..

DRY THERMOMETER.

Aug. 19d. 4h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred.

Aug. 20d. The mean daily temperature was the greatest in the month. Aug. 20d. 4h. The reading was the highest in the month.

Aug. 20d and 21d. The greatest difference in the mean daily temperatures for consecutive days occurred.

TEMPERATURE OF THE DEW POINT.

Aug. 19d. 4h. The difference between the observed temperatures of the air and the dew-point was greater at this time than at any other during the month.

Aug. 20d. The mean daily value was the greatest in the month: at 19d. 22h the reading was the highest in the month.

Aug. 20d and 21d. The greatest difference in the mean daily values for consecutive days occurred.

Aug. 22d. 16h. The temperature is higher than that of the air.

REMARKS.	Observer.
Cirri in various directions.	D
Cirri of the cymoid kind towards the N., and in other parts of the sky.	H B
Overcast: cirro-stratus and scud.	
With the exception of a few breaks near the zenith, the sky is quite covered with cirro-stratus and scud.	
Overcast: cirro-stratus and scud: rain has fallen since the last observation.	H B
The sky continued overcast with very dark clouds of considerable elevation till about five minutes since; at that time the clouds became broken about the zenith, and a few stars are now visible.	G
Overcast: the break mentioned at the last observation continued for a short time only.	
,,	
,, bright in the E.	
,, cirro-stratus and scud.	G
,, ,, breaks towards the N. and S.W.	H B
Cumuli and large masses of scud in every direction.	
Cumulo-strati and large masses of scud.	H B
Cumuli scattered about the sky; some fine specimens near the horizon; the sky between the clouds of a deep blue: gusts of wind to 2.	G
The greater part of the sky is covered with cirro-stratus and cumuli; there is no upper cloud.	
At times since the last observation the sky has been covered with dark scud, and so much so, as to cause a considerable gloom: at present large quantities of scud are passing from the N.W.: in the N. strati: a red sunset.	
The sky is wholly covered with a thin black cloud very high; there are several stars dimly seen near the zenith: the wind has lulled.	G
Overcast: cirro-stratus.	D
A few stars are shining in the zenith, but the rest of the sky is covered with a thin and high cirro-stratus.	
Overcast.	
Cirro-stratus and scud: a large portion of the northern part of the sky is clear.	
A few fragments of scud are scattered in various directions, the sky is otherwise clear.	D
Cumuli and small fragments of scud scattered over the sky.	H B
Overcast: cirro-stratus and scud.	
,, nimbi, cirro-strati, and scud.	H B
Cirro-stratus and scud.	D
,,	
,,	
Overcast: cirro-stratus.	D
,, ,,	H B
,, ,,	
,, ,,	
,, ,,	
,, ,,	H B
Cumuli and scud.	B
Cirro-stratus and scud; a small break in the N.E.; the clouds have a flaky appearance in the N.W.	
Cumulo-stratus, cirro-stratus, and scud: it is very dark and gloomy: a few drops of rain are falling.	B
Cumulo-stratus and scud: breaks in the S. E., but of no numerical amount.	H B
Cirro-stratus and scud: breaks near the zenith and S. E.	
Overcast: cirro-stratus and scud.	
,, ,,	H B
Cirro-stratus: the stars are shining through a haze: the clouds are chiefly in the S.	B
A little cirro-stratus in the S.: the stars are shining through a haze: Jupiter has a glory round him.	
Cirro-stratus in the horizon around the N. E. and S. in patches: there is still a haze.	
Cirro-stratus, and cirri in twisted lines from the N. E. to the S.W.	
Cirro-stratus and fleecy clouds, mostly over the zenith.	B
Cirri, light clouds, and scud.	D

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Aug. 20^d. The mean daily values were the greatest in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Aug. 20^d. The mean daily value was the greatest in the month.

MAXIMUM THERMOMETER—Aug. $21^d. 22^h$. The reading was lower than that of the Dry Thermometer at 4^h.

MINIMUM THERMOMETER.—Aug. $21^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^h.

TEMPERATURE OF THE WATER OF THE THAMES.—August $19^d. 22^h$. The lowest reading in the month occurred.

CLOUDS.—Aug. $21^d. 0^h$ to $22^d. 10^h$. The sky was covered with clouds; it is the longest cloudy period in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No.1, (Osler's).	RAIN. Reading of Rain-gauge No.2.	RAIN. Stand of Rain-gauge No.3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 23. 0	29·600	62·8	56·2	6·6	..	..	..	WSW	..	..	..	W by S	¼	..	..	..	10	..
2	29·578	68·8	60·0	8·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	7	..
4	29·560	64·7	57·0	7·7	45·0	19·7	70·5	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·548	62·0	56·9	5·1	..	..	47·5	NNE	..	..	..	Calm	..	..	..	..	10	..
8	29·549	58·9	55·6	3·3	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·546	55·0	52·8	2·2	50·0	5·0	98·8	Calm	..	..	..	S	¼–	..	..	..	7	Transit
12	29·551	51·2	50·6	0·6	..	..	39·7	Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·540	50·4	49·8	0·6	..	..	——	Calm	..	..	..	Calm	..	..	..	..	7	..
16	29·541	48·2	48·3	-0·1	48·0	0·2	61·0	Calm	..	..	..	Calm	..	..	..	..	3	..
18	29·547	47·6	47·7	-0·1	..	..	60·2	Calm	..	..	..	Calm	..	..	..	..	1	..
20	29·548	52·4	51·3	1·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	1	..
22	29·556	58·8	55·4	3·4	53·2	5·6	..	Calm	..	WSW	1·05	WSW	¼–	7·55	0·00	12·510	4	..
Aug. 24. 0	29·561	63·5	57·1	6·4	..	..	..	Calm	..	..	..	WSW	¼	..	..	..	7	..
2	29·558	65·4	59·4	6·0	..	..	..	Calm	..	..	..	SSW	¼	..	..	..	9½	..
4	29·557	64·1	58·6	5·5	51·0	13·1	68·4	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·559	61·8	57·6	4·2	..	..	52·3	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·589	57·6	54·8	2·8	..	..	——	SW	..	..	..	Calm	..	..	..	..	10	..
10	29·619	55·6	53·8	1·8	52·5	3·1	86·0	WNW	..	..	..	Calm	..	..	..	..	10	Transit
12	29·643	55·8	53·9	1·9	..	..	45·8	Calm	..	..	..	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	61·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	60·2	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·789	57·5	54·4	3·1	..	..	..	Calm	..	WNW	1·23	NW	¼	7·55	0·00	12·510	8	..
Aug. 25. 0	..	..	..	..	..	..	..	WNW	..	..	..	..	..					
2	29·807	61·7	57·4	4·3	..	..	..	W	0 to 1	..	..	W by N	¼	..	..	..	4	..
4	..	..	..	..	..	..	66·9	WNW	½ to 1½	WNW	0·72	..	..	..	..	..	..	..
6	..	..	..	..	..	..	52·4	NW	½ constant	NW	0·12	..	..	..	..	..	..	..
8	..	..	..	..	..	..	——	W	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	85·6	WSW	..	..	..	..	..	..	..	..	..	..
12	29·879	53·5	51·5	2·0	..	..	43·3	WSW	..	..	..	WSW	¼	..	..	..	10	Transit
14	29·876	53·5	51·7	1·8	..	..	——	WSW	..	..	..	WSW	¼	..	..	..	10	..
16	29·874	52·4	50·8	1·6	48·9	3·5	61·2	WSW	..	..	..	WSW	¼	..	..	..	10	..
18	29·885	52·0	50·7	1·3	..	..	59·5	WSW	..	..	..	WSW	¼	..	..	..	10	..
20	29·897	54·7	53·4	1·3	..	..	..	WSW	..	W	1·79	WSW	¼	..	..	..	10	..
22	29·913	60·2	55·2	5·0	49·0	11·2	..	WNW	..	WNW	0·50	W	¼	7·55	0·00	12·510	10	..
Aug. 26. 0	29·914	60·9	56·2	4·7	..	..	..	W	..	..	..	WNW	¼	..	..	..	10	..
2	29·923	61·6	56·7	4·9	..	..	..	NW	..	..	..	WNW	¼	..	..	..	10	..
4	29·914	60·2	54·2	6·0	46·0	14·2	63·4	NW	..	..	..	NW	¼	..	..	..	10	..
6	29·917	58·6	53·9	4·7	..	..	51·2	NNW	..	..	..	N by W	¼	..	..	..	10	..
8	29·935	57·3	52·4	4·9	..	..	——	NW	..	..	..	NNW	¼	..	..	..	10	..
10	29·953	56·5	51 8	4·7	46·0	10·5	80·0	NW	..	..	..	NNW	½	..	..	..	10	..
12	29·959	53·2	49·2	4·0	..	..	43·5 —— 60·5 59·8	NNW	..	NW	1·59	W	¼	..	..	..	10	Transit
14	29·957	53·0	48·7	4·3	..	..	..	WSW	..	..	..	Calm	..	..	..	..	10	..
16	29·949	51·2	48·2	3·0	45·0	6·2	..	W	..	..	..	WNW	½	..	..	..	10	..

DRY THERMOMETER.

Aug. 23d. 16h and 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Aug. 23d. 4h. The reading is the mean of two observations, and it is the lowest in the month: the same reading occurred on Aug. 17d. 16h and on Aug. 26d. 16h.

MINIMUM FREE THERMOMETER.

Aug. 25d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

REMARKS.	Observer.
Cirro-stratus, light clouds, and scud.	H B
Cumuli, cumulo-strati, and dark scud.	D
Cumuli and cirro-stratus distributed in large masses; there are also some masses of scud.	B
Cumuli and cirro-stratus.	
Nimbi, cirro-stratus, and scud: one large heavy nimbus in the North.	
The zenith is the clearest part of the sky: it is generally covered with white fleecy clouds and cirro-stratus.	B
Cirro-cumuli in the zenith and S. E.; the remainder of the sky is nearly clear.	D
The stars are shining in the neighbourhood of the zenith, every other part of the sky is covered with cirro-stratus.	
Thin scud in every direction.	
Light scud in different parts of the sky.	
Cirri and small fragments of scud.	D
Cirri, thin scud, and haze.	H B
Cumuli and thin cirro-stratus: the Sun is obscured by a dark nimbus.	
Cumulo-strati towards the N. and N. W., and cumuli and cirro-stratus in the remaining parts of the sky: the Sun is visible, but [is shining very faintly.	H B
Cirro-stratus and scud.	D
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,, the place of the Moon is visible.	D
,, ,, Jupiter and a few stars near the zenith are visible.	H B
Cirro-stratus and scud.	
Cumuli, cirro-stratus, and scud: a short time previously to this observation the sky was nearly overcast.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,, a few stars near the zenith are occasionally visible.	
,, ,,	
,, ,,	H B
There are large, grey, woolly clouds over the zenith, extending to the place of the Sun: the Sun gleams dimly through the clouds with his disk visible: near the horizon are cirro-strati, growing thin towards the zenith.	B
To the N. a thin cirro-stratus, to the S. a few ill-formed cumuli: the clouds are generally thin.	G
There are large woolly clouds covering the greater part of the sky: cirro-stratus in the S.	B
Overcast: cirro-stratus and scud.	H B
,, ,,	
,, ,,	
,, ,,	H B
The sky continued overcast with dark cirro-stratus and scud until $10^h. 55^m$, when the clouds became thinner, and shortly afterwards the Moon became visible, imbedded in white clouds; since that time Jupiter and one or two of the larger stars have been occasionally visible: at present the clouds are slightly broken in a few places, and they are all moving with great rapidity from the West, the current near the surface of the Earth being N. W.	G
Several times since the last observation there have been large breaks in the clouds, and the Moon has been shining brightly: at present the sky is quite covered with dark-coloured cirro-stratus of variable density: there is no upper cloud.	
Overcast since 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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 26. 18	29·960	51·0	48·5	2·5	. .	. .	. .	W	. .	. .	. .	W	¼	. .	. .	. .	10	. .
20	29·966	53·7	50·7	3·0	. .	. .	. .	WNW	. .	WNW	0·81	W	¼	. .	. .	. .	8	. .
22	29·972	56·6	51·7	4·9	46·3	10·3	. .	NW	. .	NW	0·39	NNW	¼	7·55	0·00	12·510	8	. .
Aug. 27. 0	29·984	61·1	53·9	7·2	. .	. .	. .	NW	. .	. .	. .	NW	¼	. .	. .	. .	9½	. .
2	29·965	63·1	55·8	7·3	. .	. .	. .	NNW	. .	. .	. .	NNW	¼	. .	. .	. .	7	. .
4	29·971	62·0	54·9	7·1	50·0	12·0	. .	W	. .	. .	. .	N	¼	. .	. .	. .	7	. .
6	29·967	61·4	54·7	6·7	. .	. .	65·8	NNW	. .	. .	. .	N	¼	. .	. .	. .	7	. .
8	29·967	58·5	52·7	5·8	. .	. .	42·8	NW	. .	NW	1·23	Calm	. .	. .	. .	. .	10	. .
10	29·986	55·5	51·7	3·8	48·5	7·0	—— 82·5 34·8	NNW	. .	. .	. .	Calm	. .	. .	. .	. .	10	. .
12	29·988	51·1	49·2	1·9	. .	. .	—— 60·0	N by W	. .	. .	. .	Calm	. .	. .	. .	. .	8	Transit
14	29·991	49·4	48·1	1·3	. .	. .	59·2	NNW	. .	. .	. .	Calm	. .	. .	. .	. .	7	Full
16	29·992	45·6	45·3	0·3	45·0	0·6	. .	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	5	. .
18	30·005	43·1	43·1	0·0	. .	. .	. .	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	1	. .
20	30·026	47·0	46·6	0·4	. .	. .	. .	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	6	. .
22	30·023	54·0	51·4	2·6	50·5	3·5	. .	Calm	. .	NNW	0·35	N	¼	7·55	0·00	12·510	0	. .
Aug. 28. 0	30·018	59·4	54·5	4·9	. .	. .	. .	Calm	. .	NW	0·16	NW	¼	. .	. .	. .	0	. .
2	30·014	63·6	57·1	6·5	. .	. .	. .	ENE	. .	. .	. .	E	¼	. .	. .	. .	0	. .
4	30·001	65·5	58·1	7·4	48·0	17·5	67·5	NE	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
6	29·987	62·0	56·6	5·4	. .	. .	44·6	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
8	30·000	55·4	52·7	2·7	. .	. .	——	Calm	. .	. .	. .	SE	¼–	. .	. .	. .	3	. .
10	30·006	51·6	51·2	0·4	51·0	0·6	83·0	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
12	30·008	49·2	48·5	0·7	. .	. .	36·8	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
14	30·012	46·6	46·7	-0·1	. .	. .	——	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	Transit: in Equator
16	30·004	46·0	45·9	0·1	46·0	0·0	60·0	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
18	30·004	45·0	45·1	-0·1	. .	. .	59·8	Calm	. .	. .	. .	SSE	¼	. .	. .	. .	0	. .
20	30·023	47·5	46·9	0·4	. .	. .	. .	Calm	. .	. .	. .	SE	¼	. .	. .	. .	0	. .
22	30·033	60·4	57·6	2·8	55·0	5·4	. .	Calm	. .	SE	0·31	SE	¼	7·55	0·00	12·510	0	. .
Aug. 29. 0	30·025	67·4	60·1	7·3	. .	. .	. .	SE	. .	NNE	0·06	SE	¼–	. .	. .	. .	0	. .
2	30·010	70·4	62·4	8·0	. .	. .	. .	ENE	. .	. .	. .	E	¼	. .	. .	. .	1	. .
4	29·997	68·4	60·7	7·7	50·8	17·6	73·5	E	. .	. .	. .	E	¼	. .	. .	. .	0	. .
6	29·991	64·2	57·5	6·7	. .	. .	46·8	E	. .	. .	. .	E	¼	. .	. .	. .	0	. .
8	30·002	56·6	52·8	3·8	. .	. .	——	ESE	. .	. .	. .	E	¼	. .	. .	. .	1	. .
10	30·009	53·2	52·0	1·2	50·2	3·0	100·2	Calm	. .	. .	. .	SE	¼	. .	. .	. .	0	. .
12	30·017	51·4	50·4	1·0	. .	. .	37·3	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
14	30·008	48·9	48·9	0·0	. .	. .	——	Calm	. .	ESE	1·20	Calm	. .	. .	. .	. .	0	Transit
16	30·017	47·4	47·8	-0·4	48·5	-1·1	60·0	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
18	30·016	46·0	46·4	-0·4	. .	. .	60·0	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
20	30·020	50·7	50·9	-0·2	. .	. .	. .	Calm	. .	. .	. .	Calm	. .	. .	. .	. .	0	. .
22	30·033	61·1	57·2	3·9	54·0	7·1	. .	ESE	. .	E	0·25	ESE	¼	7·55	0·00	12·510	8	. .
Aug. 30. 0	30·037	64·6	59·6	5·0	. .	. .	. .	ESE	. .	. .	. .	ESE	¼	. .	. .	. .	9½	. .
2	30·038	66·7	60·6	6·1	. .	. .	. .	E by N	. .	ENE	0·45	E by N	½	. .	. .	. .	8	. .
4	30·031	65·4	59·8	5·6	52·5	12·9	. .	ESE	. .	. .	. .	E	¼	. .	. .	. .	8	. .
6	30·044	62·2	58·3	3·9	. .	. .	. .	E	. .	. .	. .	Calm	. .	. .	. .	. .	9	. .
8	30·053	57·8	55·2	2·6	. .	. .	. .	E by S	. .	. .	. .	Calm	. .	. .	. .	. .	1	. .

BAROMETER.—Aug. 27d and 28d. The daily range on both of these days was the same, and it was the least in the month.
Aug. 28d and 29d. The least difference of the mean daily heights for consecutive days in the month occurred.
DRY THERMOMETER.—Aug. 27d. 18h. The reading was the lowest in the month.
Aug. 28d. The mean daily temperature was the least in the month.
Aug. 28d. 14h and 18h, and Aug. 29d. 16h, 18h, and 20h. The readings were lower than those of the Wet Thermometer.
Aug. 29d and 31d. The daily range on both of these days was the same, and it was the greatest in the month.
TEMPERATURE OF THE DEW POINT.—Aug. 27d. The mean daily value was the least in the month. On Aug. 26d. 16h and Aug. 27d. 16h the readings as observed were the lowest in the month.
Aug. 29d. 16h. The temperature was higher than that of the air.

REMARKS.	Observer.
Overcast.	G
Within the last two hours the clouds have become much thinner; the zenith indeed is free from cloud, but is obscured by a thick haze: there have been occasional faint gleams of sunshine.	G
Cirro-stratus and scud: there is an extensive break near the S. E.	H B
Cumuli, cirro-stratus, and scud: there is a slight haze.	B
Cirro-stratus and scud towards the N. and N. W., and also a few cumuli; there is also a considerable quantity of scud towards the S. W.	H B
The zenith and the parts around it are of a faint blue colour: a thin cirro-stratus is generally prevalent: in the S. a few ill-formed [cumuli: a haze.	G
A good deal of curved cirri about and around the zenith; a thin cirro-stratus everywhere else.	
A thin but not uniform cirro-stratus covers the sky.	
A thin and high cirro-stratus covers the sky: about ten minutes since, α Cygni was seen for a short time, and the Moon's place has been visible all the evening: at 10^m after this observation a lunar halo, 44° in diameter, became visible, and also a small corona appeared round the Moon.	G
The sky is nearly covered by a thin veil of cloud; Jupiter and the Moon are shining through it: a lunar halo has been visible since 10^h, its diameter is about 40°.	D
Thin cirro-stratus: the halo is still visible.	
,,	
A few fragments of scud are scattered in various directions.	
Cirro-stratus and light fleecy clouds.	D
Fog and light cirro-stratus, through which the Sun is dimly shining.	H B
Light cirro-stratus and mist as at the previous observation: at $0^h.50^m$ the upper current changed to the E.	
Thin cirro-stratus and fog.	H B
The sky is without cloud, though a great haze prevails.	D
,, ,,	D
The sky is without cloud, except near the horizon: a great haze prevails, the Moon being just visible through it.	G
Cloudless: hazy.	D
,, thick haze near the horizon.	H B
,, ,,	
,, the haze has diminished considerably since the last observation.	
Cloudless, but hazy.	
Cloudless: a thick fog.	H B
A beautiful sky, with a slight haze on the horizon.	B
Cloudless, with the exception of a few small fragments of scud, to no numerical amount.	D
A few fragments of scud in different directions.	D
Cloudless.	H B
,,	
Cloudless, with the exception of cirro-stratus and scud near the horizon.	
Splendidly clear.	H B
Cloudless.	B
A beautiful clear, cloudless night: there is a dark line of fog over the River.	
,, there is a ground fog over the lower part of the Park, which does not extend higher than the tops [of the trees.	
,, the mist is more general, and spreads upwards.	
The mist is clearing off, leaving a bright clear sky.	B
Clouds first appeared at about $20^h.25^m$, and they have been gradually increasing up to the present time: the sky is now nearly [covered with cirro-stratus and scud.	D
Cirro-stratus and scud.	D
Cirro-stratus and scud, the scud moving slowly from the E., where there are a few breaks.	H B
Large broken masses of cumuli and scud.	B
Cumuli, cirro-stratus, and scud: a considerable break near the N. E. horizon.	
Cloudless, with the exception of a little cirro-stratus in the N.	B

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Aug. 27^d. The mean daily values were the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.—Aug. 28^d. The mean daily value was the greatest in the month.
Aug. 29^d and 30^d. The difference of the mean daily values for consecutive days was the least in the month.

DEGREE OF HUMIDITY.—Aug. 27^d. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.—Aug. $26^d.22^h$ and Aug. $29^d.22^h$. The readings were higher than those of the Dry Thermometer at 18^h.

AMOUNT OF CLOUDS.—Aug. 29^d. The mean daily value was the least in the month.

CLOUDS.—Aug. $27^d.22^h$ to $29^d.20^h$. With little exception the sky was cloudless; it is the longest period of clear sky in the month.

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.	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.	By Estimation. Direction.	Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Aug. 30. 10	30·069	56·0	54·7	1·3	53·0	3·0	69·0 46·2	E by N	..	..	..	Calm	..	..	..	..	0	..
12	30·102	52·7	52·4	0·3	..	..	—— 92·5	E by N	..	..	..	Calm	..	..	..	..	0	..
14	30·105	50·6	50·6	0·0	..	..	38·7	Calm	..	..	..	Calm	..	..	..	..	0	Transit
16	30·114	47·6	48·0	-0·4	47·5	0·1	——	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·143	46·3	46·6	-0·3	..	..	60·5	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·189	51·3	51·0	0·3	..	..	59·8	Calm	..	..	..	Calm	..	..	..	..	¼	..
22	30·212	63·7	59·2	4·5	56·0	7·7	..	Calm	..	E	2·30	SE	¼	7·55	0·00	12·510	2	..
Aug. 31. 0	30·211	69·3	62·3	7·0	..	..	..	ESE	..	..	..	ESE	¼	..	..	..	3	..
2	30·202	71·7	63·5	8·2	..	..	..	..	..	..	..	SSE	¼	..	..	..	0	..
4	30·196	69·8	62·5	7·3	58·0	11·8	74·7	..	..	..	..	E	¼	..	..	..	0	..
6	30·208	65·5	61·0	4·5	..	..	46·4	..	..	..	..	E	¼	..	..	..	0	..
8	30·227	58·7	57·0	1·7	..	..	——	..	..	..	..	E	¼—	..	..	..	0	..
10	30·237	55·8	55·3	0·5	55·0	0·8	100·8	..	..	..	..	Calm	..	..	..	..	0	..
12	30·244	53·2	52·6	0·6	..	..	39·6	..	..	..	..	SE	¼	7·55	0·00	12·510	0	..
14	..	..	..	..	..	..	——	..	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	61·0	..	..	..	..	..	..	..	..	..	..	Transit
18	..	..	..	..	..	..	60·5	..	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	30·271	64·5	61·2	3·3	59·0	5·5	..	..	..	E	0·42	Calm	..	7·55	0·00	12·510	0	..
Sep. 1. 0	..	..	..	..	..	..	..	E	..	..	..	..	..	..	..	..	..	..
2	30·261	75·5	65·0	10·5	..	..	..	..	..	..	..	Calm	..	..	..	..	4	..
4	..	..	..	..	..	..	78·0	..	..	..	..	..	..	..	..	..	..	..
6	30·234	71·1	62·6	8·5	53·0	18·1	48·6	..	..	..	..	E	¼	..	..	..	3	..
8	30·248	62·5	58·7	3·8	..	..	——	..	..	..	..	E	¼	..	..	..	1	..
10	..	..	..	..	..	..	104·6	..	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	37·5	..	..	..	..	..	..	..	..	..	..	..
14	30·225	50·8	51·1	-0·3	..	..	——	..	..	..	..	Calm	..	..	..	..	0	..
16	30·208	49·5	49·6	-0·1	48·5	1·0	62·0	..	..	..	..	Calm	..	..	..	..	0	Transit
18	30·206	48·5	48·8	-0·3	..	..	61·0	..	..	..	..	Calm	..	..	..	..	0	..
20	30·214	52·7	53·1	-0·4	..	..	..	..	..	..	..	Calm	..	..	..	..	3	..
22	30·214	60·1	59·4	0·7	58·5	1·6	..	..	..	E	0·76	Calm	..	7·55	0·00	12·510	3	..
Sep. 2. 0	30·188	73·1	64·4	8·7	..	..	..	E	..	..	..	ENE	¼—	..	..	..	2	..
2	30·163	73·0	63·6	9·4	..	..	..	ENE	..	..	..	E	¼	..	..	..	3	..
4	30·130	70·8	61·9	8·9	53·2	17·6	75·8	E	..	..	..	E by N	¼	..	..	..	2	..
6	30·101	65·6	59·5	6·1	..	..	51·6	E	..	..	..	E	¼	..	..	..	3½	..
8	30·095	59·3	55·8	3·5	..	..	——	E	..	E	1·00	E by N	¼	..	..	..	½	..
10	30·091	56·4	55·5	0·9	53·8	2·6	100·5	ENE	..	..	..	Calm	..	..	..	..	8	..
12	30·082	55·1	54·3	0·8	..	..	42·6	E	..	ENE	0·65	E	¼	..	..	..	¼	..
14	30·052	51·6	51·8	-0·2	..	..	——	NE	..	..	..	Calm	..	..	..	..	0	..
16	30·018	52·8	52·8	0·0	53·0	-0·2	62·5	NE	..	..	..	Calm	..	..	..	..	10	..
18	29·994	56·4	56·6	-0·2	..	..	61·5	NE	..	..	..	Calm	..	..	..	..	10	Transit
20	29·994	61·0	59·8	1·2	..	..	..	ENE	..	..	..	NE	¼	..	..	..	8	..
22	29·998	64·8	59·8	5·0	55·8	9·0	..	E by N	½ to ¾	NE	0·80	ENE	¾	7·55	0·00	12·510	5	..
Sep. 3. 0	29·977	68·7	61·4	7·3	..	..	..	ENE	0 to 1½	..	..	ENE	½	..	..	..	6	..
2	29·961	67·9	63·6	4·3	..	..	..	ENE	0 to 2	..	..	ENE	½	..	..	..	4	..
4	29·923	65·4	60·4	5·0	55·3	10·1	..	NE	0 to ½	..	..	ENE	½	..	..	..	3	..
6	29·898	61·3	58·9	2·4	..	..	..	NE	0 to 1	..	..	ENE	¾	..	..	..	10	..

BAROMETER.

Aug. 31d. The mean daily height was the greatest in the month.

Aug. 31d. 12h. The reading was the highest in the month.

DRY THERMOMETER.

Aug. 30d. 16h and 18h; Sep. 1d. 14h, 16h, 18h, and 20h; Sep. 2d. 14h and 18h. The readings were lower than those of the Wet Thermometer.

Sep. 1d. 2h. The reading was the highest in the month.

Sep. 2d. The daily range was the greatest in the month.

Sep. 2d 0h. The reading was the highest in the month at the two-hourly observations.

Sep. 2d. 2h. The greatest difference between its reading and that of the Wet Thermometer occurred.

REMARKS.	Observer.
Since 9^{h} the amount of cloud has been very variable, the sky being at times overcast, and then cloudless; at present it is cloudless, except a small portion, to no numerical extent, in the S.W.	G
The sky has been wholly covered with cloud since the last observation, and it is now cloudless; the cloud covered the sky in less than five minutes from its first appearance, and as rapidly disappeared.	G
Cloudless.	D
,,	D
,, a thick fog.	H B
Cloudless, with the exception of a little scud in the S. E.	B
Small white cumuli range along the horizon from S. E. to S.W.: some loose scuddy cumuli are about the zenith, and to the N. of it.	G
Cumuli and small fragments of scud.	H B
Cloudless.	B
,,	H B
,,	G
Cloudless, with the exception of a few cirri in the S. E.	B
Cloudless.	D
,,	H B
,,	B
Light streams of cirri.	
,,	B
There have been many yellow, curved cirri about the sky: the day has been very fine.	G
Cloudless.	H B
,,	
,, a thick fog.	
Cirro-stratus and scud: very foggy.	H B
Cirro-stratus and fog.	D
Cirri in different directions.	
,,	D
Light cirri in various parts of the sky.	H B
Cumuli, cirro-cumuli, and a few cirri.	
Cirro-stratus and haze near the S. horizon.	
Within the last twenty minutes the greater part of the sky has been obscured: a few stars are visible between the clouds.	H B
A few cirri about the place of the Moon; the sky is otherwise cloudless.	D
Cloudless.	
Overcast: cirro-stratus.	
,, ,,	
Cirro-stratus: breaks in every direction, but chiefly S. of the zenith.	D
Cumuli: fleecy clouds and scud.	H B
Cumuli and fragments of scud.	H B
Scud passing quickly over the sky.	B
Cumuli, fleecy clouds, and scud, in different directions.	H B
Overcast: cirro-stratus and scud.	H B

TEMPERATURE OF THE DEW POINT.

Sep. 1^{d}. 6^{h}. The difference between the observed temperatures of the air and of the dew point was greater at this time than at any other [during the month.

Sep. 2^{d}. 16^{h}. The temperature was higher than that of the air.

OSLER'S ANEMOMETER.—Aug. 31^{d}, at 1^{h}. 40^{m}, and Sep. 1^{d}, at 0^{h}. 25^{m}, the registering pencil went off the rack-work.

RAIN.

Aug. 31^{d}. 12^{h}. The amount of rain collected in rain-gauge No. 4 during the month of August was $1^{in}{\cdot}71$, and that collected in the rain-gauge at the Greenwich Hospital Schools for the same period was $1^{in}{\cdot}99$.

MINIMUM FREE THERMOMETER.

Sep. 1^{d}. 22^{h}. The reading was higher than that of the Dry Thermometer at 18^{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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 3. 8	29·895	60·2	59·7	0·5	..	..	71·4	NE	0 to $\frac{1}{2}$	..	..	E	$\frac{3}{4}$	..	..	..	10	..
10	29·907	59·8	58·7	1·1	57·5	2·3	59·6	ENE	0 to 1	ENE	2·18	ENE	$\frac{1}{2}$	..	..	..	10	..
12	29·912	60·5	58·4	2·1	..	..		NE	..	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
14	29·900	60·4	59·4	1·0	..	..	93·8	NE	..	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
16	29·879	61·0	60·9	0·1	61·0	0·0	56·2	NE	..	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
18	29·859	61·3	61·0	0·3	..	..		NE	..	..	..	NE	$\frac{1}{2}$	..	..	..	10	Transit: Apogee
20	29·867	61·0	60·2	0·8	..	..	63·0	NE	0 to 1	..	..	ENE	$\frac{1}{2}$	..	..	..	10	..
22	29·858	63·5	61·6	1·9	58·8	4·7	62·5	NE	$\frac{1}{4}$ to 1	NE	6·41	ENE	$\frac{1}{2}$	7·55	0·00	12·510	10	..
Sep. 4. 0	29·851	67·8	63·5	4·3	..	..	..	NE	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	E by N	$\frac{1}{2}$	..	..	..	8	..
2	29·843	72·8	64·3	8·5	..	..	..	ENE	$\frac{1}{2}$ to 3	..	..	E by N	$\frac{1}{2}$	..	..	..	1	..
4	29·829	70·6	63·7	6·9	60·0	10·6	..	ENE	$\frac{1}{4}$ to 1	..	..	ENE	$\frac{1}{4}$	..	..	..	2	..
6	29·818	68·3	62·4	5·9	..	..	73·7	ENE	$\frac{1}{4}$ to 2	..	..	NE	$\frac{1}{2}$	..	..	..	0	..
8	29·829	62·2	59·9	2·3	..	..	59·4	ENE	..	..	..	ENE	$\frac{1}{2}$	..	..	..	0	..
10	29·840	59·2	58·4	0·8	58·0	1·2		ENE	0 to 1	ENE	1·20	E	$\frac{1}{4}$	..	..	..	10	Last Qr.
12	29·817	60·1	59·3	0·8	..	..	98·0 51·5	N by E	..	..	..	Calm	..	..	..	..	10	..
14	29·797	61·5	60·8	0·7	..	..	63·0	NNE	..	..	..	Calm	..	..	..	..	10	..
16	29·754	63·5	62·5	1·0	62·0	1·5	62·5	NE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
18	29·739	62·9	62·3	0·6	..	..	..	NE	..	NE	1·05	NE	$\frac{1}{4}$	..	..	..	10	Transit
20	29·737	62·8	62·0	0·8	..	..	..	NE	0 to $\frac{1}{2}$	..	..	NE	$\frac{1}{4}$+	..	..	..	10	..
22	29·722	63·1	62·2	0·9	62·0	1·1	..	NE	0 to $\frac{1}{2}$	ENE	0·80	ENE	$\frac{1}{2}$	7·55	0·00	12·510	10	Greatest declination N.
Sep. 5. 0	29·706	66·5	63·3	3·2	..	..	..	NE	0 to $\frac{3}{4}$	..	..	ENE	$\frac{1}{4}$	..	..	..	9	..
2	29·685	66·6	63·1	3·5	..	..	..	ENE	0 to 2	ENE	0·53	NE	$\frac{1}{4}$	..	..	..	10	..
4	29·684	69·1	64·5	4·6	62·0	7·1	..	E	0 to 1	..	..	E	$\frac{1}{2}$–	..	..	..	5	..
6	29·680	69·0	64·6	4·4	..	..	..	E by N	..	..	..	E	$\frac{1}{4}$	..	..	..	7	..
8	29·700	63·3	61·9	1·4	..	..	71·3 57·0	E by N	..	..	..	Calm	..	..	..	..	3	..
10	29·724	61·1	61·0	0·1	61·0	0·1		E	..	..	..	Calm	..	..	..	..	0	..
12	29·730	59·7	59·7	0·0	..	..	89·4 48·7	E	..	..	..	E	$\frac{1}{4}$	..	..	..	6	..
14	29·721	59·2	58·9	0·3	..	..	64·0	E	..	..	..	Calm	..	..	..	..	3	..
16	29·718	58·5	58·7	–0·2	59·0	–0·5	63·2	Calm	..	E	1·09	E by N	$\frac{1}{4}$	..	..	..	2	..
18	29·721	56·5	56·7	–0·2	..	..	.. ..	Calm	..	..	..	Calm	..	..	..	..	3	..
20	29·736	60·9	60·0	0·9	..	..	..	Calm	..	..	..	Calm	..	..	..	..	8	Transit
22	29·755	67·5	64·5	3·0	62·0	5·5	..	Calm	..	S	1·16	S	$\frac{1}{4}$	7·55	0·00	12·510	9	..
Sep. 6. 0	29·765	72·2	67·0	5·2	..	..	..	SW	..	..	..	S	$\frac{1}{4}$	..	..	..	5	..
2	29·786	70·3	65·2	5·1	..	..	..	SW	0 to $\frac{1}{2}$	..	..	S by W	$\frac{1}{4}$+	..	..	..	8	..
4	29·787	69·6	62·9	6·7	57·5	12·1	73·8	SSW	..	..	..	SSW	$\frac{1}{4}$	..	..	..	2	..
6	29·801	66·3	61·4	4·9	..	..	~~62·0~~	SSW	..	..	..	SSW	$\frac{1}{2}$	..	..	..	8	..
8	29·818	61·8	59·6	2·2	..	..		Calm	..	..	..	SSW	$\frac{1}{4}$+	..	..	..	7	..
10	29·834	59·4	58·5	0·9	59·3	0·1	95·3	Calm	..	..	..	SSW	$\frac{1}{4}$	..	..	..	5	..
12	29·828	59·6	59·0	0·6	..	..	52·4	Calm	..	..	..	Calm	..	..	..	..	9	..
14	29·809	59·6	59·1	0·5	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·785	59·5	59·4	0·1	59·5	0·0	64·5	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·784	59·5	59·7	–0·2	..	..	63·8	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·780	61·6	61·6	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
22	29·786	65·6	64·5	1·1	63·8	1·8	..	Calm	..	SSW	3·10	S by W	$\frac{1}{4}$	7·70	0·19	12·670	10	..

BAROMETER.

Sep. 6d and 7d. The least difference of the mean daily heights in the month for consecutive days occurred.

DRY THERMOMETER.

Sep. 5d. 16h and 18h, and Sep. 6d. 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Sep. 5d. 16h. The temperature was higher than that of the air.

WEIGHT OF A CUBIC FOOT OF AIR.

Sep. 6d and 7d. The difference of the mean daily values for consecutive days was the least in the month.

REMARKS.	Observer.
Overcast: cirro-stratus and scud: a very thin, misty rain falling.	D
,, ,,	D
,, ,,	G
,, ,,	
,, ,,	
,, ,,	
,, ,,	G
,, ,,	H B
Cirro-stratus and scud: breaks towards the N. E. and N.: the Sun is shining occasionally.	H B
Cirri and scud in the N. E.: the cirri have their western terminations curled upwards.	B
A few loose clouds are scattered about the sky, and near the horizon all round there are clouds of the cumulus kind.	G
There are a few detached clouds near the horizon, but of no numerical amount.	
Cloudless, except a bank of slate-coloured cloud near the horizon in the N.W., but to no numerical extent: a red sunset.	
The sky continued cloudless till $9^h.30^m$, at which time a large quantity of dark scud arose in the E., and shortly afterwards quite covered the sky: at present the sky is covered with dark scud, which is high and thin.	G
The sky is covered with a dense stratum of fog, scarcely formed into cirro-stratus, though it perfectly conceals the stars: the night is very dark: sounds are unusually distinct.	B
The same as at the last observation.	
Cirro-stratus: a break in the N.	
Cirro-stratus covers the whole sky with one unbroken cloud.	
A little misty rain has fallen since the last observation: the sky is still covered with cirro-stratus.	B
Overcast: cirro-stratus and scud: a few drops of rain are falling.	H B
Cirro-stratus and scud: breaks in various parts of the sky.	
Overcast: cirro-stratus and scud.	H B
Cumuli, cumulo-strati, cirri, and scud: the cumulo-strati are mostly in the S. E.	B
Cumuli, cumulo-strati, scud, and a few cirri: a few large drops of rain fell about twenty minutes since: there is a large cumulo-stratus at a low altitude, through the lower part of which the Sun is faintly visible.	
Large ragged cumuli in the N.W., and a small quantity of scattered scud.	
Cloudless, with the exception of a few cirro-strati in the N. E., where there is a good deal of summer lightning, of a pale yellow colour.	B
Thin cirro-stratus in different directions: since the last observation several vivid flashes of lightning have been seen in the N. E. and N., but they are not so frequent at present.	H B
Cirro-stratus and haze.	
Light fleecy clouds near the Moon's place, and cirro-stratus and haze near the horizon: flashes of lightning have been occasionally visible in the N.W., but the electrometer has not been affected.	
Cirro-cumuli and cirro-stratus, principally towards the N. E.: the sky towards the S. is nearly free from cloud.	
Cirro-stratus and scud.	H B
,,	D
Cumuli, cirro-stratus, and scud: very dark in the S.	B
Cumuli, cirro-stratus, and scud.	B
Cumuli, a few cirri, and fragments of scud.	H B
Cirro-stratus and scud.	
Thin cirro-stratus and scud: several flashes of lightning have been seen in the S. and S. E. during the evening.	
Every part of the sky is now covered with a thin cirro-stratus, through which several stars are visible (chiefly stars near the zenith).	H B
A few stars are shining in the zenith; with that exception the sky is covered with cirro-stratus.	D
Overcast: cirro-stratus: a few drops of rain are falling.	
,, ,, rain falling.	
,, rain falling heavily.	
,, no rain falling.	D
,, ,,	H B

MINIMUM FREE THERMOMETER.

Sep. $4^d.22^h$. The reading was higher than that of the Dry Thermometer at 10^h.
Sep. $5^d.22^h$. The reading was higher than that of the Dry Thermometer at 18^h.
Sep. $6^d.22^h$. The reading was higher than that of the Dry Thermometer between 8^h and 20^h: it seems probable that the reading was 5° too great.

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.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 7. 0	29·790	66·4	64·7	1·7	..	..	..	SW	..	..	..	SSW	¼	..	..	..	10	..
2	29·783	72·5	67·5	5·0	..	..	..	SW	0 to ½	..	..	SW	¼	..	..	..	7	..
4	29·784	71·3	66·5	4·8	62·0	9·3	74·0	SW	..	..	..	SW	½	..	..	..	4	..
6	29·789	69·6	64·8	4·8	..	..	56·8	SW	..	..	..	SW	¼	..	..	..	5	..
8	29·795	63·0	61·3	1·7	..	..	—	S by W	..	..	..	SW	¼	..	..	..	8	..
10	29·810	60·0	59·3	0·7	59·0	1·0	92·0	SW	..	..	..	SW	¼–	..	..	..	1	..
12	29·809	58·0	57·7	0·3	..	..	49·0	SSW	..	..	..	Calm	..	..	..	..	8	..
14	..	..	..	..	..	..	—	Calm	..	SW	2·62	..	..	..	..	..	..	..
16	..	..	..	..	..	..	65·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	63·8	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·770	66·4	61·8	4·6	..	..	..	N by E	..	N	0·25	Calm	..	7·70	0·00	12·670	1	Transit
Sep. 8. 0	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
4	29·689	73·4	65·2	8·2	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	4	..
6	29·656	68·3	62·9	5·4	..	..	..	E	..	..	..	ESE	¼	..	..	..	7	..
8	..	..	..	..	..	..	72·7	ENE	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	55·5	ENE	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	—	NE	½ to 1	..	..	..	..	..	..	..	..	..
14	29·563	57·0	56·0	1·0	..	..	95·4	ENE	..	..	..	Calm	..	..	..	..	10	..
16	29·564	57·3	56·6	0·7	55·0	2·3	49·5	NNE	..	..	..	Calm	..	..	..	..	10	..
18	29·569	56·2	55·2	1·0	..	..	— 65·0	N	..	..	..	N	¼	..	..	..	10	..
20	29·596	55·6	55·7	–0·1	..	..	64·0	N	..	..	..	N	¼	..	..	..	10	..
22	29·612	57·1	56·9	0·2	57·3	–0·2		N	..	NNE	2·02	N by W	¼	7·94	0·30	12·920	10	Transit
Sep. 9. 0	29·621	62·5	60·5	2·0	..	..	..	NE	..	..	..	NNE	¼	..	..	..	10	..
2	29·623	62·2	60·6	1·6	..	..	..	NE	..	..	..	NNE	¼	..	..	..	10	..
4	29·616	62·5	60·2	2·3	..	..	64·5	NE	..	NNE	0·23	N	¼–	..	..	..	10	..
6	29·625	60·8	59·2	1·6	..	..	55·8	Calm	..	..	..	N by E	¼–	..	..	..	10	..
8	29·647	58·4	58·6	–0·2	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·653	58·3	58·4	–0·1	58·0	0·3	72·5	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·656	57·6	57·7	–0·1	..	..	50·0	Calm	..	N	0·20	Calm	..	..	..	..	10	..
14	29·658	57·5	57·7	–0·2	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·653	57·0	57·3	–0·3	57·0	0·0	65·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·661	57·3	57·5	–0·2	..	..	64·2	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·692	55·5	55·3	0·2	..	..	..	..	..	..	..	Calm	..	..	..	..	10	..
22	29·721	55·9	55·3	0·6	55·0	0·9	..	..	..	W	0·25	Calm	..	8·07	0·13	13·045	10	Transit
Sep. 10. 0	29·737	57·6	55·2	2·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·741	60·6	57·0	3·6	..	..	..	SW	..	W	0·53	SW	¼	..	..	..	8	..
4	29·753	62·4	56·8	5·6	51·0	11·4	64·0 44·8 —	WNW	..	WNW	0·10	NNW	¼	..	..	..	7	..
6	29·761	60·8	55·9	4·9	..	..	80·8	NW	..	..	..	NNW	¼	..	..	..	3	..
8	29·799	58·6	55·5	3·1	..	..	33·5	NNW	..	..	..	NNW	¼	..	..	..	10	..
10	29·828	57·3	54·7	2·6	52·2	5·1	—	NW	..	NW	0·17	NNW	¼	..	..	..	8	..
12	29·856	54·6	52·2	2·4	..	..	66·5	NNW	..	..	..	NNW	¼	..	..	..	10	..
14	29·861	51·7	49·8	1·9	..	..	63·5	NW	..	..	..	NW	¼	..	..	..	4	..
16	29·864	46·6	46·7	–0·1	46·5	0·1	..	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·894	45·0	45·3	–0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..

BAROMETER.

Sep. 7d. The daily range was the least in the month.

Sep. 9d. The mean daily height was the least in the month.

DRY THERMOMETER.

Sep. 8d. 20h, and Sep. 9d. 8h to 18h. The readings were lower than those of the Wet Thermometer.

Sep. 9d. The daily range was the least in the month.

TEMPERATURE OF THE DEW POINT.

Sep. 7d. The mean daily value was the greatest in the month.

Sep. 8d. 22h The temperature was higher than that of the air.

Sep. 9d. 4h The observation was inadvertently omitted.

REMARKS.	Observer.
Overcast: no rain falling.	H B
Cumulo-strati towards the N. E., and cirro-cumuli and scud in various directions.	H B
Cumuli and scud.	D
Cirri, fleecy clouds, and scud: there are a few cumuli near the horizon in the N.	
Fleecy clouds and scud: a red sunset. [last observation.	
A few lines of stratus in the horizon, but chiefly in the S.: several flashes of sheet lightning have been visible in the S. since the	D
Many flashes of lightning have been seen in the S., S. E., and E., near the horizon: the appearance of the sky has been very variable, at times a large portion of it being free of cloud, and at other times principally covered with a thin cirro-stratus; at present it is nearly covered with a thin film of cloud, through which in many places the stars are visible.	G
Cirri scattered in various directions.	D
Cirri and light clouds in every part of the sky: hazy.	D
The sky is nearly covered with thin cirro-stratus: after this time the sky became overcast, and at $7^h.10^m$ the clouds in the South became black, and shortly afterwards several flashes of lightning emanated from them: lightning continued at intervals of about two minutes till $8^h.55^m$; at that time thunder was heard, and lightning continued as before till $12^h.40^m$: heavy rain commenced falling about $8^h.40^m$. [visible.	G
Clouds over the whole sky, being thinner in some places than in others, though in no place sufficiently so to allow the stars to be	B
Clouds: there was a good deal of lightning and several claps of thunder between $7^h.40^m$ and $10^h.40^m$; the lightning was in the S., and some of it of a blue colour.	
Cirro-stratus and scud: there is a very slight misty rain falling.	
,,	B
A very thin rain falling.	H B
Overcast: cirro-stratus and scud: there are several breaks near the zenith, but of no numerical amount.	
Nimbi, cirro-strati, and scud.	H B
Cirro-stratus, scud, and haze.	B
,, a very light breeze: rain began to fall a few minutes after the observation.	
Cirro-stratus and fog.	
,,	B
Overcast: cirro-stratus and scud: a thin misty rain is falling, and there is a dense fog in the Park.	H B
Overcast: cirro-stratus and scud.	
,, ,, rain fell rather heavily about 14^h.	
Cirro-stratus and fog: a thin rain falling.	
Overcast: cirro-stratus and scud: no rain.	H B
,, ,,	D
Cirro-stratus, scud, and fog: very gloomy and dark.	B
Cirro-stratus and scud: there is an extensive break near the horizon in the N. and N. E., and a smaller one near the horizon in the S.; up to this time the day has been very gloomy.	D
Since the last observation the sky has been at times nearly free from cloud, but at present the greater part is covered with cirro-stratus and scud, the only extensive break being towards the N. and N. E.: there are also a few cumuli in different directions.	H B
Cumuli towards the N., cirro-cumuli in the S. E., and cirro-stratus and haze near the horizon.	
Overcast: cirro-stratus and scud.	
Cirro-stratus and scud: a few stars are visible in different parts of the sky.	H B
Overcast: cirro-stratus.	D
Cirro-stratus and scud: the whole of the sky N. of the zenith is clear.	
Cloudless.	
,,	

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Sep. 7^d. The mean daily values were the greatest in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Sep. 9^d. The mean daily value was the least in the month: the same values occurred on the 18th day.

MINIMUM FREE THERMOMETER.—Sep. $9^d.22^h$. The reading was higher than that of the Dry Thermometer at 20^h.

OSLER'S ANEMOMETER.—Sep. $9^d.18^h.30^m$. The self-registering pencil went off the rack-work.

TEMPERATURE OF THE WATER OF THE THAMES.—Sep. $10^d.22^h$. The highest reading in the month occurred.

CLOUDS.—Sep. $8^d.14^h$ to $10^d.0^h$. The sky was covered with cloud: it is the longest cloudy period in the month.

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.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 10. 20	29·901	48·0	48·0	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·915	56·6	53·6	3·0	49·5	7·1	..	NNW	..	NNW	0·40	N	¼	8·07	0·00	13·050	1	..
Sep. 11. 0	29·913	61·4	55·7	5·7	..	..	..	N	..	..	..	N by W	¼–	..	..	..	2	Transit
2	29·891	64·5	56·9	7·6	..	..	..	N by E	..	..	..	N by W	¼–	..	..	..	3	..
4	29·871	64·8	57·4	7·4	51·0	13·8	69·0	..	..	..	..	NNW	¼	..	..	..	8	..
6	29·874	60·6	55·8	4·8	..	..	49·8	..	..	NNW	0·45	NNW	¼	..	..	..	9½	..
8	29·883	55·6	53·2	2·4	..	..		..	..	..	..	Calm	..	..	..	..	10	..
10	29·881	55·7	53·7	2·0	52·0	3·7	94·3	..	..	..	..	Calm	..	..	..	..	10	..
12	29·880	53·2	52·0	1·2	..	..	39·9	..	..	..	..	Calm	..	..	..	..	0	..
14	29·867	49·7	49·6	0·1	..	..		..	..	..	..	Calm	..	..	..	..	0	..
16	29·868	51·5	50·6	0·9	49·5	2·0	65·0	..	..	..	..	Calm	..	..	..	..	10	..
18	29·879	52·0	51·5	0·5	..	..	63·0	..	..	..	..	Calm	..	..	..	..	10	..
20	29·906	54·2	52·9	1·3	..	..	..	..	..	..	..	Calm	..	..	..	..	10	..
22	29·925	58·3	54·9	3·4	52·0	6·3	..	..	..	W	0·76	Calm	..	8·07	0·00	13·050	10	..
Sep. 12. 0	29·931	62·3	58·6	3·7	..	..	..	WSW	..	..	..	W by S	¼	..	..	..	10	Transit In Equator
2	29·945	63·1	58·1	5·0	..	..	..	WSW	..	..	..	W by S	¼	..	..	..	10	New
4	29·944	63·4	58·0	5·4	52·0	11·4	66·9	SW	..	..	..	W by S	¼	..	..	..	10	..
6	29·964	62·3	58·0	4·3	..	..	52·9	W	..	..	..	W by S	¼–	..	..	..	9	..
8	29·978	58·5	55·2	3·3	..	..		Calm	..	..	..	Calm	..	..	..	..	3	..
10	30·002	57·1	55·2	1·9	53·5	3·6	80·8	Calm	..	NNW	0·61	Calm	..	..	..	..	9½	..
12	30·025	56·1	53·5	2·6	..	..	44·7	NE	..	..	..	Calm	..	..	..	..	10	..
14	30·034	54·5	52·7	1·8	..	..	63·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·034	53·8	52·2	1·6	50·0	3·8	62·5	Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·039	52·5	50·3	2·2	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
20	30·050	54·2	52·2	2·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	30·064	59·1	55·2	3·9	52·2	6·9	..	Calm	..	NNE	0·59	E	¼	8·07	0·00	13·050	9½	..
Sep. 13. 0	30·070	65·8	59·5	6·3	..	..	..	WSW	..	..	..	SW by W	¼–	..	..	..	10	..
2	30·052	64·8	58·3	6·5	..	..	..	SW	..	..	..	SW by W	¼–	..	..	..	9½	Transit
4	30·045	64·5	58·4	6·1	55·0	9·5	68·0	WSW	..	WSW	0·77	SW	¼	..	..	..	8	..
6	30·024	63·2	57·7	5·5	..	..	53·8	Calm	..	..	..	SW	¼	..	..	..	7	..
8	30·028	58·4	55·0	3·4	..	..		Calm	..	..	..	SW	¼	..	..	..	10	..
10	30·028	56·7	53·7	3·0	51·5	5·2	90·1	Calm	..	..	..	SW	¼	..	..	..	10	..
12	30·021	54·5	52·1	2·4	..	..	45·7	Calm	..	..	..	S	¼	..	..	..	9¾	..
14	30·005	54·3	52·9	1·4	..	..		Calm	..	..	..	S	¼	..	..	..	10	..
16	29·984	54·0	52·9	1·1	51·5	2·5	63·5	Calm	..	..	..	S	½	..	..	..	7	..
18	29·969	54·2	53·5	0·7	..	..	62·8	Calm	..	..	..	S	½	..	..	..	10	..
20	29·978	56·9	56·2	0·7	..	..	..	Calm	..	..	..	S	¼	..	..	..	10	..
22	29·979	63·6	60·7	2·9	58·0	5·6	..	Calm	..	SW	2·42	SW	¼	8·07	0·00	13·055	8	..
Sep. 14. 0	29·967	68·5	61·5	7·0	..	..		SW	0 to 1	..	..	SW	¼	..	..	..	9	..
2	29·949	69·2	61·9	7·3	..	..	71·9	SSW	0 to ½	..	..	SW	½	..	..	..	9	Transit
4	29·933	67·3	60·2	7·1	52·2	15·1	57·3	SSW	..	..	..	SSW	¼	..	..	..	9½	..
6	29·917	64·7	59·5	5·2	..	..		SSW	..	..	..	SSW	½	..	..	..	7	..
8	29·926	60·0	57·8	2·2	..	..	89·5	S by W	..	..	..	SSW	½	..	..	..	10	..
10	29·921	57·8	56·8	1·0	55·5	2·3	51·3	S by W	..	..	..	SSW	½	..	..	..	10	..
12	29·903	58·6	56·5	2·1	..	..		Calm	..	..	..	S by W	¼	..	..	..	10	..
14	..	..	..	..	..	..	63·0	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	62·2	Calm	..	..	..	..	..	..	..	..	..	..

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Sep. 13d. The mean daily value was the greatest in the month.

DEGREE OF HUMIDITY.

Sep. 13d. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER.

Sep. 11d. 22h. The reading was higher than that of the Dry Thermometer at 14h.

Sep. 12d. 22h. The reading was higher than that of the Dry Thermometer at 18h.

REMARKS.	Observer.
Cloudless.	D
Cloudless, with the exception of a bank of cloud in the S. W.	H B
Cumuli and scud, mostly in the N.	B
,,	B
Cirro-stratus and scud.	D
,,	
,,	
Overcast: cirro-stratus.	D
Cloudless, but rather hazy, though the stars are visible.	B
Cloudless.	
Thin cirro-stratus covers the whole sky.	
Cirro-stratus and woolly clouds about the zenith, scarcely shewing the sky between the breaks.	
Cirro-stratus and woolly clouds: the sun is gleaming through the clouds.	B
Overcast: cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,, the clouds appear lighter than at the last observation.	H B
Heavy cumuli, and scud in broken masses.	B
Cirro-stratus, and fleecy clouds about the zenith in broken patches.	
The zenith is clear: cirro-stratus about the horizon, particularly in the S.	
Cirro-stratus, with breaks in the N. E.	B
A very thin and high cloud, or rather a film of cloud, covers the sky, the places of many of the brighter stars being visible by a diffused light. The reflexion of the London lights is very high.	G
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,, the clouds are flaky, the edges lapping over each other.	G
The clouds are broken in many parts of the sky, chiefly in the zenith: cirro-stratus and haze near the horizon.	H B
Cirro-stratus and scud: there are a few cumuli in the horizon: the clouds about the zenith have a ragged appearance.	B
,, a small break in the N.W.	B
Cirro-cumuli near the zenith, white flaky clouds N. of the zenith, and ill-defined cumuli near the horizon all round.	G
Cirro-cumuli around the zenith; the greater portion of the southern sky is clear: N. of the zenith, cumulo-strati and cumuli all round near the horizon.	
Overcast, but the clouds are more dense to the S. than they are to the N.	
Overcast: cirro-stratus.	G
,, ,, Jupiter and a few stars in the S. E. are visible.	H B
,, ,,	
Cirro-stratus and scud: a few stars are visible in different parts of the sky, but they appear very dim.	
Overcast: cirro-stratus and scud.	
,, ,,	H B
Cirro-stratus and scud: extensive breaks of blue sky are in the N: a little rain fell at about $8^h. 40^m$.	D
Cirro-stratus, cirro-cumuli, and scud.	B
Cumuli and fleecy clouds.	B
A thin cirro-stratus all over the sky, and large masses of scud in many places.	H B
Cumuli, cumulo-strati, and scud.	
Overcast: thin cirro-stratus and scud.	
,, ,,	H B
,, ,,	D

OSLER'S ANEMOMETER.
Sep. $11^d. 3^h. 40^m$. At this time the registering pencil went off the rack-work.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 14. 18	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	S by W	0 to ½	..	..	..	..	..	..	..	..	..
22	29·744	63·3	62·8	0·5	..	..	..	S by W	½ to 1	SSW	4·35	SW	1	8·07	0·01	13·075	10	..
Sep. 15. 0	..	..	..	..	..	..	..	SSW	½ to 4	..	..	..	..	..	..	..	..	..
2	29·716	68·7	66·1	2·6	..	..	..	SW	½ to 3	..	..	WSW	1	..	..	..	10	..
4	..	..	..	..	..	..		SW	1 to 2½	..	..	..	..	..	..	..	..	Transit
6	29·701	65·3	63·3	2·0	..	..	72·4 61·4	SW	0 to 1	..	..	SW	1	..	..	..	10	..
8	..	..	..	..	..	..		SW	½ to 2	SW	2·87	..	..	..	..	..	..	..
10	..	..	..	..	..	..	85·7 55·5	WSW	0 to 1	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..		WSW	..	..	..	..	..	..	..	..	..	..
14	29·735	62·2	61·3	0·9	..	..		WSW	..	..	..	SW	½+	..	..	..	10	..
16	29·723	62·0	60·8	1·2	59·5	2·5	63·5 62·5	WSW	..	..	..	SW	¾	..	..	..	10	Perigee
18	29·720	61·5	60·4	1·1	..	..		WSW	..	..	..	SW	½	..	..	..	10	..
20	29·734	63·0	61·4	1·6	..	..	..	WSW	0 to ½	..	..	W by S	½	..	..	..	9	..
22	29·747	65·3	62·8	2·5	60·5	4·8	..	W by S	0 to 2	WSW	3·55	W	¼	8·07	0·01	13·085	10	..
Sep. 16. 0	29·742	67·5	64·8	2·7	..	..	..	WSW	0 to 1	..	..	WSW	½	..	..	..	10	..
2	29·721	69·2	64·0	5·2	..	..	..	WSW	½ to 3	..	..	WSW	½	..	..	..	6	..
4	29·710	69·2	63·6	5·6	58·5	10·7	71·0 60·8	WSW	0 to 4	WSW	0·53	W by S	½	..	..	..	3	Transit
6	29·707	66·7	62·7	4·0	..	..		WSW	0 to 1	..	..	W	½	..	..	..	5	..
8	29·713	64·6	62·4	2·2	..	..		WSW	..	..	..	W	¼	..	..	..	9	..
10	29·710	63·5	62·7	0·8	62·0	1·5	86·7 55·8	SW	..	W	1·93	W	¼	..	..	..	2	..
12	29·690	62·4	62·0	0·4	..	..		SW	..	..	..	SW	¼	..	..	..	10	..
14	29·668	62·0	61·7	0·3	..	..		SW	..	..	..	SW	¼	..	..	..	10	..
16	29·649	61·6	61·5	0·1	61·5	0·1	63·8 62·0	SW	..	..	..	SW	¼	..	..	..	10	..
18	29·624	61·3	60·8	0·5	..	..		SW	..	..	..	SW	¼	..	..	..	10	..
20	29·616	63·8	62·1	1·7	..	..	..	SW	..	..	..	SW	¼	..	..	..	7	..
22	29·627	66·5	63·9	2·6	62·3	4·2	..	WSW	0 to 1½	WSW	2·67	SW by W	½	8·07	0·00	13·085	9½	..
Sep. 17. 0	29·602	64·2	63·6	0·6	..	..	..	SW	0 to ½	..	..	SW	¼	..	..	..	10	..
2	29·589	67·3	64·7	2·6	..	..	..	WSW	0 to ½	SW	1·00	SW by W	½	..	..	..	9	..
4	29·579	69·5	64·0	5·5	61·3	8·2	70·5 53·9	WNW	0 to 1	WSW	0·26	W	½	..	..	..	7	Transit
6	29·594	61·5	59·8	1·7	..	..		Calm	..	..	..	NNW	¼	..	..	..	5	..
8	29·606	57·1	56·8	0·3	..	..		Calm	..	..	..	Calm	..	..	..	..	4	..
10	29·621	58·4	57·8	0·6	57·5	0·9	85·4 51·6	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·633	59·5	59·4	0·1	..	..		NE	..	..	..	NE	¼	..	..	..	10	..
14	29·640	57·7	57·6	0·1	..	..		NE	..	..	..	NE	¼	..	..	..	10	..
16	29·650	57·0	56·9	0·1	56·3	0·7	64·0 63·0	ENE	..	..	..	NNE	¼	..	..	..	10	..
18	29·678	54·5	54·5	0·0	..	..		NE	..	..	..	NNE	¼	..	..	..	10	..
20	29·718	54·3	54·2	0·1	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	10	..
22	29·763	55·3	54·8	0·5	54·5	0·8	..	NNE	..	NE	1·03	NNE	¼	8·44	0·54	13·510	10	..
Sep. 18. 0	29·805	57·2	54·6	2·6	..	..	57·2 41·3	NE	..	..	..	NNE	¼	..	..	..	10	..
2	29·826	55·8	54·4	1·4	..	..		NE	..	..	..	NNE	¼	..	..	..	10	..
4	29·829	56·6	54·5	2·1	53·8	2·8		NE	..	..	..	ENE	¼	..	..	..	10	
6	29·847	55·3	52·6	2·7	..	..	70·0 33·5	NE	..	..	..	NE	¼	..	..	..	8½	Transit Greatest declination S.
8	29·869	52·3	51·0	1·3	..	..		NNE	..	..	..	NE	¼	..	..	..	9¾	
10	29·896	50·5	49·4	1·1	48·0	2·5		NNE	..	..	..	N	¼	..	..	..	6	..
12	29·911	46·0	46·2	−0·2	..	..	63·0 62·0	NE	..	NE	1·31	N	¼	..	..	..	1	..

DRY THERMOMETER.

Sep. 16d. The mean daily temperature was the greatest in the month.

Sep. 17d and 18d. The greatest difference in the mean daily temperature for consecutive days in the month occurred.

Sep. 18d. 12h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Sep. 17d and 18d. The greatest difference in the mean daily values for consecutive days in the month occurred.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Sep. 18d. The mean daily value was the least in the month: the same value occurred on Sep. 9d.

REMARKS.	Observer.
Cirro-stratus and scud: gusts of wind to 1 +.	H B
Cirro-stratus and nimbus.	
Overcast: nimbi and scud: the sky during the day has been generally overcast, and the wind has been rather strong: at $4^h. 40^m$ the clouds broke in various directions for a short time.	H B
Cirro-stratus and scud: a little misty rain fell about twenty minutes since.	B
,,	
The sky is mostly covered with thin scud, with a few cirro-strati in the horizon: the wind blows in long gusts to $\frac{3}{4}$ +.	
Cirri, scud, and large fleecy clouds about the zenith.	B
A thin rain is now falling, which commenced about five minutes since.	H B
Overcast: nimbi and scud.	
Cumuli towards the N., cumulo-strati in S. and S.W., and fragments of scud in various parts of the sky: the Sun is shining occasionally through the light fleecy clouds in which he is enveloped.	H B
Cirri and scud: clear.	B
Cirri, cirro-strati, cirro-cumuli, and scud.	
Cirro-stratus and scud: there is a break in the S.W.	
,, there is a break in the S.	B
Overcast: cirro-stratus: the air is very close.	D
,, ,,	
,, ,,	
,, cirro-stratus and scud.	
Cirro-stratus and scud.	D
Cumulo-stratus: cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud: rain has fallen occasionally since the last observation.	
Nimbi, cirro-strati, and scud: breaks towards the E. and N. E.	
Cumulo-stratus towards the N., and cirro-stratus and scud in different directions.	H B
Cirro-stratus and fragments of scud: showers of rain have fallen since the last observation.	D
Cirro-stratus and a thick haze.	
Cirro-stratus and a light fog.	D
Overcast: cirro-stratus.	H B
,, cirro-stratus and scud: rain commenced falling at 12^h.	
,, ,, rain falling heavily.	
,, ,, rain still falling.	
,, ,, ,,	H B
,, ,, ,,	D
Cirro-stratus and scud: the rain ceased about 22^h.	B
,, rain falling.	B
Overcast: nimbi and scud.	H B
Cirro-stratus and scud: breaks in various directions.	
,, breaks in the zenith.	H B
The sky continued covered by a thin cirro-stratus till about ten minutes since; at that time a break appeared in the N., and at present four-fifths of the N. hemisphere is clear: the S. is still overcast.	G
Cloudless, except near the S. horizon.	G

WEIGHT OF A CUBIC FOOT OF AIR.

Sep. 16^d and 17^d. The mean daily values were the least in the month.

DEGREE OF HUMIDITY.

Sep. 18^d. The mean daily value was the greatest in the month.

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.	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.	By Estimation. Direction.	Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 18. 14	29·891	44·6	44·7	-0·1	..	..	..	N by E	..	..	..	Calm	..	..	..	..	0	..
16	29·878	43·2	43·3	-0·1	42·5	0·7	..	N	..	..	..	Calm	..	..	..	..	0	..
18	29·875	42·2	42·4	-0·2	..	..	..	N	..	..	..	NE	¼	..	..	..	0	..
20	29·866	44·7	43·9	0·8	..	..	..	N	..	..	..	N	¼–	..	..	..	0	1st Qr.
22	29·862	51·7	50·2	1·5	48·0	3·7	..	N	..	N	0·64	NE	¼	8·44	0·00	13·510	10	..
Sep. 19. 0	29·834	58·2	54·8	3·4	..	..	..	N by W	..	..	..	N	¼	..	..	..	8	..
2	29·819	60·8	56·5	4·3	..	..	..	NE	..	..	..	NNE	¼–	..	..	..	9	..
4	29·800	58·9	55·0	3·9	51·0	7·9		NNE	..	..	..	NE	½	..	..	..	3	..
6	29·817	54·0	52·4	1·6	..	..	63·7 47·3	NE	..	..	..	ENE	¼	..	..	..	2	Transit
8	29·819	52·5	51·6	0·9	..	..	88·3	..	..	..	..	N	¼–	..	..	..	0	..
10	29·832	48·1	48·1	0·0	48·0	0·1	33·6	..	..	..	..	N	¼	..	..	..	0	..
12	29·850	49·0	49·0	0·0	..	..		..	..	..	..	Calm	..	..	..	..	0	..
14	29·844	50·0	50·0	0·0	..	..		..	..	..	..	Calm	..	..	..	..	0	..
16	29·839	50·5	50·6	-0·1	51·0	-0·5	62·0	..	..	..	..	Calm	..	..	..	..	0	..
18	29·847	51·1	50·9	0·2	..	..	61·0	..	..	..	..	Calm	..	..	..	..	10	..
20	29·868	51·3	51·2	0·1	..	..	..	..	..	..	..	Calm	..	..	..	..	10	..
22	29·886	52·3	51·4	0·9	49·8	2·5	..	..	..	NE	1·52	Calm	..	8·44	0·01	13·540	10	..
Sep. 20. 0	29·906	57·4	54·5	2·9	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
2	29·888	61·5	56·9	4·6	..	..	..	N	..	..	..	N	¼–	..	..	..	5	..
4	29·878	60·6	54·5	6·1	47·0	13·6	..	E	..	..	..	E by N	¼–	..	..	..	8	..
6	29·886	57·7	53·5	4·2	..	..	64·5	Calm	..	..	..	E	¼–	..	..	..	3	..
8	29·900	52·7	51·3	1·4	..	..	45·9	Calm	..	..	..	Calm	..	..	..	..	0	Transit
10	29·908	50·3	50·2	0·1	50·0	0·3	87·1	Calm	..	..	..	Calm	..	..	..	..	4	..
12	29·910	48·8	48·9	-0·1	..	..	35·0	Calm	..	..	..	Calm	..	..	..	..	3	..
14	29·918	47·5	47·8	-0·3	..	..		Calm	..	..	...	Calm	..	..	..	..	0	..
16	29·921	45·5	45·7	-0·2	45·5	0·0	62·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·924	46·6	46·8	-0·2	..	..	61·0	Calm	..	..	..	Calm	..	..	..	..	2	..
20	29·938	49·3	49·3	0·0	..	..	..	NE	..	..	..	ENE	¼	..	..	..	2	..
22	29·952	58·2	55·7	2·5	55·3	2·9	..	NE	0 to 1½	NE	1·29	NE	½	8·44	0·00	13·540	7	..
Sep. 21. 0	29·960	60·2	56·3	3·9	..	..	..	NE	0 to 2	..	..	NE	½	..	..	..	8	..
2	29·959	59·8	56·1	3·7	..	..	..	NE	0 to 1	..	..	NE	½	..	..	..	9	..
4	29·969	58·6	54·9	3·7	55·2	3·4	..	NE	0 to 1½	..	..	ENE	½	..	..	..	10	..
6	29·979	54·6	53·6	1·0	..	..	63·0	NE	..	..	..	ENE	¼	..	..	..	10	..
8	29·992	51·0	50·0	1·0	..	..	47·1	NNE	..	..	..	ENE	¾	..	..	..	10	Transit
10	30·001	51·2	49·2	2·0	46·5	4·7	87·0	NE	..	..	..	NE	½	..	..	..	9	..
12	30·004	47·5	46·9	0·6	..	..	36·0	NE	..	..	..	NE	¼	..	..	..	5	..
14	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	61·0	NE	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	60·0	NE	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
22	29·926	56·2	50·3	5·9	..	..	..	NE	..	NE	3·15	ENE	1	8·44	0·00	13·540	5	..
Sep. 22. 0	29·931	57·8	52·8	5·0	..	..	..	NE	0 to 1	..	..	NE	1	..	..	..	10	..
2	..	..	..	..	..	..	..	NE	0 to 1½	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NE	0 to 1½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	NE	0 to 2½	..	..	..	..	..	..	..	..	..

DRY THERMOMETER.

Sep. 18d, 14h, 16h, 18h; Sep. 19d. 16h; and Sep. 20d. 12h, 14h, 16h, and 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Sep. 19d. 16h. The temperature was higher than that of the air.

MINIMUM FREE THERMOMETER.

Sep. 20d. 22h. The reading was higher than that of the Dry Thermometer at 16h.

REMARKS.	Observer.
Cloudless.	D
,,	H B
,,	H B
,,	B
The sky is covered by a thin veil of cloud: there are occasional gleams of sunshine, and blue sky is frequently seen in different [parts of the sky.	G
Cirro-stratus, a few cumuli, and scud.	H B
Cirro-stratus and scud in broken masses: the Sun is shining at intervals.	B
Cumulo-strati in the N.W.: cumuli are scattered in various directions.	D
There are many detached loose clouds, of a fibrous texture, in all directions; and in the N.W., about the place of the Sun, there are some stratus clouds with coloured edges.	G
Cloudless.	H B
Splendidly clear.	H B
There is a sky fog which obscures the stars, yet scarcely formed into cirro-stratus.	B
,, ,,	
Stars of the second magnitude are visible through a sky fog.	
Cirro-stratus: misty rain is falling.	
,, heavy rain falling.	B
,, no rain falling at present.	H B
Cirro-stratus and scud.	B
Cumuli, a few cirri, and large masses of scud: a considerable portion of the northern sky is free from cloud.	H B
Cumuli, cumulo-strati, cirri, cirro-stratus, and scud; the cirri are mostly about the zenith.	B
The appearance of the sky is the same as at the last observation, except that the cirri are mostly in the S. W.	
There are a few very faint cirri.	
Cumulo-strati in the S., and cirri in lines from N. E. to S. W., and in the N. W.: the clouds this evening have undergone very rapid modifications and changes, both as to amount and kind.	B
A bank of stratus near the Moon, and loose clouds scattered about the sky.	G
Cloudless.	
,,	
A bank of cloud near the E. horizon, and some thin clouds N. of the zenith.	
Some loose scud has been passing over with unusual rapidity from the E.: at present there are some fine specimens of cirri, and a little cloud of no modification and of a loose texture about the Sun's place, and S. of it.	G
Cirro-cumuli, cumuli, and fragments of light scud.	H B
Cumulo-stratus, cirro-stratus, and scud.	
,,	
Nimbi and scud: rain falling.	
Cumuli, cirro-stratus, and scud: breaks in many places, but to no numerical extent.	H B
Overcast, but the clouds are thin.	G
There are frequent clear patches in the sky, and at times the sky is wholly covered with white flaky clouds; at present there is a clear portion in the S. E., and a few of the larger stars are visible.	G
Cirro-cumuli, and scud chiefly towards the S.: the sky towards the N. is free from cloud.	H B
During the morning the sky has been about one half covered with white cumuli and white flaky clouds, with the Sun shining [brightly.	G
The Sun has been obscured for an hour: the sky is quite covered with scud.	

OSLER'S ANEMOMETER.

Sep. $18^d.22^h$. The observer on changing the sheet omitted to remove the other traversing board, which caused the instrument to stop at $7^h.35^m$.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 22. 8	29·850	51·8	49·4	2·4	..	..	60·0	NE	..	..	..	ENE	1	..	..	..	8	..
10	..	..	..	..	..	..	49·1	NNE	..	..	..	..	..	..	..	..	..	Transit
12	29·766	49·8	49·6	0·2	..	..	——	NNE	..	..	..	ENE	½	..	..	..	10	..
14	29·730	50·0	49·3	0·7	..	..	72·0	NNE	..	..	..	NE	½+	..	..	..	10	..
16	29·686	50·2	49·3	0·9	48·8	1·4	44·0	NNE	..	..	..	NNE	1½	..	..	..	9	..
18	29·664	49·6	49·7	-0·1	..	..	——	NNE	..	..	..	NNE	½	.	..	..	10	..
20	29·641	50·9	50·4	0·5	..	..	60·0	N by E	..	..	..	NNE	¼	..	..	..	10	..
22	29·615	55·5	52·7	2·8	50·0	5·5	59·5	N by E	0 to 1½	NNE	3·74	NE	1	8·44	0·00	13·540	10	..
Sep. 23. 0	29·588	56·1	53·2	2·9	..	..	..	NNE	0 to ½	..	..	NE	¾	..	..	..	10	..
2	29·566	58·0	52·4	5·6	..	..	..	NNE	0 to 1	..	..	NE	1	..	..	..	9	..
4	29·562	57·6	53·1	4·5	47·0	10·6	59·8	NNE	0 to 1½	..	..	NE	¾	..	..	..	9	..
6	29·587	54·1	49·9	4·2	..	..	49·3	NNE	..	..	..	NNE	½	..	..	..	10	..
8	29·613	51·4	49·0	2·4	..	..	——	NNE	..	..	..	NNE	½	..	..	..	10	..
10	29·648	50·8	49·3	1·5	49·5	1·3	71·6	NNE	..	NNE	2·43	N by E	¼	..	..	..	10	Transit
12	29·647	51·4	49·4	2·0	..	..	41·2	N	..	..	..	N	½	..	..	..	10	..
14	29·661	51·1	49·6	1·5	..	..	——	N	..	..	..	N	¼	..	..	..	10	..
16	29·671	50·7	49·2	1·5	47·5	3·2	59·0	N	..	..	..	N	½	..	..	..	10	..
18	29·715	49·3	48·7	0·6	..	..	58·5	N	..	..	..	N	¼	..	..	..	8	..
20	29·767	51·0	49·9	1·1	..	..	..	N	..	..	..	N	¼	..	..	..	8	..
22	29·808	55·4	52·4	3·0	49·7	5·7	..	NNE	0 to ¾	N	1·58	N	¾	8·44	0·00	13·550	3	..
Sep. 24. 0	29·818	59·7	54·3	5·4	..	..	..	NE	..	..	..	NNE	¼	..	..	..	4	..
2	29·837	62·7	54·8	7·9	..	..	..	NE	..	..	..	NNE	¼	..	..	..	2	..
4	29·867	60·5	55·2	5·3	45·0	15·5	65·7	NNE	..	..	..	NNE	½	..	..	..	9	..
6	29·905	58·4	54·0	4·4	..	..	41·8	NE	..	..	..	NNE	¼	..	..	..	9	..
8	29·954	53·4	52·7	0·7	..	..	——	NE	..	..	..	NNE	¼	..	..	..	7	..
10	29·980	49·6	48·7	0·9	48·0	1·6	91·0	N by E	..	..	..	N	¼	..	..	..	1	..
12	30·000	46·8	46·8	0·0	..	..	32·2	NNE	..	..	..	N	¼	..	..	..	0	Transit
14	30·004	45·4	45·2	0·2	..	..	——	NNE	..	..	..	N	¼	..	..	..	0	..
16	30·014	42·6	42·8	-0·2	42·0	0·6	58·0	N by E	..	..	..	N	¼	..	..	..	0	..
18	30·037	42·6	42·6	0·0	..	..	57·2	N	..	..	..	N	¼—	..	..	..	½	..
20	30·057	45·0	45·2	-0·2	..	..	..	NNW	..	..	..	Calm	..	..	..	..	10	..
22	30·082	51·4	50·9	0·5	49·2	2·2	..	NNW	..	N	2·10	N	¼	8·44	0·00	13·555	10	In Equator
Sep. 25. 0	30·094	57·7	54·2	3·5	..	..	..	NNE	..	..	..	ENE	¼	..	..	..	3	..
2	30·083	61·6	55·6	6·0	..	..	..	NNE	..	..	..	NE	¼	..	..	..	2	..
4	30·087	60·7	54·9	5·8	49·0	11·7	65·4	N	..	..	..	NE	¼	..	..	..	4	..
6	30·095	56·5	51·9	4·6	..	..	40·8	N by E	..	..	..	NE	¼	..	..	..	1	..
8	30·111	51·6	50·0	1·6	..	..	——	Calm	..	..	..	NE	¼	..	..	..	1	..
10	30·146	48·0	48·0	0·0	46·5	1·5	92·0	Calm	..	..	..	NE	¼	..	..	..	4	..
12	30·142	48·3	48·5	-0·2	..	..	31·2	Calm	..	..	..	Calm	..	..	..	..	2	Transit
14	30·137	44·4	44·7	-0·3	..	..	58 0	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·144	44·0	44·2	-0·2	44·0	0·0	57·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·144	44·0	44·2	-0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·157	41·7	41·9	-0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·169	53·0	51·0	2·0	50·5	2·5	..	Calm	..	ESE	0·73	Calm	..	8·44	0·00	13·555	2	..
Sep. 26. 0	30·159	60·9	56·0	4·9	..	..	..	Calm	..	..	..	Calm	..	..	..	..	1	..
2	30·131	63·3	57·3	6·0	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	0	Full

Barometer.

Sep. 23d. 4h. The reading was the lowest in the month.

Sep. 24d. The daily range was the greatest in the month.

Sep. 24d and 25d. The greatest difference of the mean daily heights in the month for consecutive days occurred; the difference between the numbers for the last day of September and the first of October was slightly greater.

Dry Thermometer.

Sep. 22d. 18h; 24d. 16h and 20h; and 25d. 12h to 20h. The readings were lower than those of the Wet Thermometer.

REMARKS.	Observer.
At times a large portion of the sky has been clear, but generally it has been covered with stratus and cirro-stratus: at present it is covered with a thin cirro-stratus and passing scud.	G
Overcast: cirro-stratus and scud.	HB
,, ,, the sky has a very stormy appearance.	
Cirro-stratus and scud: a few stars are visible in various parts of the sky.	
,, rain falling.	
,,	H B
The clouds are thin in some places, but still there is no part entirely free, their character being stratus breaking into cumulus.	G
Overcast: cirro-stratus and scud: gusts of wind.	J H
Cirro-stratus and scud.	D
,, an extensive break near the N. W. horizon.	H B
,, the clouds are lighter than at the last observation.	
,, a light rain is now falling.	
Overcast: nimbi and scud.	H B
,, cirro-stratus.	D
,, ,,	
,, ,,	
,, cirro-stratus and scud.	
,, ,,	D
Cumulo-strati and scud.	J H
Cumuli, cumulo-strati, and scud.	H B
Cumuli in various directions: cumulo-strati near the horizon.	H B
Cirro-stratus and fleecy clouds.	L
Cirro-stratus and scud.	H B
Cumulo-stratus, cirro-stratus, and fleecy clouds: the Moon is completely obscured.	H B
A few clouds in the S. E. and about the place of the Moon.	D
Cloudless.	J H
,, hazy.	
,,	
A few fragments of scud in various directions.	
Stratus: the air is thick and misty.	J H
Overcast: cirro-stratus and scud.	H B
In and near the zenith is clear blue sky, immediately below which, are loose cumuli floating from the E. N. E.: near the horizon, on all sides, are cumuli; those towards the S. are fine, having white silvery tops, of a rocky appearance.	L & G
Detached cumuli are scattered here and there: a fine blue sky.	L
Cumuli and scud in every direction.	J H
A cumulo-stratus S. of the zenith; with this exception the sky is clear.	
A bank of fleecy clouds in the N.	
Fleecy clouds in every direction.	
Fleecy clouds continued in every direction, increasing in amount and density till $11^h. 40^m$; at this time the whole sky was covered with a loose kind of cumulo-stratus: at $11^h. 50^m$ the clouds moved off rapidly from the East, and by $11^h. 55^m$ the E. half of the sky was nearly free from cloud; at present the only cloudy part is that near the horizon.	J H
Cloudless: a slight fog.	L
,, ,,	
,, ,,	
,, ,,	L
Light cirri near the zenith: cirro-stratus and haze near the horizon.	H B
Cumuli and haze.	
Cloudless, but very hazy.	H B

CLOUDS.

From Sep. $26^d. 0^h$, until after Sep. $28^d. 12^h$, with little exception, the sky was cloudless: it was the longest period of clear sky in the month.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 26. 4	30·111	61·5	56·7	4·8	50·0	11·5	66·2	NNE	..	..	..	Calm	..	..	..	..	0	..
6	30·099	56·2	53·6	2·6	..	..	40·1	Calm	..	..	..	Calm	..	..	..	..	0	..
8	30·107	50·4	49·7	0·7	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·112	50·0	49·7	0·3	50·0	0·0	92·0	Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·096	47·2	46·6	0·6	..	..	31·6	Calm	..	..	..	S	$\frac{1}{4}$–	..	..	..	0	Transit
14	30·090	44·7	44·8	–0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·080	42·0	41·9	0·1	41·3	0·7	57·5	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·074	41·5	41·4	0·1	..	..	56·0	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·079	41·9	42·0	–0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·092	46·5	46·7	–0·2	49·0	–2·5	..	Calm	..	NE	0·72	Calm	..	8·44	0·00	13·555	0	..
Sep. 27. 0	30·081	60·0	56·2	3·8	..	..	..	NNE	..	..	..	Calm	..	..	..	..	0	..
2	30·053	64·5	57·2	7·3	..	..	..	Calm	..	ESE	0·08	E	$\frac{1}{4}$	..	..	..	0	..
4	30·014	64·5	57·5	7·0	51·2	13·3	66·6	Calm	..	..	..	Calm	..	..	..	..	0	..
6	29·992	59·0	55·8	3·2	..	..	40·3	Calm	..	..	..	Calm	..	..	..	..	2	..
8	30·004	52·8	51·3	1·5	..	..	——	Calm	..	..	..	E	$\frac{1}{4}$–	..	..	..	2	..
10	30·003	49·7	48·8	0·9	49·5	0·2	90·8	Calm	..	..	..	SE	$\frac{1}{4}$	..	..	..	1	..
12	29·988	46·6	46·0	0·6	..	..	32·2	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·973	45·4	45·7	–0·3	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	Transit
16	29·950	42·4	42·7	–0·3	42·5	–0·1	57·8	Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·939	40·6	41·0	–0·4	..	..	55·5	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·940	42·4	42·8	–0·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·945	50·7	49·8	0·9	48·0	2·7	..	Calm	..	S	0·30	Calm	..	8·44	0·00	13·565	0	..
Sep. 28. 0	29·925	61·7	56·5	5·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
2	29·893	64·5	58·5	6·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	$\frac{1}{2}$	..
4	29·849	65·1	57·2	7·9	47·5	17·6	67·6	Calm	..	..	..	W	$\frac{1}{4}$–	..	..	..	0	..
6	29·820	59·8	54·8	5·0	..	..	45·1	Calm	..	..	..	Calm	..	..	..	..	0	..
8	29·830	55·1	51·6	3·5	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	..
10	29·837	52·0	49·7	2·3	51·5	0·5	88·5	Calm	..	..	..	Calm	..	..	..	..	0	..
12	29·825	47·4	46·9	0·5	..	..	36·6	Calm	..	..	..	Calm	..	..	..	..	0	..
14	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	Transit
16	..	..	..	..	..	..	56·5	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	56·0	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·872	52·1	51·8	0·3	..	..	..	N	0 to $\frac{1}{2}$	NNW	0·99	N	1	8·44	0·00	13·565	10	..
Sep. 29. 0	..	..	..	..	..	..	..	N	$\frac{1}{4}$ to $1\frac{1}{2}$	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	N	$\frac{1}{2}$ to 2	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	57·5	N	$1\frac{1}{2}$ to $3\frac{1}{2}$	..	..	..	..	..	..	..	..	..
6	30·035	49·9	47·2	2·7	..	..	34·8	N	0 to $\frac{1}{2}$	..	..	N	$\frac{1}{2}$	..	..	..	3	..
8	..	..	..	..	..	..	——	N	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	65·3	N	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	27·2	N	..	..	..	..	..	..	..	..	..	..
14	30·164	40·0	39·7	0·3	..	..	——	N	..	N	1·81	N	$\frac{1}{2}$	..	..	..	3	..
16	30·187	39·7	39·1	0·6	37·5	2·2	56·5	NW	..	..	..	N	$\frac{1}{2}$	..	..	..	0	Transit
18	30·208	35·2	35·3	–0·1	..	..	55·0	Calm	..	..	..	N	$\frac{1}{2}$	..	..	..	0	..
20	30·232	37·1	36·9	0·2	..	..	..	Calm	..	..	..	NW	$\frac{1}{2}$	..	..	..	0	..
22	30·247	50·5	47·4	3·1	42·5	8·0	..	Calm	..	NW	1·18	WNW	$\frac{1}{4}$	8·44	0·00	13·565	8	..
Sep. 30. 0	30·238	53·4	49·5	3·9	..	..	..	NNW	..	..	..	Calm	..	..	..	..	2	..
2	30·217	56·2	50·7	5·5	..	..	..	N	..	..	..	Calm	..	..	..	..	2	..
4	30·177	57·1	51·2	5·9	45·5	11·6	..	Calm	..	..	..	Calm	..	..	..	..	2	..

BAROMETER.

Sep. 29d. 22h. The reading was the highest in the month at the two-hourly observations.

Sep. 30d. The mean daily height was the greatest in the month.

Sep. 30d and Oct. 1d. The difference of the mean daily heights for consecutive days was greater between those two days than for any other two in the month of September.

DRY THERMOMETER.

Sep. 26d. 14h, 20h, and 22h; Sep. 27d, 14h to 20h; and Sep. 29d, 18h. The readings were lower than those of the Wet Thermometer.

Sep, 29d. 18h. The reading was the lowest in the month.

Sep. 30d. The mean daily temperature was the lowest in the month.

REMARKS.	Observer.
Cloudless, but very hazy.	L
Cloudless: a slight fog.	
,, ,,	
,, ,,	L
,, the fog is not so dense as at the preceding observation.	H B
,, hazy.	
,, ,,	
,, ,,	
,, a dense fog.	H B
,, hazy.	L
Cloudless: hazy.	
,, ,,	L
,, ,,	H B
Cirro-stratus and vapour near the horizon; every other part of the sky is clear.	
Cirro-stratus and haze.	
,,	H B
Cloudless: hazy.	D
,, ,,	
,, ,, a corona is visible round the Moon.	
,, a thick fog.	
,, ,,	D
Thin cirri in various parts of the sky.	H B
Cloudless, but hazy.	L
Cirri and haze.	L
Cloudless.	D
Cloudless, but hazy.	H B
,,	
,,	H B
,, a beautiful night.	J H
Overcast: cirro-stratus and scud: rain falling.	
Loose scud floating about: hazy.	
Light fleecy clouds.	
Cloudless.	
,,	
,,	J H
The greater part of the sky is covered with cirro-cumuli, cirro-stratus and scud being near the horizon.	H B
Cirro-stratus and thick haze.	L
Cumuli and haze.	L
Cumuli in various directions.	J H

Temperature of the Dew Point.—Sep. $26^d.22^h$ and $27^d.16^h$. The readings were lower than those of the Dry Thermometer. Sep. $29^d.16^h$. The reading as observed was the lowest in the month; and at Sep. 30^d, the mean daily value was the least in the month. Sep. 30^d and Oct. 1^d. The difference of the mean daily values was considerable.

Elastic Force of Vapour and Weight of Vapour in a Cubic Foot of Air. Sep. 30^d. The mean daily value was the least in the month.

Weight of a Cubic Foot of Air.—Sep. 30^d. The mean daily value was the greatest in the month. Sep. 30^d and Oct. 1^d. The difference of the mean daily values for consecutive days was the greatest in the month of September.

Amount of Clouds.—Sep. 28^d. The mean daily value was the least in the month.

Temperature of the Water of the Thames.—Sep. $29^d.22^h$. The lowest reading in the month occurred.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Sep. 30. 6	30·159	52·0	48·5	3·5	..	..	59·3	Calm	..	..	..	Calm	..	..	..	..	3	..
8	30·159	48·7	45·2	3·5	..	..	42·2	Calm	..	..	..	Calm	..	..	..	..	¼	..
10	30·149	46·5	44·2	2·3	43·0	3·5	—	Calm	..	..	..	N	½	..	..	..	2	..
12	30·125	44·1	42·7	1·4	..	..	79·5	Calm	..	..	..	SSW	¼–	8·44	0·00	13·565	0	..
14	30·074	43·5	42·3	1·2	..	..		Calm	..	..	..	SSW	½	..	..	..	0	..
16	30·038	42·6	42·0	0·6	42·0	0·6	..	SW	..	..	..	SW	¼	..	..	..	0	Transit
18	30·022	44·1	43·4	0·7	..	..	—	Calm	..	..	..	SSW	¼	..	..	..	0	..
20	30·005	44·8	44·2	0·6	..	..	55·8	Calm	..	..	..	SSW	¼	..	..	..	3	..
22	29·996	55·7	51·7	4·0	50·3	5·4	54·8	SW	0 to ½	WSW	2·82	SW	¼	8·44	0·00	13·565	3	..
Oct. 1. 0	29·975	60·9	54·4	6·5	..	..	..	SW	0 to 1	..	..	SW	½	..	..	..	6	..
2	29·911	64·6	56·9	7·7	..	..	..	SW	¼ to 1½	..	..	SW	½	..	..	..	9+	..
4	29·883	61·3	54·8	6·5	51·5	9·8	66·2	WSW	0 to 1	..	..	WSW	½	..	..	..	10	..
6	29·879	59·3	54·6	4·7	..	..	56·7	WSW	..	..	..	W	½	..	..	..	10	..
8	29·852	57·3	53·9	3·4	..	..	—	SW	0 to 1½	..	..	W	1	..	..	..	10	..
10	29·839	56·4	54·3	2·1	53·5	2·9	86·4	SW	0 to ½	..	..	W by S	1	..	..	..	10	..
12	29·802	56·7	55·0	1·7	..	..	54·4	SW	0 to 1	..	..	WSW	½	..	..	..	10	Apogee
14	29·750	56·6	55·0	1·6	..	..	—	SW	0 to 1	..	..	WSW	¾	..	..	..	10	..
16	29·697	57·0	55·2	1·8	54·8	2·2	55·5	WSW	½ to 2	..	..	W by S	1	..	..	..	10	Transit
18	29·638	56·7	54·7	2·0	..	..	54·5	WSW	1 to 3	..	..	W by S	1	..	..	..	10	..
20	29·567	57·2	55·7	1·5	..	..	..	SW	1 to 4	WSW	5·57	SW	1	..	..	..	10	..
22	29·525	57·0	53·7	3·3	52·0	5·0	..	W	1 to 4	W	0·58	W	1½	8·44	0·00	13·565	10	..
Oct. 2. 0	29·487	58·4	55·5	2·9	..	..	..	WSW	2½ to 4½	..	..	WSW	1½	..	..	..	10	..
2	29·440	64·8	58·2	6·6	..	..	..	W by S	4 to 7	..	..	W by S	1½	..	..	..	9	..
4	29·492	63·4	54·7	8·7	49·6	13·8	.. 66·4	WNW	2 to 8	..	..	NW	2	..	..	..	8+	..
6	29·558	61·2	53·5	7·7	..	..	50·1	WNW	0 to 1	..	..	NW	1	..	..	..	9	Greatest declination N.
8	29·606	58·7	52·6	6·1	..	..	—	WNW	0 to 1	WNW	2·96	NW	1	..	..	..	10	..
10	29·670	56·4	51·3	5·1	52·0	4·4	83·0 45·0	W	0 to ¾	..	..	W	1	..	..	..	10	..
12	29·712	53·0	49·7	3·3	..	..	—	W	0 to ½	..	..	W	½	..	..	..	0	..
14	29·729	50·1	48·0	2·1	..	..	55·0	SW	..	..	..	SW	¼	..	..	..	4	..
16	29·712	52·1	50·2	1·9	48·0	4·1	55·0	SW	..	..	..	SW	½	..	..	..	9½	..
18	29·701	52·7	50·5	2·2	..	..	..	WSW	0 to 1	..	..	SW	¾	..	..	..	10	Transit
20	29·691	55·5	53·4	2·1	..	..	..	SW	0 to 1	..	..	SW	¾	..	..	..	10	..
22	29·670	60·4	57·9	2·5	57·5	2·9	..	SW	0 to 1½	W	3·25	W	1½	8·44	0·00	13·565	10	..
Oct. 3. 0	29·653	65·9	61·7	4·2	..	..	..	WSW	1 to 4½	..	..	W	1½	..	..	..	10	..
2	29·640	63·5	59·7	3·8	..	..	..	WSW	2 to 3½	..	..	WSW	1½	..	..	..	9+	..
4	29·608	65·6	60·0	5·6	58·0	7·6	67·4	WSW	3 to 7	..	..	WSW	1½	..	..	..	4	..
6	29·606	61·8	58·6	3·2	..	..	52·4	WSW	1½ to 4	..	..	SW	1½	..	..	..	7	..
8	29·653	61·1	58·5	2·6	..	..	—	WSW	½ to 2½	..	..	SW	1	..	..	..	10	..
10	29·680	60·7	58·2	2·5	58·0	2·7	79·4	WSW	0 to 1	..	..	WSW	1	..	..	..	10	..
12	29·721	59·0	56·2	2·8	..	..	39·6	W	..	W	4·45	WSW	¾	..	..	..	2	..
14	29·760	54·8	51·9	2·9	..	..	—	WNW	..	WNW	0·52	W	¾	..	..	..	3	..
16	29·784	50·0	47·8	2·2	45·0	5·0	55·0	W	..	..	..	W	¾	..	..	..	0	..
18	29·807	46·8	45·6	1·2	..	..	55·0	WSW	..	..	..	WSW	½	..	..	..	0	Transit
20	29·836	46·8	45·4	1·4	..	..	..	WSW	..	..	..	WSW	½	..	..	..	3	..
22	29·874	53·8	49·7	4·1	47·8	6·0	..	W	..	W	0·88	W by S	½	8·44	0·00	13·565	1	..
Oct. 4. 0	29·878	58·6	56·5	2·1	..	..	..	WSW	..	..	..	W by S	½	..	..	..	1	..
2	29·867	61·0	52·8	8·2	..	..	..	W by S	..	..	..	WSW	¼	..	..	..	4	..

DRY THERMOMETER.—Oct. 1d. The daily range was the greatest in the month.

Oct. 2d. 4h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred at this time: so great a difference did not occur between Sep. 29d and the end of the year.

Oct. 3d. The mean daily temperature was the greatest in the month. Oct. 3d. 0h. The reading was the highest in the month.

WET THERMOMETER.—Oct. 4d. 0h. After this observation was taken it was found that the wet bulb was not moist with water, and therefore this observation is erroneous; the result is omitted in the mean.

TEMPERATURE OF THE DEW POINT.—Oct. 3d. The mean daily value was the greatest in the month: at 3d. 4h and 10h the readings as observed were the highest in the month. Oct. 3d, 4d, and 5d. The difference of the mean daily values was considerable.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.—Oct. 3d. The mean daily values were the greatest in the month.

REMARKS.	Observer.
Fleecy clouds and cumuli.	J H
A few light fleecy clouds.	
Light fleecy clouds.	J H
Cloudless.	H B
,,	
,,	
,,	
Cirro-stratus and haze, chiefly near the S. and S. E. horizon.	H B
Cirro-cumuli and cirri.	L
Cirro-cumuli and cirri, of which there are some fine specimens towards the S.	
Cirro-stratus nearly covers the sky; some blue patches here and there.	L
Overcast: cirro-stratus and scud.	H B
,, ,,	
,, ,, very dark.	
,, ,, gusts of wind.	H B
,, ,, the wind not so violent as at the previous observation.	L
Cirro-stratus and scud: the Moon's place is visible.	
Overcast: cirro-stratus.	
,, cirro-stratus and scud.	
,, cirro-stratus and scud, with a slight drizzling rain.	L
,, cirro-stratus and scud: gusts of wind.	H B
Overcast: cirro-stratus and scud: gusts of wind.	
Cirro-stratus and large masses of scud: since the last observation the sky has been partially clear at times, but at present the greater part is covered with scud.	H B
Cirro-stratus with a great deal of scud, and a few blue patches here and there.	L
Cirro-stratus and scud: two or three blue patches.	
At about $7^h. 35^m$ a break appeared in the N., and in a short time the greater part of the sky became clear but remained so only for a short time: by $7^h. 55^m$ it was again quite covered with scud, which is apparently very thin.	
Since the last observation the sky has been at times partially clear and then cloudy.	L
Cloudless.	D
Cirro-stratus and loose fragments of scud are scattered in various parts of the sky.	
Cirro-stratus and scud.	
,,	
,,	D
Overcast: cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	L
Cirro-stratus and scud, with a few breaks.	L
Cumuli and scud: the wind is blowing in frequent gusts to 2.	D
Cirro-stratus and scud.	
,,	D
,, gusts of wind to 1½ and 2.	H B
Fleecy clouds moving from the N.W.: gusts of wind to 1+.	J H
,, ,,	
Cloudless.	
,,	
Light fleecy clouds.	J H
Fine linear cirri are scattered about the sky: hazy near the horizon.	L
Fine linear cirri are scattered about the sky: hazy near the horizon.	
Cirri scattered over the sky.	L

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR. Oct. 2^d. The mean daily value was the greatest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.—Oct. 2^d and 3^d. The difference of the mean daily values for consecutive days was the least in the month.

DEGREE OF HUMIDITY.—Oct. 2^d. The mean daily value was the least in the month.

MINIMUM FREE THERMOMETER—Oct. $1^d. 22^h$. The reading was higher than that of the Dry Thermometer at 10^h and 12^h. Oct. $3^d. 22^h$. The reading was higher than that of the Dry Thermometer at 18^h and 20^h.

RAIN.—Sep. $30^d. 12^h$. The amount of rain collected in rain-gauge No. 4 during the month of September was $1^{in}\cdot19$, and that collected in the gauge at Greenwich Hospital Schools for the same period was $1^{in}\cdot23$.

AMOUNT OF CLOUDS.—Oct. 4^d and 31^d. The mean daily values were the same, and were the least in the month.

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 22^h. of Free Therm. / of Rad. Therm. / of Therm. in Water of the Thames.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 4. 4	29·835	61·3	52·9	8·4	42·8	18·5	..	WSW	..	..	..	W by S	¼	..	..	..	3	Last Qr.
6	29·822	55·0	51·0	4·0	..	..	..	SW	..	..	..	W by S	¼	..	..	..	3	..
8	29·816	51·5	48·8	2·7	..	..	62·1	S by W	..	..	..	W by S	¼	..	..	..	2	..
10	29·792	51·6	50·4	1·2	49·0	2·6	52·9	S by W	..	WSW	1·28	WSW	½	..	..	..	1	..
12	29·770	52·2	51·5	0·7	..	..	87·2	SSW	..	..	..	W	¼	..	..	..	1	..
14	29·732	53·7	52·7	1·0	..	..	45·3	SSW	..	..	..	W	¼	..	..	..	10	..
16	29·689	54·3	52·9	1·4	..	..	56·0	SSW	..	..	..	W	¼	..	..	..	9+	..
18	29·668	52·5	51·2	1·3	..	..	55·5	SW	..	..	..	Calm	..	..	..	..	9+	..
20	29·667	53·7	51·5	2·2	..	..	..	SSW	..	..	..	SW	¼	..	..	..	7	Transit
22	29·661	57·5	54·6	2·9	53·0	4·5	..	SW	..	SW	3·28	SW	½	8·44	0·00	13·575	10	..
Oct. 5. 0	29·614	61·4	58·1	3·3	..	..	..	SW	0 to ¾	..	..	SSW	½	..	..	..	10	..
2	29·589	63·5	58·9	4·6	..	..	..	SW	0 to 2	WSW	1·21	SW	¼	..	..	..	10	..
4	29·581	63·4	58·1	5·3	..	..	65·4	SW	0 to 1¼	..	..	WSW	¼	..	..	..	4	..
6	29·592	59·7	56·8	2·9	..	..	43·1	SW	0 to ½	SW	0·88	W by S	¼	..	..	..	9	..
8	29·638	52·7	52·2	0·5	..	..		N	0 to 1	..	..	W	¼	..	..	..	10	..
10	29·711	49·5	48·8	0·7	51·0	-1·5	73·0	NNW	..	N	0·48	W	¼	..	..	..	10	..
12	29·759	48·2	48·1	0·1	..	..	43·5	W	..	..	..	W by S	¼	..	..	..	4	..
14	..	..	..	..	..	..		WSW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	55·8	WSW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	55·5	SW	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..		SW	..	..	..	..	..	..	..	..	..	Transit
22	29·886	51·0	49·5	1·5	..	..	..	SW	..	W	0·45	W by S	¼	8·54	0·20	13·780	10	..
Oct. 6. 0	..	..	..	..	..	..	..	SW	0 to ½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	WSW	¼ to 1½	..	..	..	..	..	..	..	..	..
4	29·825	57·0	51·9	5·1	..	..	57·7	SW	..	..	..	SW	½	..	..	..	10	..
6	..	..	..	..	..	..	43·2	SW	..	..	..	..	..	..	..	..	..	..
8	29·803	50·0	48·7	1·3	..	..		SW	..	..	..	SW	½	..	..	..	8	..
10	..	..	..	..	..	..	71·0	SW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	40·1	SW	..	..	..	..	..	..	..	..	..	..
14	29·749	47·5	47·2	0·3	..	..		WSW	..	..	..	WSW	¼	..	..	..	9	..
16	29·715	47·4	46·8	0·6	46·0	1·4	56·0	SW	..	..	..	WSW	½	..	..	..	10	..
18	29·717	44·7	44·7	0·0	..	..	55·0	WSW	..	..	..	WSW	½	..	..	..	2	..
20	29·750	44·1	43·9	0·2	..	..	..	WSW	..	WSW	3·38	WSW	¼	..	..	..	2	Transit
22	29·788	48·6	46·9	1·7	47·0	1·6	..	NW	..	NNW	1·00	NW	¾	8·54	0·00	13·790	1	..
Oct. 7. 0	29·806	52·4	47·1	5·3	..	..	..	NNW	0 to ½	..	..	N	½	..	..	..	7	..
2	29·826	54·0	45·5	8·5	..	..	..	NNW	0 to ½	..	..	N by W	½	..	..	..	2	..
4	29·844	54·3	46·8	7·5	36·5	17·8	..	NNW	..	..	..	N	¼+	..	..	..	4	..
6	29·875	50·5	46·2	4·3	..	..	54·6	NNW	..	..	..	N	¼	..	..	..	3	..
8	29·894	47·6	43·8	3·8	..	..	33·2	NNW	..	..	..	N by W	¼	..	..	..	2	..
10	29·902	42·2	40·8	1·4	40·5	1·7		NW	..	NNW	1·15	NNW	¼	..	..	..	0	..
12	29·900	39·1	38·3	0·8	..	..	69·0	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·894	37·6	36·9	0·7	..	..	29·0	Calm	..	..	..	Calm	..	..	..	..	0	..
16	29·868	35·3	35·1	0·2	35·0	0·3		Calm	..	..	..	Calm	..	..	..	..	0	..
18	29·845	34·2	34·1	0·1	..	..	55·5	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·846	36·2	36·1	0·1	..	..	54·8	Calm	..	..	..	Calm	..	..	..	..	5	..
22	29·827	47·9	45·6	2·3	42·4	5·5	..	Calm	..	SW	0·30	Calm	..	8·54	0·00	13·790	2	Transit

TEMPERATURE OF THE DEW POINT.

Oct. 4^d. 4^h. The greatest difference in the month between the observed temperatures of the air and dew point occurred at this time.

Oct. 5^d. 10^h. The reading is higher than that of the Dry Thermometer, but it is evidently erroneous, and no use has been made of this observation in subsequent calculations: the deduced dew point is 48°·0.

MINIMUM FREE THERMOMETER.

Oct. 4^d. 22^h. The reading was higher than that of the Dry Thermometer at 8^h, 10^h, 12^h, and 18^h.

TEMPERATURE OF THE WATER OF THE THAMES.

Oct. 4^d. 22^h. The highest reading in the month occurred: the same reading was recorded on Oct. 6^d at 22^h.

REMARKS.	Observer.
Light cirri in various directions.	H B
Fleecy clouds and scud.	J H
Cirro-stratus and scud near the N. horizon.	H B
Several meteors have been seen in various directions since the last observation.	H B
Cloudless, with the exception of a few clouds near the horizon: within three minutes after this observation the sky was quite covered with scud.	G
Overcast with scud.	L
Overcast with scud, with a few breaks: a few stars are seen in the zenith: since the previous observation there has been a thin rain falling for a short time.	
Overcast, but the Moon and Venus may be seen through a break: there seems to be a thick haze round the Moon.	
Blue sky towards the horizon in the N. and W.; cirri scattered over the remainder of the sky.	L
About ten minutes since a shower of rain fell, and the sky became clear in many places, but at present every part is covered with cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
Cumuli, cirro-stratus, and scud.	L
Cirro-stratus, with a few breaks.	
Overcast: rain falling.	
,, ,,	L
Within the last twenty minutes the greater part of the sky has become clear, but there is still a large quantity of cirro-stratus and scud remaining, especially near the horizon.	H B
Overcast: cirro-stratus and scud.	
Overcast: cirro-stratus and scud.	
Cirro-stratus and scud: rain fell shortly after 4^h: during the afternoon from 3^h the sky was generally overcast.	
,, a few stars are visible near the zenith and in other parts of the sky.	
Overcast: cirro-stratus and scud.	
Thin cirro-stratus and scud towards the N.	
Cirro-stratus and vapour.	H B
Fleecy clouds and cirri.	L
Cumuli and scud.	
,,	L
Cumuli, cirro-strati, and scud.	H B
Thin cirro-stratus and fragments of scud: the sky near the horizon is of a pale red colour.	
Cirro-stratus and haze: there is a fog in the Park.	
Cloudless.	H B
,,	D
,,	
,,	
,,	
The S.E. portion of the sky is covered with a thin cirro-stratus and haze, the rest of the sky remaining clear; the haze is, however, thick near the horizon.	D
Cirri and haze: a solar halo, whose radius was 23°, was visible about the time of the observation.	L

WIND BY OSLER'S ANEMOMETER.

Oct. $5^d.\ 7^h.\ 20^m$. At this time the direction of the wind suddenly changed from S. W. to N,

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.	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.	By Estimation. Direction.	By Estimation. Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 8. 0	29·792	54·8	49·6	5·2	..	..	..	SSW	0 to 1	..	..	S	½	..	..	..	6	..
2	29·704	55·5	49·0	6·5	..	..	..	S	½ to 1½	..	..	S by E	½	..	..	..	7	..
4	29·662	54·5	48·0	6·5	40·0	14·5	..	S	½ to 1	..	..	S	¾	..	..	..	5	..
6	29·638	48·6	44·5	4·1	..	..	57·6	S	..	..	..	S	¼	..	..	..	8	..
8	29·590	46·1	43·7	2·4	..	..	44·8	S by E	..	S	1·53	Calm	..	..	..	..	9½	..
10	29·525	47·0	44·4	2·6	42·0	5·0		Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·471	46·5	44·2	2·3	..	..	72·3	Calm	..	..	..	Calm	..	..	..	..	0	..
14	29·384	46·0	44·7	1·3	..	..	40·0	SE	..	..	..	Calm	..	..	..	..	9+	..
16	29·311	47·0	44·9	2·1	45·3	1·7	54·2	SE	..	..	..	Calm	..	..	..	..	10	..
18	29·251	47·0	45·4	1·6	..	..	54·0	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·209	48·9	47·0	1·9	..	..	..	SE	..	SE	1·74	SE by E	¼	..	..	..	7	..
22	29·149	52·1	49·2	2·9	48·0	4·1	..	SSE	..	SSE	0·10	S	½+	8·54	0·00	13·790	10	Transit
Oct. 9. 0	29·096	54·2	51·1	3·1	..	..	..	SSE	½ to 3½	..	..	S	¾	..	..	..	10	..
2	29·064	55·5	52·0	3·5	..	..	..	SSE	0 to 3	..	..	SSE	½	..	..	..	10	..
4	29·031	56·0	53·4	2·6	53·0	3·0	60·7	SSE	0 to 2½	..	..	S	½	..	..	..	10	..
6	28·981	55·7	53·4	2·3	..	..	52·7	SSE	0 to 3	..	..	SSE	½	..	..	..	9+	..
8	28·961	58·2	54·2	4·0	..	..		SSE	0 to 3	..	..	SE	¾	..	..	..	10	..
10	28·919	60·0	54·7	5·3	55·0	5·0	71·0	SSE	0 to 2½	SSE	2·23	SSE	¾	..	..	..	10	In Equator
12	28·958	59·7	56·4	3·3	..	..	50·3	SSW	0 to 1½	..	..	SSW	1	..	..	..	10	..
14	28·985	55·4	53·2	2·2	..	..		S	..	..	..	S	¾	..	..	..	10	..
16	29·017	54·7	52·8	1·9	52·5	2·2	54·0	S	0 to ½	..	..	S	¾	..	..	..	10	..
18	29·040	54·4	52·5	1·9	..	..	54·0	S	..	..	..	S	¾	..	..	..	9	..
20	29·088	54·5	52·5	2·0	..	..	..	S	0 to ½	..	..	S	½	..	..	..	10	..
22	29·122	58·5	55·0	3·5	54·0	4·5	..	S	0 to 1½	S	4·72	SSW	¼	8·54	0·00	13·810	10	..
Oct. 10. 0	29·148	61·0	55·7	5·3	..	..	..	SSW	½ to 2	..	..	SSW	½	..	..	..	10	Transit
2	29·161	61·8	56·7	5·1	..	..	..	SSW	½ to 1	..	..	SW	½	..	..	..	9+	..
4	29·183	59·2	56·6	2·6	55·3	3·9	62·6	SSW	½ to 1	..	..	SSW	½	..	..	..	6	..
6	29·242	55·5	53·1	2·4	..	..	46·3	SSW	..	..	..	SW	¼	..	..	..	3	..
8	29·279	53·0	52·1	0·9	..	..		SSW	..	..	..	SSW	½	..	..	..	0	..
10	29·316	51·7	51·4	0·3	50·5	1·2	70·5	S by W	..	..	..	SSW	½	..	..	..	0	..
12	29·352	49·6	49·7	–0·1	..	..	44·0	S by W	..	..	..	Calm	..	..	..	..	0	..
14	29·396	48·6	49·0	–0·4	..	..		S by W	..	SSW	2·55	SSW	¼	..	..	..	0	..
16	29·423	47·6	47·9	–0·3	47·5	0·1	54·5	SSW	..	..	..	SSW	¼	..	..	..	0	..
18	29·463	46·7	46·9	–0·2	..	..	54·0	SSW	..	..	..	SSW	¼	..	..	..	0	..
20	29·507	46·9	47·1	–0·2	..	..	..	SSW	..	..	..	SSW	¼	..	..	..	0	..
22	29·550	55·2	53·2	2·0	52·8	2·4	..	SW	..	SW	1·74	WSW	¼	8·54	0·01	13·830	0	..
Oct. 11. 0	29·570	61·2	55·7	5·5	..	..	..	SW	0 to ½	..	..	WSW	¼	..	..	..	4	Transit
2	29·580	61·0	54·2	6·8	..	..	..	SW	0 to 1	WSW	1·49	SW	½	..	..	..	3	..
4	29·590	59·0	52·2	6·8	46·0	13·0	63·3	SW	..	SW	0·32	SW	½	..	..	..	4	..
6	29·618	56·3	52·0	4·3	..	..	45·9	SSW	..	..	..	SW	½	..	..	..	9¾	..
8	29·650	53·4	52·0	1·4	..	..		SSW	..	..	..	SW	½	..	..	..	6	..
10	29·657	51·5	51·3	0·2	50·0	1·5	86·2	SSW	..	..	..	SW	¼	..	..	..	0	..
12	29·672	49·8	48·2	1·6	..	..	42·2	SSW	..	SSW	1·43	Calm	..	..	..	..	0	New
14	29·676	47·5	47·0	0·5	..	..		S	..	..	..	WSW	¼	..	..	..	0	..
16	29·666	47·0	46·7	0·3	47·5	–0·5	54·2	S	..	..	..	WSW	¼	..	..	..	0	..
18	29·640	47·0	46·7	0·3	..	..	54·0	Calm	..	..	..	Calm	..	..	..	..	9+	..
20	29·636	49·9	49·6	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	9+	..
22	29·614	57·1	55·6	1·5	55·4	1·7	..	Calm	..	S	0·88	S	¼	8·54	0·00	13·830	10	..

BAROMETER.

Oct. 8d and 9d. The greatest difference for the month in the mean daily heights for consecutive days occurred.

Oct. 9d. The daily range was the greatest in the month.

Oct. 11d and 12d. The least difference for the month in the mean daily heights for consecutive days occurred.

DRY THERMOMETER.

Oct. 8h and 9d. The greatest difference in the mean daily temperature for consecutive days in the month occurred.

Oct. 10d. 12h, 14h, 16h, 18h, and 20h. The readings are lower than those of the Wet Thermometer.

REMARKS.	Observer.
Cirri and haze, with blue sky.	L
Cumuli towards the N.: a few cirri and cirro-cumuli in various parts of the sky: scud and haze near the horizon.	L
Cirro-cumuli in the zenith; cirri are scattered in other directions.	D
Thin cirro-stratus and haze.	
Stratus: hazy.	
,,	D
Cloudless: the stars are shining brightly.	L
Overcast, with the exception of a break in the zenith, where a few stars are visible: directly after this observation the sky became completely overcast.	
Overcast.	
,,	
Scud, with breaks towards the W. and S.: a few minutes after this observation one-third of the sky became of a fine blue, with scattered cirri.	L
Overcast: cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
Cirro-stratus and scud: about ten minutes before this observation there was a shower of rain.	L
Cirro-stratus and scud, with rain.	
Overcast.	
,, gusts of wind to 1½.	L
,, cirro-stratus and scud: gusts of wind to 1½ and 2.	H B
,, ,, the wind is not so violent as at the preceding observation.	
Cirro-stratus and scud.	
,,	
,,	H B
,,	L
Cirro-stratus and scud.	
Cirro-stratus and scud, with a few breaks N. of the zenith: occasional gusts of wind to 1: rain began to fall at about $2^h. 20^m$.	L
Cirri, cirro-strati, and fragments of scud: a shower of rain fell at $2^h. 55^m$.	H B
Light cirri in various directions.	
Cloudless.	
,,	H B
,,	D
,, a great deposition of moisture.	
,, ,,	
,, ,,	
,, ,,	D
,,	L
Cumuli, cirro-stratus, and scud.	
Cumuli and fragments of scud.	L
Cirri, cumuli, and light fleecy clouds.	D
With the exception of a break near the horizon in the W., the sky is covered with cirro-stratus and scud.	
Cirro-stratus and vapour: the sky has been generally clear since the last observation.	D
Cloudless, but hazy towards the S.	H B
Cloudless, but rather hazy.	L
,,	
,,	
Nearly overcast: a break towards the E.	
Cirro-stratus and scud, with some small breaks.	L
Overcast: cirro-stratus and scud.	H B

TEMPERATURE OF THE DEW POINT.

Oct. 8^d and 9^d. The greatest difference in the mean daily values for consecutive days in the month occurred.

Oct. $11^d. 16^h$. The reading was higher than that of the Dry Thermometer.

WEIGHT OF A CUBIC FOOT OF AIR.

Oct. 8^d and 9^b. The difference in the mean daily values for consecutive days was the greatest in the month.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 12. 0	29·586	61·7	57·8	3·9	..	..	..	SSW	..	..	..	S by W	¼	..	..	..	9½	Transit
2	29·545	61·4	57·7	3·7	..	..	..	S by W	0 to 2½	..	..	S	¼	..	..	..	10	..
4	29·509	58·2	57·8	0·4	58·9	−0·7	61·2	SSW	0 to ½	..	..	S by W	¼	..	..	..	10	..
6	29·485	58·8	57·4	1·4	..	..	54·9	S by W	..	..	..	S	¼	..	..	..	10	..
8	29·472	56·8	56·2	0·6	..	..	—	S	..	..	..	SSW	¼	..	..	..	10	..
10	29·443	57·8	56·4	1·4	57·2	0·6	72·0	S by W	½ to 1½	..	..	S	¼	..	..	..	10	..
12	29·415	57·2	55·9	1·3	..	..	52·2	S by W	0 to ½	S	1·70	S	¾	..	..	..	10	..
14	..	..	..	..	..	..	—	S by W	0 to 1	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	54·5	S by W	0 to ¾	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	54·0	SSW	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..	..
22	29·296	61·3	56·8	4·5	..	..	..	SSW	0 to 2	SSW	3·22	S	1½	8·56	0·03	13·880	9	..
Oct. 13. 0	..	..	..	..	..	..	..	SSW	½ to 2½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	SSW	1 to 3½	SSW	1·72	..	..	..	..	..	..	Transit
4	29·177	58·5	54·1	4·4	..	..	62·7	S by W	½ to 2	S	0·26	S	1	..	..	..	5	..
6	..	..	..	..	..	..	48·3	S by E	1 to 3	SSE	0·44	..	..	..	..	..	..	..
8	..	..	..	..	..	..	—	S by W	1 to 3½	SSW	0·49	..	..	..	..	..	..	..
10	..	..	..	..	..	..	78·6	SW	2½ to 6	SW	1·07	..	..	..	..	..	..	Perigee
12	..	..	..	..	..	..	42·0	SSW	..	..	..	..	..	..	..	..	..	..
14	29·204	49·6	48·3	1·3	..	..	—	SSW	..	..	..	SSW	½	..	..	..	7	..
16	29·209	49·5	48·1	1·4	48·8	0·7	55·5	SW	..	..	..	SSW	½	..	..	..	10	..
18	29·205	48·5	48·1	0·4	..	..	54·2	SSW	..	..	..	SSW	½	..	..	..	3	..
20	29·221	49·6	47·7	1·9	..	..	..	SSW	..	SSW	1·88	SSW	½	..	..	..	7	..
22	29·220	52·6	51·3	1·3	50·0	2·6	..	SSW	..	S	0·37	S	¼	8·67	0·12	14·010	9+	..
Oct. 14. 0	29·200	54·1	53·2	0·9	..	..	..	S	..	..	..	S	¼	..	..	..	10	..
2	29·140	55·3	54·1	1·2	..	..	..	SSW	0 to 3	..	..	SSW	¾	..	..	..	10	Transit
4	29·036	56·8	54·6	2·2	54·0	2·8	57·4	SSW	2 to 3	..	..	S by W	1½	..	..	..	10	..
6	28·996	55·6	54·6	1·0	..	..	46·6	SSW	0 to 2	..	..	SSW & SW	1½	..	..	..	10	..
8	28·946	54·2	53·1	1·1	..	..	—	SSW	..	..	..	SSW	¾	..	..	..	10	..
10	28·902	52·4	52·0	0·4	52·0	0·4	66·0	SW	..	SSW	2·50	S	¼	..	..	..	10	..
12	28·912	49·6	49·1	0·5	..	..	40·5	SW	0 to ½	..	..	SW	¾	..	..	..	0	..
14	28·924	47·9	46·8	1·1	..	..	—	SW	0 to ½	..	..	SW	¾	..	..	..	0	..
16	28·928	47·0	46·4	0·6	45·5	1·5	54·0	SW	..	..	..	SW	½	..	..	..	0	..
18	28·908	46·9	45·8	1·1	..	..	54·0	SW	..	..	..	SW	½	..	..	..	0	..
20	28·906	48·6	47·7	0·9	..	..	..	SSW	..	..	..	SSW	¼	..	..	..	6	..
22	28·906	53·9	51·9	2·0	53·0	0·9	..	SW	0 to ½	SW	3·28	WSW	½	8·76	0·21	14·180	2	..
Oct. 15. 0	28·905	59·8	54·2	5·6	..	..	..	SSW	1 to 4	..	..	SW	¾	..	..	..	8	..
2	28·895	58·0	53·5	4·5	..	..	..	SSW	½ to 2	..	..	SW	1	..	..	..	8	..
4	28·878	57·0	53·2	3·8	51·0	6·0	60·4	SSW	½ to 4½	SW	1·97	SSW	¾	..	..	..	10	Transit
6	28·869	53·6	52·5	1·1	..	..	45·8	S by W	¼ to 2	..	..	SSW	1	..	..	..	10	..
8	28·855	52·1	51·3	0·8	..	..	—	S by W	½ to 1½	..	..	SSW	¾	..	..	..	9	..
10	28·835	52·2	52·0	0·2	52·0	0·2	78·0	S by W	0 to 1	..	..	SSW	¼	..	..	..	10	..
12	28·828	52·0	51·8	0·2	..	..	43·8	S by W	..	..	..	SW	½	..	..	..	10	Greatest declination S.
14	28·818	51·2	51·1	0·1	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
16	28·779	50·5	50·2	0·3	50·1	0·4	54·0	S by W	..	SSW	1·92	SW	¼	..	..	..	10	..
18	28·776	48·2	48·4	−0·2	..	..	54·0	N	..	..	..	SW	¼	..	..	..	10	..
20	28·808	46·0	46·2	−0·2	..	..	..	NNW	0 to ¼	..	..	Calm	..	..	..	..	10	..
22	28·844	46·6	46·6	0·0	45·5	1·1	..	NNW	..	NNW	1·58	NNW	¼	9·74	1·38	15·400	10	..

BAROMETER.
Oct. 15d. The mean daily height was the least in the month.
Oct. 15d. 18h. The reading at this time was the lowest in the month.

DRY THERMOMETER.
Oct. 15d. 18h and 20h. The readings are lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.
Oct. 12d. 4h. The reading was higher than that of the Dry Thermometer.

WEIGHT OF A CUBIC FOOT OF AIR.
Oct. 15d. The mean daily value was the least in the month.

REMARKS.	Observer.
Cirro-stratus and large masses of dark scud.	H B
Overcast; cirro-stratus and scud.	H B
,, ,, gusts of wind to $\frac{1}{2}$: a few minutes before this observation a shower of rain fell.	L
Cirro-stratus and scud: there has been no rain since the last observation.	
Overcast: between this and the preceding observation there was a smart shower of rain, but it has now ceased: a few minutes before this observation a few stars in the zenith were faintly visible.	
Overcast: gusts of wind to $\frac{3}{4}$ and 1.	L
,, cirro-stratus and scud.	H B
Cumulo-strati, cirro-stratus, and scud.	L
Cumuli and scud: since the last observation the sky has been about one-half covered with cumuli, cumulo-strati, and scud.	D
Cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud: a heavy shower of rain fell about ten minutes before the observation.	
Cirro-stratus and fragments of scud towards the N.	
Cumuli towards the N., and masses of scud in various directions.	H B
Cirro-stratus and scud, with rain.	L
Overcast: cirro-stratus and scud.	
,, ,, with rain.	L
,, ,, drops of rain falling: frequent gusts of wind to 2.	H B
,, ,, the gusts of wind are more frequent than at the last observation, and equal to about $2\frac{1}{2}$.	
,, ,, the wind has abated considerably since the preceding observation.	
,, ,, rain falling heavily.	H B
The sky became clear at about $10^h. 40^m$, and is at present cloudless.	D
Cloudless.	
,,	
,,	
Cirro-stratus and scud: a few drops of rain are falling.	D
Cirri, fleecy clouds, and scud.	L
Cumuli, cumulo-strati, cirro-strati, and scud: gusts of wind to 1+.	
Cirro-stratus and scud.	L
,,	D
,, frequent showers of rain have fallen since the last observation.	
A few stars are shining in different directions; the sky is otherwise covered with scud, which is passing over rapidly from the S.S.W.: since $6^h. 40^m$ rain has fallen heavily.	
Overcast: rain falling heavily.	D
,, ,,	L
,, slight rain.	
,, rain falling heavily.	
,, ,,	
,, ,,	L
,, cirro-stratus and scud.	H B

MAXIMUM FREE THERMOMETER.

Oct. $12^d. 22^h$. The reading was lower than that of the Dry Thermometer at 0^h, 2^h, and 22^h.

RAIN.

Oct. $15^d. 13^h. 40^m$. The rain began to fall heavily: the rain bucket of Osler's Anemometer emptied itself at $15^h. 50^m$, at $17^h. 45^m$, at $19^h. 20^m$, and at $20^h. 50^m$, respectively; therefore, within five hours, nearly one inch of rain was registered; within the same time above one inch and a quarter was collected on the surface of the ground: it is the greatest amount of rain collected in any one day throughout the year.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 16. 0	28·884	49·5	48·8	0·7	..	..	..	W	..	..	..	WNW	¼	..	..	..	10	..
2	28·910	53·1	50·8	2·3	..	..	..	WSW	..	..	..	WNW	¼	..	..	..	7	..
4	28·934	52·0	49·5	2·5	47·5	4·5	54·3	WSW	..	WNW	1·20	NW	¼	..	..	..	9+	Transit
6	28·960	48·8	46·8	2·0	..	..	41·3	WSW	..	..	..	WSW	¼	..	..	..	7	..
8	28·983	47·2	46·2	1·0	..	..	——	SW	..	..	..	WSW	¼	..	..	..	3	..
10	29·003	45·1	44·9	0·2	44·9	0·2	64·0	SW	..	..	..	NNW	¼	..	..	..	0	..
12	29·023	42·8	42·7	0·1	..	..	37·5	SW	..	..	..	WSW	¼	..	..	..	0	..
14	29·033	42·0	41·9	0·1	..	..	——	SW	..	..	..	WSW	¼	..	..	..	0	..
16	29·034	44·5	43·7	0·8	42·8	1·7	53·5	WSW	..	SW	2·44	WSW	¼	..	..	..	10	..
18	29·056	45·6	44·6	1·0	..	..	53·0	WSW	..	..	..	W	¼	..	..	..	10	..
20	29·093	46·8	45·9	0·9	..	..	..	WSW	..	W	0·56	W	½	..	..	..	10	..
22	29·139	49·5	47·8	1·7	47·5	2·0	..	WSW	..	WNW	0·30	W	¾	9·74	0·01	15·420	5	..
Oct. 17. 0	29·174	52·6	49·2	3·4	..	..	..	W by S	0 to 1	..	..	W	¾	..	..	..	7	..
2	29·193	54·9	49·8	5·1	..	..	..	W	0 to ½	..	..	W	½	..	..	..	9¾	..
4	29·212	54·4	48·9	5·5	45·5	8·9	55·3	W	0 to 1	..	..	W	½	..	..	..	8	..
6	29·268	51·6	48·0	3·6	..	..	39·8	W	..	..	..	W	½	..	..	..	10	Transit
8	29·319	48·6	46·8	1·8	..	..	——	W	..	WNW	1·55	W	½	..	..	..	8	..
10	29·357	48·4	46·6	1·8	45·0	3·4	78·5	WSW	..	..	..	W	½	..	..	..	10	..
12	29·395	43·6	43·2	0·4	..	..	31·5	SW	..	..	..	WSW	¼	..	..	..	0	..
14	29·429	42·1	41·6	0·5	..	..	——	WSW	..	..	..	WSW	½	..	..	..	0	..
16	29·444	40·6	40·2	0·4	40·0	0·6	52·8	WSW	..	..	..	WSW	¼	..	..	..	0	..
18	29·458	40·6	40·0	0·6	..	..	52·8	WSW	..	..	..	WSW	¼	..	..	..	0	..
20	29·497	40·3	39·7	0·6	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	½	..
22	29·546	46·4	44·3	2·1	42·5	3·9	..	WSW	..	W	3·28	W	¾	9·74	0·00	15·425	3	..
Oct. 18. 0	29·580	49·6	46·7	2·9	..	..	..	WSW	..	..	..	W	½	..	..	..	3	..
2	29·599	52·0	48·3	3·7	..	..	..	WSW	..	..	..	W	¼	..	..	..	9¾+	..
4	29·603	51·1	47·4	3·7	43·5	7·6	55·4	W	..	..	..	W	¼	..	..	..	7	1st Qr.
6	29·622	47·0	45·0	2·0	..	..	36·5	WSW	..	W	0·80	WSW	¼	..	..	..	6	Transit
8	29·651	44·0	43·3	0·7	..	..	——	SW	..	..	..	SW	¼	..	..	..	0	..
10	29·676	42·1	41·7	0·4	41·0	1·1	72·0	SW	..	..	..	SW	¼	..	..	..	0	..
12	29·687	40·0	39·7	0·3	..	..	32·3	SW	..	..	..	Calm	..	..	..	..	0	..
14	29·699	39·1	39·0	0·1	..	..	——	SW	..	..	..	Calm	..	..	..	..	0	..
16	29·682	38·5	37·7	0·8	38·0	0·5	53·0	SW	..	..	..	Calm	..	..	..	..	0	..
18	29·684	36·8	36·7	0·1	..	..	52·0	SW	..	..	..	Calm	..	..	..	..	0	..
20	29·684	37·7	37·1	0·6	..	..	..	SW	..	..	..	Calm	..	..	..	..	2	..
22	29·670	44·8	43·2	1·6	41·5	3·3	..	SW	..	WSW	2·23	W by S	¼	9·74	0·00	15·430	7	..
Oct. 19. 0	29·643	50·7	46·0	4·7	..	..	..	SSW	0 to 1	..	..	WSW	½	..	..	..	8	..
2	29·587	51·6	47·1	4·5	..	..	..	SSW	0 to 2	..	..	SW	½	..	..	..	8	..
4	29·552	52·0	46·8	5·2	..	..	53·2	SSW	½ to 4	..	..	SSW	½	..	..	..	6	..
6	29·512	49·3	46·7	2·6	..	..	44·4	SSW	0 to 1½	..	..	SW	½	..	..	..	10	..
8	29·487	48·4	47·0	1·4	..	..	——	SSW	0 to 2½	..	..	SW	½	..	..	..	10	Transit
10	29·474	49·2	47·7	1·5	48·0	1·2	69·3	SW	0 to 1½	..	..	S	½	..	..	..	9+	..
12	29·437	48·3	47·7	0·6	..	..	39·0	SSW	..	..	..	SSW	¼	..	..	..	9	..
14	..	..	..	..	..	..	——	SSW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	51·8	SSW	..	SW	3·90	..	..	..	..	..	..	..
18	..	..	..	..	..	..	51·2	SSW	0 to ½	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..	..
22	29·354	53·7	48·7	5·0	..	..	..	SW	0 to ¼	WSW	1·47	WSW	½	9·76	0·01	15·470	4	..

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Oct. 16d. 4h. 50m. At this time a sudden gust of 3½ lbs. occurred; at 5h the pressure was 2½ lbs.; and at 5h. 20m it was only 1lb.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and fleecy clouds.	H B
Cirro-stratus and scud, with one or two small breaks: a slight shower of rain is falling, and a double rainbow is visible.	L
Fleecy clouds and scud.	D
Cirro-stratus and scud towards the W.S.W.: about the zenith the stars are shining: a flash of lightning was seen about ten minutes before this observation.	L
Cloudless.	L
,,	H B
,,	
Overcast: cirro-stratus and scud: at 15^h the sky was clear.	
,, ,,	
,, ,,	H B
Cirri, cirro-stratus, and scud.	L
Cumulo-strati, cirro-strati, and scud.	
,,	L
Cumuli, cirro-strati, and large masses of dark scud.	H B
Overcast: cirro-stratus and scud.	
Cirro-stratus and scud: since the last observation the sky has been occasionally free from cloud.	
Overcast: cirro-stratus and scud.	H B
Cloudless.	D
,,	
,,	
,,	
A few cirri are scattered in various directions about the sky.	D
Cirro-cumuli and cirri, with haze.	L
Cirro-cumuli, scud, and haze.	
Cirro-stratus, scud, and haze.	L
Cumulo-strati, scud, and haze: the N. E. portion of the sky is nearly clear: a few drops of rain fell about ten minutes since.	D
Scud in every direction: hazy.	
Cloudless: hazy.	
,, ,,	D
,, ,,	L
,, ,,	
,, ,,	
,, ,,	
Cirri and haze.	L
Cirro-stratus and scud: a few cirri in various directions.	H B
Fine cirro-cumuli near the zenith, and for 20° around it: cirro-stratus and scud, with a few breaks elsewhere.	
Cirro-stratus and scud: an extensive break in the S. E.	H B
Cirri, cirro-stratus, and scud.	L
Overcast: cirro-stratus and scud, with rain: gusts of wind to 1.	
Overcast, with rain: gusts of wind to 1.	
Cirro-stratus and scud: fine cirro-cumuli near the zenith: the rain has ceased.	L
,, the sky was clear for a short time at about 10^h.	H B
Cirro-cumuli, cirri, fleecy clouds, and scud.	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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 20. 0	..	..	..	..	..	..	..	WSW	0 to 1½	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	SSW	..	WSW	0·62	..	..	..	..	..	..	..
4	..	..	..	..	..	..	56·3	SSW	..	..	..	..	..	..	..	..	..	..
6	29·327	50·4	47·5	2·9	..	..	43·6	SSW	..	..	..	SSW	¼	..	..	..	3	..
8	..	..	..	..	..	..	—	SSW	..	SW	1·00	..	..	..	..	..	..	Transit
10	..	..	..	..	..	..	61·5	Calm	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	36·0	Calm	..	..	..	..	..	..	..	..	..	..
14	29·384	45·1	43·9	1·2	..	..	—	Calm	..	..	..	SW	¼	..	..	..	10	..
16	29·384	45·1	44·4	0·7	44·5	0·6	51·8	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·395	45·5	44·9	0·6	..	..	51·0	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·415	45·8	45·1	0·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·438	48·2	47·1	1·1	48·0	0·2	..	Calm	..	SSW	1·88	Calm	..	9·77	0·01	15·495	10	..
Oct. 21. 0	29·437	48·6	46·8	1·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·454	47·8	47·0	0·8	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·436	46·8	46·5	0·3	46·5	0·3	49·4	Calm	..	..	..	S	¼–	..	..	..	10	..
6	29·460	44·9	44·5	0·4	..	..	42·3	N	..	..	..	Calm	..	..	..	..	10	..
8	29·480	43·5	43·3	0·2	..	..	—	NNW	..	..	..	Calm	..	..	..	..	10	..
10	29·499	42·7	42·7	0·0	43·0	–0·3	50·5	NW	..	NW	0·61	NW	¼	..	..	..	10	Transit
12	29·526	43·0	43·1	–0·1	..	..	40·0	WSW	..	..	..	WSW	¼	..	..	..	10	..
14	29·552	43·3	43·3	0·0	..	..	—	W by S	..	..	..	WSW	¼	..	..	..	10	..
16	29·557	43·6	43·6	0·0	43·5	0·1	51·0	SW	0 to 1	..	..	SW	¼	..	..	..	10	..
18	29·584	44·0	44·0	0·0	..	..	50·0	WSW	..	..	..	WSW	¼	..	..	..	10	..
20	29·636	44·4	44·5	–0·1	..	..	..	WSW	0 to ½	..	..	WSW	¼	..	..	..	10	..
22	29·675	45·2	44·9	0·3	45·0	0·2	..	WSW	..	WSW	2·07	W	¼	10·30	0·76	16·140	10	..
Oct. 22. 0	29·707	48·0	46·4	1·6	..	..	..	WSW	0 to ½	..	..	W by S	¼	..	..	..	10	..
2	29·738	52·4	49·6	2·8	..	..	..	W by S	..	..	..	W	¼	..	..	..	9	..
4	29·739	51·4	48·4	3·0	46·5	4·9	..	W	..	..	..	W	¼	..	..	..	2	In Equator
6	29·770	48·3	46·1	2·2	..	..	53·5 30·8	W	..	..	..	W	¼	..	..	..	0	..
8	29·796	42·2	41·9	0·3	..	..	—	SSW	..	..	..	Calm	..	..	..	..	0	..
10	29·811	41·1	40·9	0·2	41·0	0·1	65·4	SSW	..	..	..	Calm	..	..	..	..	0	Transit
12	29·828	39·6	39·3	0·3	..	..	25·5	SW	..	..	..	Calm	..	..	..	..	0	..
14	29·818	37·5	37·5	0·0	..	..	—	Calm	..	..	..	Calm	..	..	..	..	0	..
17	29·795	36·5	36·2	0·3	34·5	2·0	..	Calm	..	..	..	..	..	..	..	..	0	..
18	29·795	34·5	34·5	0·0	..	..	48·0	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·802	31·5	31·4	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·793	34·3	34·3	0·0	34·8	–0·5	..	Calm	..	W	0·90	Calm	..	10·30	0·00	16·145	0	..
Oct. 23. 0	29·780	42·2	42·0	0·2	..	..	..	NNE	..	..	..	Calm	..	..	..	..	0	..
2	29·752	50·4	48·6	1·8	..	..	..	NE	..	..	..	NE	¼	..	..	..	4	..
4	29·733	52·0	49·7	2·3	48·0	4·0	52·7	ENE	..	..	..	Calm	..	..	..	..	9+	..
6	29·688	48·3	47·0	1·3	..	..	45·5	NE	..	..	..	Calm	..	..	..	..	9+	..
8	29·688	47·9	46·4	1·5	..	..	—	NE	..	..	..	Calm	..	..	..	..	10	..
10	29·675	47·6	46·2	1·4	44·5	3·1	69·2	NE	..	..	..	ENE	¼	..	..	..	10	Transit
12	29·655	47·1	46·4	0·7	..	..	40·5	N	..	..	..	SW	¼	..	..	..	10	..
14	29·631	47·3	46·5	0·8	..	..	—	NE	..	..	..	S	¼	..	..	..	10	..
16	29·597	47·3	46·5	0·8	46·0	1·3	50·0	NE	..	..	..	SSE	½	..	..	..	10	..
18	29·614	47·8	46·9	0·9	..	..	48·8	NNE	..	..	..	SE	¼	..	..	..	10	..
20	29·608	47·7	46·8	0·9	..	..	..	NNE	..	..	..	NE	¼	..	..	..	10	..
22	29·595	48·8	48·1	0·7	47·0	1·8	..	NNE	..	NE	0·95	NE	¼	10·30	0·01	16·155	10	..

Oct. 22d. At 16h the observations were not taken; at 17h observations were taken; no use, however, has been made of them in [subsequent calculations.

DRY THERMOMETER.

Oct. 21d. 12h and 20h. The readings were lower than those of the Wet Thermometer.

Oct. 22d. 20h. The reading was the lowest in the month at the two-hourly observations: a lower reading occurred on the same day during Term-Day Observations.

TEMPERATURE OF THE DEW POINT.

Oct. 21d. 10h and 22d. 22h. The readings were higher than those of the Dry Thermometer.

Oct. 22d. 22h. The reading as observed was the lowest in the month.

Oct. 23d and 24d. The difference of the mean daily values was considerable.

REMARKS.	Observer.
Fleecy clouds and scud.	L
Overcast: cirro-stratus and scud: a few drops of rain fell at 13h.	H B
,, ,,	
,, ,, rain falling.	
,, ,, ,,	H B
,, stratus.	L
Overcast: stratus: slight rain.	
,, rain falling.	L
,, cirro-stratus: rain falling.	H B
,, ,, heavy rain.	
,, ,, ,,	
,, cirro-stratus and scud: heavy rain is falling.	H B
,, rain is falling steadily.	D
,, ,,	
,, rain falling.	
,, rain falling slightly.	
,, a steady rain is falling.	D
,, cirro-stratus and scud: a slight rain is falling.	L
Overcast: cirro-stratus and scud: the rain has ceased.	
Large quantities of scud: the upper clouds consist of cirro-cumuli: cumulo-strati near the N. horizon.	L
Cumulo-strati near the horizon in the W., and fragments of scud in various directions: the clouds have nearly disappeared within the last quarter of an hour.	D
Cloudless: hazy in the N.	
,,	
,,	D
,,	L
,,	
,, hazy.	
,, ,,	
,, a dense fog.	L
Cloudless, but hazy: very foggy.	H B
Cloudless: a slight fog.	J M
Cirro-cumuli, principally towards the S.	H B
Scud nearly covers the sky.	L
Cirro-stratus and scud.	
,,	L
Overcast: cirro-stratus.	D
,, cirro-stratus and scud.	D
,, cirro-stratus.	J M
Cirro-stratus and scud, with breaks in many parts of the sky, but to no numerical amount.	H B
Overcast: cirro-stratus and dark scud.	H B
Cirro-stratus and scud.	L
Overcast: rain falling.	D

MAXIMUM FREE THERMOMETER.

Oct. $23^d. 22^h$. The reading was $35^\circ \cdot 5$, which is evidently wrong: it is altered conjecturally to $45^\circ \cdot 5$.

MINIMUM FREE THERMOMETER.

Oct. $23^d. 22^h$. The reading was $30^\circ \cdot 5$, which is evidently wrong: it is altered conjecturally to $40^\circ \cdot 5$.

TEMPERATURE OF THE WATER OF THE THAMES.

Oct. $22^d. 22^h$. The index of the Maximum Thermometer was at the highest part of the stem.

CLOUDS.

Oct. $22^d. 6^h$ to Oct. $23^d. 0^h$. The sky was cloudless: it is the longest period of clear sky in the month.

Oct. $23^d. 8^h$ to Oct. $26^d. 4^h$. The sky was covered with cloud: it is the longest cloudy period in the month.

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.	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.	By Estimation. Direction.	Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 24. 0	29·594	48·6	48·6	0·0	..	..	..	N by E	..	..	..	NE	¼	..	..	..	10	..
2	29·566	49·6	49·3	0·3	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	10	..
4	29·569	49·8	48·9	0·9	48·5	1·3	50·9	NNE	0 to ½	..	..	NNE	½+	..	..	..	10	..
6	29·563	49·2	48·9	0·3	..	..	46·3	N	0 to ½	..	..	NE	¼	..	..	..	10	..
8	29·570	49·0	48·9	0·1	..	..	—	N	0 to ¾	NE	0·20	NE	¼	..	..	..	10	..
10	29·570	49·4	49·3	0·1	49·0	0·4	52·7	N	0 to ¾	..	..	NNW	¼	..	..	..	10	..
12	29·572	48·6	48·7	–0·1	..	..	44·5	N by W	0 to 1	..	..	N	½+	..	..	..	10	Transit
14	29·592	48·0	48·0	0·0	..	..	—	N by W	0 to 1	..	..	N	½	..	..	..	10	..
16	29·587	46·9	46·8	0·1	46·0	0·9	49·0	N by W	0 to 4	..	..	N	½	..	..	..	10	..
18	29·604	47·1	46·8	0·3	..	..	49·0	N by W	0 to 1	..	..	N	½	..	..	..	10	..
20	29·627	47·8	47·6	0·2	..	..	..	N by W	0 to 1	..	..	N	¼	..	..	..	10	..
22	29·663	47·8	47·7	0·1	47·3	0·5	..	NNW	0 to 1½	NW	4·64	N	¼	10·66	0·94	16·849	10	..
Oct. 25. 0	29·672	50·0	49·2	0·8	..	..	..	N	0 to 1½	..	..	N	½	..	..	..	10	..
2	29·686	50·0	48·7	1·3	..	..	..	N by W	0 to 1	..	..	N	¼	..	..	..	10	..
4	29·694	49·6	48·3	1·3	48·5	1·1	50·5	N by W	½ to 1	..	..	N	¾	..	..	..	10	..
6	29·721	49·2	47·5	1·7	..	..	42·2	NNW	0 to ½	..	..	N	½	..	..	..	10	..
8	29·748	47·5	46·0	1·5	..	..	—	NNW	0 to ½	..	..	N	½	..	..	..	10	..
10	29·756	47·2	45·8	1·4	46·5	0·7	50·9	NNW	..	..	..	N by W	½	..	..	..	10	..
12	29·776	44·5	43·7	0·8	..	..	35·2	W	..	..	..	NNW	½	..	..	..	10	Transit
14	29·781	42·7	42·2	0·5	..	..	—	WSW	..	..	..	NW	½	..	..	..	10	..
16	29·774	43·7	43·1	0·6	41·5	2·2	49·8	WSW	..	..	..	SW	¼	..	..	..	10	..
18	29·786	44·5	43·8	0·7	..	..	48·8	WSW	..	..	..	SW	¼	..	..	..	10	Full
20	29·803	44·4	43·6	0·8	..	..	..	WSW	..	..	..	W	¼	..	..	..	10	..
22	29·825	46·7	45·9	0·8	45·0	1·7	..	W by S	0 to ½	..	..	W	¼	10·67	0·02	16·870	10	..
Oct. 26. 0	29·844	48·0	46·8	1·2	..	..	..	WSW	..	..	..	WNW	¼	..	..	..	10	..
2	29·870	48·7	47·4	1·3	..	..	..	SW	..	..	..	W	¼–	..	..	..	10	..
4	29·884	49·5	48·9	0·6	47·0	2·5	52·3	NW	..	..	..	W	¼	..	..	..	10	..
6	29·939	49·7	49·2	0·5	..	..	44·1	N	..	..	..	N	¼	..	..	..	9	..
8	29·983	46·8	46·5	0·3	..	..	—	NNW	..	..	..	N	¼	..	..	..	0	..
10	30·018	44·2	43·9	0·3	42·5	1·7	51·2	NNW	..	..	..	Calm	..	..	..	..	0	..
12	30·084	44·1	43·2	0·9	..	..	35·8	NNW	..	..	..	N	¼–	..	..	..	2	Transit
14	..	..	..	..	..	..	—	NNW	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	49·0	N	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	48·5	N by W	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	NW	..	..	..	..	..	..	..	..	..	..
22	30·157	46·7	45·6	1·1	..	..	..	N by W	..	..	..	N by E	¼	10·68	0·04	16·905	10	..
Oct. 27. 0	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	50·5	NNE	..	..	..	..	..	..	..	..	..	..
6	30·154	46·2	42·7	3·5	..	..	36·2	NE	..	..	..	NNE	¼	..	..	..	10	..
8	30·165	45·2	42·3	2·9	..	..	—	NNE	..	..	..	NNE	¼	..	..	..	10	..
10	..	..	..	..	..	..	53·8	NE	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	30·7	NE	..	..	..	..	..	..	..	..	..	..
14	30·138	40·6	38·9	1·7	..	..	—	Calm	..	..	..	Calm	..	..	..	..	0	Transit
16	30·100	39·7	38·7	1·0	38·0	1·7	49·0	Calm	..	..	..	NE	¼–	..	..	..	1	..
18	30·097	36·7	36·6	0·1	..	..	47·5	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·114	36·5	36·4	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	2	..
22	30·099	39·8	39·4	0·4	39·0	0·8	..	Calm	..	..	..	S	¼	10·68	0·00	16·905	10	..
Oct. 28. 0	30·081	45·8	44·1	1·7	..	..	..	NE	..	..	..	E	¼	..	..	..	10	..

BAROMETER.

Oct. 27^{d}. 14^{h}. The reading at this time was the highest in the month at the two-hourly observations; the highest reading, however, occurred at 8^{h}.

Oct. 28^{d}. The mean daily height was the greatest in the month.

DRY THERMOMETER.

Oct. 24^{d}. The daily range was the least in the month.

Oct. 28^{d}. The mean daily temperature was the lowest in the month.

Oct. 24^{d}. 12^{h}. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Overcast: rain is falling heavily.	H B
Cirro-stratus and scud, with rain.	L
Overcast: cirro-stratus and scud.	H B
,, rain falling.	D
,, a slight rain is falling.	J M
,, ,,	L
,, ,,	H B
,, heavy rain is falling.	
,, ,, wind in gusts to 1.	
,, ,, ,,	
,, ,,	H B
,, a slight rain is falling.	L
Overcast.	J M
,, cirro-stratus: clear to windward: a thin rain is falling.	J M
,, cirro-stratus and scud.	H B
,, ,,	
,, ,, at $7^h.\ 35^m$ the Moon and a few stars were visible, but they remained so for a short time only.	
,, ,, the Moon's place is visible.	H B
A thin cirro-stratus covers the whole sky; the Moon, however, is visible through it.	J M
Overcast: cirro-stratus and scud.	
,,	
,, a few drops of rain are falling.	
,,	J M
,,	L
Overcast.	
,,	L
,, a slight rain is falling.	J M
Clear in the western horizon; otherwise quite cloudy.	
Cloudless.	
,,	J M
The northern half of the sky is cloudless; loose scud is floating about the southern part.	L
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and scud, with a few breaks, to no numerical extent.	
Overcast.	H B
Cloudless.	L
Scud in various directions: hazy: there is a halo visible round the Moon.	
Cloudless.	
A thin mist over the whole sky: fine cirri and masses of dark scud near the S. horizon.	L
Overcast: cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	

TEMPERATURE OF THE DEW POINT.—Oct. $25^d.\ 16^h$. The reading was $46^\circ\cdot5$, which is evidently 5° in error: it is altered conjecturally [to $41^\circ\cdot5$.

Oct. 28^d. The mean daily value was the least in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

Oct. 28^d. The mean daily values were the least in the month.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Oct. 24^d. The mean daily value was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.—Oct. 28^d. The mean daily value was the greatest in the month.

DEGREE OF HUMIDITY.—Oct. 24^d. The mean daily value was the greatest in the month.

WHEWELL'S ANEMOMETER. Oct. $25^d.\ 1^h$. The instrument was out of order: it was sent to Mr. Simms to be 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. of Rad. Therm. of Therm. in Water of the Thames.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Oct. 28. 2	30·066	48·2	45·6	2·6	..	..	..	E	..	..	..	E	¼—	..	..	..	8½	..
4	30·046	47·8	44·8	3·0	44·0	3·8	..	Calm	..	..	..	Calm	..	..	..	..	10	..
6	30·033	43·7	42·0	1·7	..	..	49·2	Calm	..	..	..	Calm	..	..	..	..	4	..
8	30·031	40·3	39·5	0·8	..	..	39·8	Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·022	40·5	39·9	0·6	40·0	0·5	—	Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·002	39·5	39·2	0·3	..	..	62·6 29·6	Calm	..	..	..	Calm	..	..	..	..	1½	..
14	29·989	39·1	39·2	–0·1	..	..	—	Calm	..	..	..	Calm	..	..	..		9½	Transit
16	29·967	40·4	40·4	0·0	41·0	–0·6	48·0	NE	..	..	..	Calm	..	..	..	..	10	..
18	29·947	43·2	43·2	0·0	..	..	47·2	Calm	..	..	..	ESE	¼	..	..	..	10	..
20	29·954	45·4	43·0	2·4	..	..	..	E	..	..	..	ESE	½	..	..	..	10	..
22	29·956	47·1	44·2	2·9	43·5	3·6	..	E	..	..	..	ESE	½	10·68	0·00	16·905	10	..
Oct. 29. 0	29·949	49·3	44·5	4·8	..	..	..	ESE	0 to ½	..	..	ESE	½	..	..	..	10	..
2	29·905	48·8	44·7	4·1	..	..	..	E	0 to ½	..	..	ESE	½	..	..	..	10	..
4	29·877	47·6	43·8	3·8	42·0	5·6	49·9	E	0 to 1	..	..	ESE	½	..	..	..	10	Apogee
6	29·871	45·5	43·0	2·5	..	..	41·8	E	0 to ¼	..	..	E	½	..	..	..	10	..
8	29·855	45·4	43·2	2·2	..	..	—	E by N	..	..	..	ESE	½	..	..	..	10	..
10	29·834	44·3	41·8	2·5	42·0	2·3	58·0	ESE	..	..	..	SSE	½	..	..	..	10	..
12	29·804	43·4	42·3	1·1	..	..	35·0	E by S	..	..	..	ESE	¼	..	..	..	10	Greatest declination N.
14	29·784	42·9	42·1	0·8	..	..	—	E by S	..	..	..	E	¼	..	..	..	10	..
16	29·750	42·8	42·4	0·4	42·0	0·8	48·0	E by N	..	..	..	E	¼	..	..	..	10	Transit
18	29·725	42·6	42·3	0·3	..	..	47·0	E by N	..	..	..	E	¼	..	..	..	10	..
20	29·712	42·9	42·4	0·5	..	..	..	E by N	..	..	..	E	¼	..	..	..	10	..
22	29·728	43·4	42·7	0·7	42·5	0·9	..	E	..	..	..	E	¼	10·85	0·26	17·015	10	..
Oct. 30. 0	29·729	43·2	42·5	0·7	..	..	..	ENE	..	..	..	E by N	¼	..	..	..	10	..
2	29·709	45·0	44·1	0·9	..	..	..	E	..	..	..	E by S	¼	..	..	..	10	..
4	29·701	46·7	45·7	1·0	45·5	1·2	47·4	E	..	..	..	ESE	¼	..	..	..	10	..
6	29·718	44·4	44·1	0·3	..	..	39·9	E by N	..	..	..	NE	¼	..	..	..	8	..
8	29·729	43·6	43·4	0·2	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·747	44·8	44·3	0·5	43·5	1·3	47·4	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·746	45·2	44·5	0·7	..	..	35·2	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·732	44·8	44·2	0·6	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·712	41·5	41·2	0·3	41·0	0·5	48·0	Calm	..	..	..	Calm	..	..	..	..	0	Transit
18	29·708	40·7	40·7	0·0	..	..	47·0	Calm	..	..	..	Calm	..	..	..	..	0	..
20	29·707	41·9	41·2	0·7	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	29·692	46·4	44·8	1·6	45·5	0·9	..	Calm	..	..	..	E by S	¼	10·85	0·00	17·015	0	..
Oct. 31. 0	29·678	49·4	47·3	2·1	..	..	..	E	0 to ½	..	..	E by S	½	..	..	..	½	..
2	29·634	51·5	48·8	2·7	..	..	..	E by N	0 to 2	..	..	E	½	..	..	..	½	..
4	29·618	49·7	47·5	2·2	..	..	..	ENE	0 to 1	..	..	E	½	..	..	..	¼	..
6	29·620	46·8	46·0	0·8	..	..	52·1	..	0 to ¾	..	..	E by N	½	..	..	..	0	..
8	29·604	47·5	46·4	1·1	..	..	43·8	..	0 to ½	..	..	E	½	..	..	..	10	..
10	29·580	45·7	44·7	1·0	44·5	1·2	66·7	..	..	..	..	E	½	..	..	..	0	..
12	29·538	44·5	43·9	0·6	..	..	37·5	..	..	..	..	E	¼	10·85	0·00	17·015	0	..
14	29·507	44·5	44·1	0·4	..	..	—	..	0 to ½	..	..	ESE	½	..	..	..	0	..
16	29·475	43·9	43·4	0·5	43·5	0·4	47·5	..	0 to ½	..	..	ESE & SE	½	..	..	..	1	Transit
18	29·446	44·1	43·3	0·8	..	..	47·0	..	0 to 1½	..	..	SSE	½	..	..	..	3	..
20	29·425	45·6	44·6	1·0	..	..	..	E	0 to ½	..	..	E by S	½	..	..	..	10	..
22	29·399	46·2	44·9	1·3	44·3	1·9	..	E by N	0 to 3½	E	4·58	E	¾	10·85	0·00	17·015	10	..

BAROMETER.

Oct. 30d. The daily range was the least in the month.

DRY THERMOMETER.

Oct. 28d. 14h. The reading was lower than that of the Wet Thermometer; and at 28d. 16h it was lower than that of the Dew Point.

MINIMUM FREE THERMOMETER.

Oct. 28d. 22h. The reading was higher than that of the Dry Thermometer at 12h and 14h.

TEMPERATURE OF THE WATER OF THE THAMES.

Oct. 29d. 22h, and 30d. 22h. The lowest readings in the month occurred.

REMARKS.	Observer.
Thin cirro-stratus: a few cirri and cirro-cumuli.	H B
Fleecy clouds, cirro-stratus, and scud.	L
Fleecy clouds and cirro-stratus in the northern part of the sky.	
Cloudless: hazy.	
,, a thick mist prevails: there is a halo round the Moon.	L
There is a bank of clouds near the S. horizon: the halo mentioned in the preceding observation still remains; its diameter is about 44°: the sky is very hazy.	H B
Nearly overcast: the halo continued visible till about five minutes previously to this observation, and also a fine coloured corona: [a dense fog prevails.	
Overcast: cirro-stratus and scud: great deposition of moisture.	
,, ,, the Moon's place is visible.	
,, ,,	H B
,, ,,	L
Overcast: thin cirro-stratus, and stratus near the S. horizon.	
,, cirro-stratus.	L
Cirro-cumuli and linear cirri near the zenith: cirro-stratus and scud cover the remainder of the sky.	H B
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	H B
,, ,, a thin rain is falling.	D
,, ,,	
,, ,, rain falling.	
,, ,, ,,	
,, ,, ,,	D
Cirro-stratus and scud: a thin rain was falling a few minutes before the observation.	L
Overcast: cirro-stratus.	
,, ,,	L
,, cirro-stratus and scud.	H B
Cirro-stratus and scud: the sky N. of the zenith is partially clear, fragments of scud being scattered over it.	D
Overcast: cirro-stratus: since the last observation the sky has been nearly clear, though the stars appeared as if they were shining through vapour.	
Overcast: cirro-stratus.	D
,, ,,	L
Cirro-stratus and scud: the Moon can be dimly seen through the scud.	
Cloudless: hazy: the sky became clear at about 14^h.	
,, ,,	
,, ,,	L
Cloudless, with the exception of a few light cirri.	H B
A few light cirri in various directions.	
Light cirri and fleecy clouds.	H B
A few light cirri about the zenith, and fleecy clouds towards the S. horizon.	L
Cloudless, with the exception of a few very small cirri a little N. of the zenith.	
A few minutes before this observation it was quite overcast; at present it seems as if it would clear off, as some of the brightest stars about and to the S. of the zenith may be dimly seen through scud.	
Soon after the former observation the sky gradually cleared; at present it is quite cloudless.	L
Cloudless.	H B
,,	
Light fleecy clouds passing rapidly from the S. E.	
Fleecy clouds and scud: a faint corona was visible around the Moon at 17^h. 10^m, but it remained only for a short time.	
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and scud: gusts of wind to 1.	L

OSLER'S ANEMOMETER.

Oct. 31^d. 4^h. At this time the registering-pencil went off the rack-work.

WHEWELL'S ANEMOMETER.

Oct. 30^d. 22^h. The instrument had been received from Mr. Simms, and it was set to work at this time.

RAIN.

Oct. 31^d. 12^h. The amount of rain collected in rain-gauge No. 4 during the month of October was $4^{in}\cdot01$, and that collected in the gauge at Greenwich Hospital Schools for the same period was $4^{in}\cdot03$.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d	h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 1.	0	29·360	46·8	45·3	1·5	..	..	..	E by N	1 to 4	..	..	E	1	..	..	..	10	..
	2	29·285	47·0	45·7	1·3	..	..	..	E	1 to $4\frac{1}{2}$	..	..	E	1	..	..	..	10	..
	4	29·248	47·0	45·5	1·5	..	..		E	1 to $4\frac{1}{2}$	..	..	E	2	..	..	..	10	..
	6	29·224	47·9	45·7	2·2	..	..	48·4	E	2 to 5	..	..	E	2+	..	..	..	10	..
	8	29·194	47·3	44·8	2·5	..	..	41·0	E	1 to $4\frac{1}{2}$	..	..	E	$2\frac{1}{2}$	..	..	..	10	..
	10	29·167	46·2	44·4	1·8	..	..	53·1	E by N	2 to $4\frac{1}{2}$	..	..	E	$2\frac{1}{2}$	..	..	..	10	..
	12	29·119	44·0	43·7	0·3	..	..	39·0	E by N	1 to 4	..	.	E by N	2	..	..	..	10	..
	14	29·090	42·7	42·6	0·1	..	..	46·8	E by N	3 to 5	..	..	E by N	2	..	..	..	10	..
	16	29·053	41·3	41·2	0·1	..	..	46·0	E by N	$1\frac{1}{2}$ to 4	..	..	E by N	2	..	..	..	10	..
	18	29·030	42·2	41·4	0·8	..	..		E	2 to 5	..	..	E	2	..	..	..	10	Transit
	20	29·014	42·7	42·2	0·5	..	..	..	E	$2\frac{1}{2}$ to $4\frac{1}{2}$	..	..	E by S	2	..	..	..	10	..
	22	29·035	42·6	41·9	0·7	..	..	..	E	$1\frac{1}{2}$ to $4\frac{1}{2}$	E	8·52	E	1	11·32	0·70	17·670	10	..
Nov. 2.	0	29·033	42·1	41·7	0·4	..	..	..	E	$\frac{1}{2}$ to 3	..	..	E	1	..	..	..	10	..
	2	29·039	43·2	42·7	0·5	..	..	..	E	0 to $\frac{1}{2}$	..	..	E	$\frac{3}{4}$	..	..	..	10	..
	4	29·065	43·5	42·9	0·6	..	..	44·6	E by N	..	E	1·86	E	$\frac{3}{4}$	..	..	..	10	..
	6	29·099	44·0	43·7	0·3	..	..	37·0	ENE	..	..	..	E	$\frac{1}{2}$	..	..	..	10	..
	8	29·112	44·5	44·2	0·3	..	..		ENE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
	10	29·143	44·0	43·7	0·3	..	..	43·8	ENE	0 to 1	..	..	E	$\frac{1}{2}$	..	..	..	10	..
	12	29·164	41·5	40·3	1·2	..	..	34·5	ENE	0 to 1	ENE	0·99	E	$\frac{1}{2}$	..	..	..	10	..
	14	..	..	..	..	..	..		NE	$\frac{1}{2}$ to 2	..	..	..	..	..	..	..	..	..
	16	..	..	..	..	..	..	46·0	NE	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
	18	..	..	..	..	..	..	45·8	NE	0 to 1	..	..	..	..	..	..	..	..	Transit
	20	..	..	..	..	..	..	..	NE	0 to 1	..	..	..	..	..	..	..	..	..
	22	29·218	44·3	43·5	0·8	..	..	..	NE	0 to $\frac{1}{2}$	NE	1·09	NE	$\frac{1}{2}$	11·62	0·64	18·069	10	Last Qr.
Nov. 3.	0	..	..	..	..	..	..	..	NNE	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
	2	..	..	..	..	..	..	..	NNE	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..		NNE	0 to $\frac{3}{4}$	..	..	..	..	..	..	..	..	..
	6	29·254	39·3	38·4	0·9	..	..	~~43·0~~	N by E	..	NE	0·99	NE	$\frac{1}{4}$	..	..	..	10	..
	8	..	..	..	..	..	..	36·8	N	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
	10	..	..	..	..	..	..	45·0	N	..	..	..	..	..	..	..	..	..	..
	12	..	..	..	..	..	..	28·8	N	..	NNE	0·91	..	..	..	..	..	..	..
	14	29·276	38·6	37·7	0·9	..	..		NNW	..	..	..	NE	$\frac{1}{4}$	..	..	..	9	..
	16	29·278	39·5	38·7	0·8	..	..	46·0	NNW	..	..	..	NE	$\frac{1}{4}$–	..	..	..	10	..
	18	29·249	40·8	40·1	0·7	..	..	46·0	NNW	..	..	..	NE	$\frac{1}{4}$	..	..	..	6	..
	20	29·252	41·2	40·4	0·8	..	..		NNW	..	..	..	N by E	$\frac{1}{4}$–	..	..	..	10	Transit
	22	29·239	43·2	42·0	1·2	..	..	.. ..	NNW	..	N	2·22	N by W	$\frac{1}{4}$	11·62	0·01	18·075	9	..
Nov. 4.	0	29·216	44·7	42·9	1·8	..	..	..	NNW	..	NNW	0·24	N	$\frac{1}{4}$	..	..	..	10	..
	2	29·193	44·8	43·1	1·7	..	..	..	NW	..	..	..	N by W	$\frac{1}{4}$	..	..	..	9	..
	4	29·168	44·5	42·0	2·5	..	..	45·4	NW	..	..	..	NNW	$\frac{1}{4}$–	..	..	..	10	..
	6	29·155	42·7	41·2	1·5	..	..	34·6	NW	..	..	..	Calm	..	..	..	..	10	..
	8	29·124	40·0	38·8	1·2	..	..		NW	..	..	..	N	$\frac{1}{4}$–	..	..	..	1	..
	10	29·115	35·8	35·7	0·1	..	..	47·8	Calm	..	NW	0·93	Calm	..	..	..	..	0	..
	12	29·095	36·2	35·7	0·5	..	..	25·0	Calm	..	..	..	Calm	..	..	..	..	7	..
	14	29·080	36·8	36·7	0·1	..	..		Calm	..	..	..	W. Nearly calm	$\frac{1}{4}$–	..	..	..	10	..
	16	29·062	37·5	37·2	0·3	..	..	45·0	NNW	..	..	..	Calm	..	..	..	..	10	..
	18	29·055	38·4	37·8	0·6	..	..	45·0	Calm	..	..	..	Calm	..	..	..	..	10	..
	20	29·068	39·6	39·1	0·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
	22	29·083	40·1	39·7	0·4	..	..	..	Calm	..	WNW	0·19	Calm	..	11·62	0·00	18·080	10	..

TEMPERATURE OF THE DEW POINT.

Nov. 1d. 4h. The instrument was accidently broken at this time.

OSLER'S ANEMOMETER.

Nov. 1d. 18h. 10m. At this time the registering-pencil went off the rack-work.

REMARKS.	Observer.
Cirro-stratus and scud.	L
Overcast: cirro-stratus.	L
,, cirro-stratus and scud.	H B
,, ,, gusts of wind to 2½ and upwards.	
,, ,,	
,, ,, the gusts of wind are more violent than at the last observation, and sometimes exceed 3.	H B
Rain has been falling during the last hour in occasional showers, between which there have been continuous dashing drops: the gusts of wind are occasionally to 2½, with lulls of longer duration than they have previously been.	G
No change whatever.	
Rain has fallen without intermission since the last observation.	
Rain continued to fall till within a quarter of an hour since: wind in gusts to 2½.	
The rain has not ceased falling since the last observation.	G
Cirro-stratus and scud: heavy rain is falling.	L
Cirro-stratus and scud: heavy rain is falling.	
,, the rain is not falling so heavily as at the previous observation.	
,, the rain has ceased.	L
Overcast: a slight rain is falling.	G
,, no rain has fallen since the last observation. [London lights appears to be in the horizon.	
,, cirro-stratus: the clouds appear to be less dense than they have been; they are very low, as the reflexion of the	G
,, ,, a thin drizzling rain is falling.	L
Cirro-stratus and scud: gusts of wind to 1.	
Cirro-stratus and scud: a thin drizzling rain is falling: the sky has been overcast during the whole of the day.	
[through a break: the rest of the sky is overcast.	
Towards the N. it is cloudy: in the zenith and a little to the S. of it, fleecy clouds, with a few breaks: the Moon is visible	
Since the last observation the sky has been nearly cloudless, but it is at present quite overcast.	
Clear in the zenith and to the E. and S. of it; everywhere else the sky is cloudy.	
Cirro-stratus, scud, and haze: the S. half of the sky is covered with cirri, fleecy clouds, and scud; cumulo-strati towards the S. and E. horizon: there are large masses of scud coming up from the N. and N.E.	L
Cirro-stratus, scud, and haze, with a few breaks.	H B
Overcast: cirro-stratus and scud. [day has been very gloomy.	
The clouds are broken towards the E. and N.E., but there is a considerable quantity of scud still remaining in that direction: the	H B
Cirro-stratus and scud: hazy.	L
,, ,,	L
Cloudless, with the exception of a thin cirro-stratus near the horizon.	H B
Cloudless: hazy.	L
The greater part of the sky is covered with a thin cirro-stratus, through which several of the principal stars may be seen.	H B
A short time after the preceding observation the sky became overcast, and has continued so to the present time.	
Overcast: at $14^h. 30^m$ a few stars were visible.	
The sky has remained overcast since the last observation.	
Overcast: cirro-stratus and scud.	H B
,, hazy.	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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 5. 0	29·084	42·2	41·3	0·9	..	..	..	N	..	..	..	Calm	..	..	..	..	10	..
2	29·084	43·6	42·5	1·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·096	42·7	41·6	1·1	..	..	45·0	Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·110	41·4	40·6	0·8	..	..	39·1	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·139	40·6	40·1	0·5	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·145	40·1	39·7	0·4	..	..	47·5	NNE	..	..	..	N by W	¼	..	..	..	10	..
12	29·143	39·7	39·5	0·2	..	..	33·9	N by E	..	..	..	Calm	..	..	..	..	10	..
14	29·143	39·8	39·7	0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·138	40·5	40·5	0·0	..	..	44·5	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·135	40·3	40·2	0·1	..	..	44·5	NNW	..	W	0·05	Calm	..	..	..	..	10	..
20	29·144	39·5	39·4	0·1	..	..	..	NW	..	..	..	Calm	..	..	..	..	10	Transit In Equator
22	29·162	39·3	38·9	0·4	..	..	..	SW	..	WSW	0·10	WSW	¼–	11·66	0·06	18·125	10	..
Nov. 6. 0	29·153	43·8	42·6	1·2	..	..	..	WSW	..	..	..	WSW	¼–	..	..	..	2	..
2	29·147	44·8	42·4	2·4	..	..	..	SW	..	..	..	WSW	¼	..	..	..	9	..
4	29·144	44·4	42·3	2·1	..	..	..	SW	..	SW	0·68	SSW	¼	..	..	..	6	..
6	29·155	42·9	41·4	1·5	..	..	..	SSW	..	..	..	Calm	..	..	..	..	10	..
8	29·174	40·4	40·0	0·4	..	..	45·3	Calm	..	..	..	Calm	..	..	..	..	3	..
10	29·198	38·6	38·5	0·1	..	..	38·3	Calm	..	..	..	Calm	..	..	..	..	1	..
12	29·214	39·8	39·4	0·4	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·226	41·5	40·9	0·6	..	..	46·5 31·0 ——	Calm	..	SSW	1·24	Calm	..	..	..	..	10	..
16	29·232	42·0	41·2	0·8	..	..	44·0 44·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·245	41·0	40·5	0·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	8	..
20	29·266	40·2	39·8	0·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	6	..
22	29·302	43·0	42·5	0·5	..	..	.. ..	Calm	..	S	0·88	S	¼–	11·76	0·20	18·320	10	Transit
Nov. 7. 0	29·301	45·2	45·0	0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·292	48·6	48·3	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	8	..
4	29·278	48·8	47·4	1·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	9	..
6	29·284	47·2	46·4	0·8	..	..	50·5 43·9	SE	..	..	..	Calm	..	..	..	..	10	..
8	29·268	46·8	46·1	0·7	..	..	——	ESE	..	..	..	SE	¼–	..	..	..	0	..
10	29·261	47·5	46·7	0·8	..	..	53·4	SE	..	..	..	SE	½	..	..	..	10	..
12	29·198	46·7	45·4	1·3	..	..	39·3	ESE	..	ESE	1·83	SE	¼+	..	..	..	10	..
14	29·144	45·5	44·7	0·8	..	..	——	E by N	..	..	..	SE	½	..	..	..	10	..
16	29·075	45·5	44·7	0·8	..	..	44·2 44·2	E by N	0 to ½	..	..	SE	½	..	..	..	10	..
18	29·036	44·5	43·9	0·6	..	..	..	E	0 to 1	..	..	SE	¾	..	..	..	10	..
20	29·000	44·5	43·5	1·0	..	..	..	E	..	E	1·62	E	½	..	..	..	10	..
22	28·982	46·4	45·3	1·1	..	..	..	E	..	SSE	0·09	ESE	¼	11·98	0·24	18·455	10	Transit
Nov. 8. 0	28·946	52·2	50·2	2·0	..	..	..	SSE	0 to ¼	..	..	SSE	¼	..	..	..	10	..
2	28·916	53·5	50·4	3·1	..	..	..	S	0 to 1	..	..	SSE	½	..	..	..	10	..
4	28·887	50·2	48·9	1·3	..	..	..	S	..	..	..	S	¼	..	..	..	9+	..
6	28·865	48·3	48·2	0·1	..	..	..	S	..	SSE	1·04	Calm	..	..	..	..	10	..
8	28·827	49·7	49·2	0·5	..	..	..	SSW	0 to 2½	..	..	SE	1	..	..	..	0	..
10	28·871	49·0	48·2	0·8	..	..	..	SSW	½ constant	..	..	SSE	½	..	..	..	10	..

BAROMETER.
Nov. 8d. 8h. The reading was the least in the month.

WEIGHT OF A CUBIC FOOT OF AIR.
Nov. 5d and 6d. The difference in the mean daily values for consecutive days was the least in the month.
Nov. 8d. The mean daily value was the least in the month.

REMARKS.	Observer.
Overcast: hazy.	L
Cirro-stratus and scud.	L
,, very dark.	H B
Overcast: cirro-stratus.	
,, ,,	
,, ,, a few drops of rain fell about ten minutes before this observation.	H B
,, ,,	D
,, a thin rain is falling.	
,, rain falling.	
,, no rain is falling.	
,,	D
Cirro-stratus and scud.	L
Cumulo-stratus towards the N. horizon, and scud in various directions.	
Fleecy clouds and scud.	L
,,	D
Overcast: cirro-stratus.	
Cirro-stratus and haze to the S. and S. E. of the zenith; the remainder of the sky is clear, though the stars shine but dimly.	
Vapour N.W. of the zenith.	
The sky continued clear until 11^h, when the vapour became so dense as to obscure every star: occasionally a bright star may be seen near the zenith.	
The sky gradually became clear until 13^h. 5^m; by 13^h. 10^m a thin veil of cloud formed, and at 13^h. 29^m rain began to fall, and still continues.	
A little rain has fallen since 14^h, and a solitary star is occasionally seen: the clouds are thin and high, the reflexion of the London lights being high.	
Occasionally rain has been falling since 16^h; at present it is clear in and around the zenith.	D
No rain has fallen since 18^h; the sky has been partially clear; Venus and the Moon have been shining beautifully: at present a large quantity of scud is passing slowly from the S. S.W.	G
Cirro-stratus and scud, with heavy rain: there is a luminous appearance towards the W., as if the clouds were thin at that part.	L
Cirro-stratus and scud, with heavy rain: at 22^h the arc of a rainbow was visible.	
Cirro-stratus, cumulo-stratus, and scud.	L
Some rain has fallen since the last observation: at present there are faint gleams of sunshine, and a large quantity of scud passing over from the S.	G
Cirro-stratus and a large quantity of scud moving from the S.	G
Cloudless: hazy: the stars are shining dimly: a few minutes after this observation it became quite overcast.	L
A thin veil of cloud covers the sky, occasionally a star is dimly seen: a quantity of scud is passing from the S. S. E.: the reflexion of the London lights is high: hazy.	G
Overcast.	L
,,	
The northern portion of the sky is covered with cloud: the zenith and the southern portion of the sky are covered with a thin veil of cloud, through which the stars are dimly seen.	
Overcast: gusts of wind to 1+.	
Cirro-stratus and scud.	L
Overcast: cirro-stratus and scud: at 22^h. 30^m a rainbow was seen, which lasted only for a short time.	H B
Since the last observation a slight rain fell, and the sky was clear in many places: at present the sky is completely overcast.	
Overcast: cirro-stratus and scud: every appearance of rain.	H B
Cirro-stratus and scud, with a break towards the E. horizon.	L
Cirro-stratus and scud, with very heavy rain.	
Cloudless: a few minutes after this observation it became quite overcast, and began to rain.	
Overcast, with slight rain: gusts of wind to 1.	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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 8. 12	28·887	47·4	46·7	0·7	..	..	53·8 ~~49·3~~	SSW	..	..	..	SSE & S	½	..	..	..	9	..
14	28·897	47·0	46·7	0·3	..	..	68·3	SSW	..	SSW	2·96	S	¼	..	..	..	10	..
16	28·889	49·0	47·5	1·5	..	..	39·6	S by W	½ to 2	..	..	S	1	..	..	..	9	..
18	28·890	47·7	46·6	1·1	..	..		S by W	..	..	..	SSE	½	..	..	..	5	..
20	28·884	46·5	45·7	0·8	..	..	44·5	Calm	..	..	..	S	¼	..	..	..	2	..
22	28·871	47·8	47·4	0·4	..	..	44·5	Calm	..	S	0·59	Calm	..	12·88	1·03	19·365	10	..
Nov. 9. 0	28·849	49·5	49·2	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	9+	Transit
2	28·851	50·0	48·9	1·1	..	..	..	WSW	..	..	..	WSW	¼	..	..	..	3	..
4	28·878	49·1	48·1	1·0	..	..		SW	..	..	..	W	¼	..	..	..	1	..
6	28·921	47·2	45·9	1·3	..	..	51·6	SW	..	..	..	WSW	¼	..	..	..	5	..
8	28·961	45·4	44·7	0·7	..	..	38·2	SW	..	SW	1·16	SW	¼	..	..	..	0	..
10	28·998	44·5	43·7	0·8	..	..	55·8	SW	..	..	..	SSW	¼	..	..	..	2	..
12	29·005	45·4	44·4	1·0	..	..	32·0	SW	..	SSW	0·65	SSW	¼	..	..	..	5	..
14	..	..	..	..	..	..	45·2	WSW	½ to 2	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	45·0	SW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..		SW	..	SW	0·63	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	SSW	..	..	..	..	..	..	..	..	..	..
22	29·069	43·0	41·4	1·6	..	..	..	S by W	..	SSW	0·42	SSW	¼	13·14	0·28	19·625	9	New
Nov. 10. 0	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	Transit
2	..	..	..	..	..	..	..	E	0 to 1½	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	SW	1 to 4½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..		SW	3 to 5	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	48·8	SW	½ to 1½	SW	2·42	..	..	..	..	..	..	..
10	..	..	..	..	..	..	37·4	W	0 to ½	..	..	..	..	..	..	..	..	..
12	28·924	39·1	38·6	0·5	..	..	52·5 33·3	W	0 to 1	..	..	W	¾	..	..	..	10	..
14	28·939	39·6	38·9	0·7	..	..	44·5	W	½ to 3½	..	..	W	1½	..	..	..	10	..
16	28·971	39·9	39·1	0·8	..	..	44·5	W	½ to 1½	..	..	W	¾	..	..	..	10	..
18	29·006	41·1	40·2	0·9	..	..		W	..	W	2·69	W	½	..	..	..	10	Perigee
20	29·045	38·8	38·4	0·4	..	..	..	W	..	..	..	WSW	¼	..	..	..	¼	..
22	29·107	42·8	41·6	1·2	..	..	..	W	..	WSW	1·12	W	¼	13·40	0·34	19·895	10	..
Nov. 11. 0	29·185	44·3	41·7	2·6	..	..	..	NW	1 to 4	..	..	W	2	..	..	..	10	..
2	29·263	45·3	41·0	4·3	..	..	..	NW	1 to 4	..	..	NW	2	..	..	..	10	Transit
4	29·347	45·0	39·3	5·7	..	..	49·2	NW	0 to 1½	..	..	W	1½	..	..	..	1	..
6	29·406	42·2	37·8	4·4	..	..	40·3	W by N	½ to 2½	WNW	1·87	WSW	1+	..	..	..	9½	..
8	29·424	41·6	38·7	2·9	..	..		SW	1 to 3½	..	..	SW	1½	..	..	..	7	..
10	29·435	40·8	39·4	1·4	..	..	51·2	SW	..	..	..	SW	¼	..	..	..	10	..
12	29·406	44·6	41·7	2·9	..	..	35·5	SW	2 to 3	..	..	SW	1	..	..	..	10	..
14	29·402	45·8	42·9	2·9	..	..	43·7	SW	1½ to 4	..	..	SW	1½	..	..	..	10	..
16	29·394	43·1	42·7	0·4	..	..	43·7	SW	..	..	..	Calm	..	..	..	..	10	..
18	29·373	46·7	45·6	1·1	..	..		SW	½ to 2	..	..	WSW	½	..	..	..	10	..
20	29·343	47·7	46·7	1·0	..	..	..	SW	0 to ½	WSW	4·40	WSW	¼	..	..	..	10	..
22	29·320	48·2	47·9	0·3	..	..	..	S by W	..	SSW	0·79	SW	¼	13·50	0·20	20·005	10	Greatest declination S.

BAROMETER.
Nov. 9d. The mean daily height was the least in the month. Nov. 11d. The daily range was the greatest in the month.

DRY THERMOMETER.
Nov. 11d. 4h. The greatest difference between its reading and that of the Wet Thermometer for the month occurred at this time.

TEMPERATURE OF THE DEW POINT.
Nov. 11d and 12d. The greatest difference of the mean daily values for consecutive days in the month occurred.

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Nov. 11d. The mean daily value was the greatest in the month.

DEGREE OF HUMIDITY.—Nov. 11d. The mean daily value was the least in the month.

REMARKS.	Observer.
Within the last twenty-five minutes the state of the sky has been very variable; at 11h. 35m the greater part was free from cloud, and at 11h. 40m scarcely a star was to be seen: at present a few stars are visible (the Pleiades, Taurus, &c.): at 12h. 8m the sky S. of the zenith was nearly free from cloud: heavy rain began to fall at 12h. 25m.	H B
Overcast: light rain is falling: the clouds appear black and stormy.	
Cirro-stratus and masses of dark scud: since the last observation several heavy showers of rain have fallen, especially one at 15h, when the electrometer was slightly affected.	
Cirro-stratus and scud, principally N. of the zenith.	
Cumulo-strati: a few cirri and masses of dark scud.	H B
Cirro-stratus and scud, with heavy rain.	L
Cirro-stratus and scud, with a small break a little S. of the zenith.	
Cumuli towards the N. and S. horizon, and cirri about the zenith.	L
Cumulo-strati near the horizon, and a few cirri scattered over the sky.	H B
Cirro-stratus and scud, principally to the N. of the zenith.	
The sky is cloudless at present: at 7h. 30m scarcely a star was to be seen S. of the zenith.	
Cloudless, with the exception of a bank of cirro-stratus extending along the S. horizon.	H B
Cirro-stratus covers the greater part of the sky S. of the zenith: patches of cloud are also scattered in various other parts: since the last observation the sky has been alternately clear and cloudy.	D
Cirro-stratus and scud: the Sun's place is just visible: at 22h. 10m a small portion of a solar halo was seen; it lasted only a few minutes.	
Overcast: rain falling: soon after the last observation the sky became quite covered with cloud, and at about 0h. 10m rain began to fall, and continued until 2h: from the latter time till 8h the sky was generally about one-half covered; afterwards it became overcast.	
Overcast: cirro-stratus: strong gusts of wind.	
,, ,,	
,, ,,	
A few light clouds near the horizon; breaks first appeared soon after 18h, and gradually increased in extent till 19h. 10m, at which time the sky was nearly cloudless; several fragments of scud, however, have occasionally passed over the sky.	D
Cirro-stratus and scud.	L
Cirro-stratus and scud; occasional gusts of wind to 2½.	
,, ,,	L
A few fragments of scud in different directions: the clouds dispersed soon after the last observation: gusts of wind to 2.	D
With the exception of a break near the horizon in the W. and S.W., the sky is covered with cirro-stratus and scud: the wind is blowing in gusts to 1½, and occasionally to 2.	
The stars are shining in and to the E. of the zenith; the remainder of the sky is covered principally with scud: strong gusts of wind: rain in large drops is now falling.	
Overcast: rain falling.	D
,, gusts of wind to 1½.	L
,, gusts of wind to 2, with a few drops of rain.	
,, with slight rain: the wind ceased at about 14h. 10m.	
,, rain falling: gusts of wind to ¾.	
,, cirro-stratus and scud: a slight rain is falling.	L
,, ,, ,,	H B

MINIMUM FREE THERMOMETER.

Nov. 8d. 22h. The reading was higher than that of the Dry Thermometer at 6h, 10h, and from 12h to 22h. Probably the reading is 5° too great.

WIND BY OSLER'S ANEMOMETER.

Nov. 10d. 0h. 20m. At this time the direction gradually changed from S. S. E. to E. S. E., which latter occurred at 1h. 40m: rain was falling heavily during this time: about 2h. 5m the direction suddenly changed from E. to S.W., where it continued, with frequent pressures of 3 lbs.

PRESSURE OF THE WIND BY OSLER'S ANEMOMETER IN POUNDS ON THE SQUARE FOOT.

Nov. 11d. 8h. Shortly after this observation the air became nearly calm, and continued so until 11h. 30m, at which time the wind again began to blow with pressures varying from 2 lbs. to 5 lbs. until 14h. 30m; at this time the pressure suddenly ceased.

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.	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.	By Estimation. Direction.	Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 12. 0	29·319	48·7	48·6	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·328	51·4	51·2	0·2	..	..	..	Calm	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	Transit
4	29·352	54·4	53·8	0·6	..	..	55·1	WSW	$\frac{1}{2}$ to 2	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..
6	29·403	53·7	53·7	0·0	..	..	48·8	WSW	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
8	29·419	53·7	53·5	0·2	..	..	——	SW	1 to $3\frac{1}{2}$	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
10	29·427	54·0	53·0	1·0	..	..	55·3	SW	1 to $3\frac{1}{2}$	..	..	SW	$\frac{1}{2}$	..	..	..	10	..
12	29·430	54·4	53·3	1·1	..	..	47·0	SW	$\frac{1}{2}$ to 4	..	..	SW	2	..	..	..	10	..
14	29·423	54·0	53·3	0·7	..	..	——	WSW	$2\frac{1}{2}$ to $4\frac{1}{2}$	..	..	SW	2	..	..	..	10	..
16	29·453	54·0	53·6	0·4	..	..	45·0	SW	$\frac{1}{2}$ to 3	..	..	SW	$1\frac{1}{2}$	..	..	..	10	..
18	29·451	53·8	53·6	0·2	..	..	44·0	SW	$\frac{1}{2}$ to $2\frac{1}{2}$	..	..	SW	$1\frac{1}{2}$	..	..	..	10	..
20	29·445	54·5	54·0	0·5	..	..	..	SW	$\frac{1}{2}$ to 1	..	..	SW	$\frac{3}{4}$ to 1	..	..	..	10	..
22	29·446	54·4	54·2	0·2	..	..	..	SW	1 to 4	WSW	8·34	SW	1	13·80	0·66	20·505	10	..
Nov. 13. 0	29·431	54·7	54·4	0·3	..	..	..	SSW	1 to 5	..	..	WSW	$1\frac{1}{2}$	..	..	..	10	..
2	29·416	54·7	54·5	0·2	..	..	..	SSW	1 to 5	..	..	WSW	$1\frac{1}{2}$	..	..	..	10	..
4	29·503	51·2	51·4	−0·2	..	..	..	WNW	..	..	..	NW	$\frac{1}{4}$	..	..	..	10	Transit
6	29·601	49·7	49·9	−0·2	..	..	55·8	SW	..	..	..	W by S	$\frac{1}{4}$	..	..	..	10	..
8	29·681	48·0	48·1	−0·1	..	..	43·4 —— 55·5	SW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	2	..
10	29·739	46·8	46·8	0·0	..	..	37·0	SW	..	..	..	W by S	$\frac{1}{4}$	..	..	..	2	..
12	29·786	46·5	46·4	0·1	..	..	——	SW	..	..	..	W	$\frac{1}{2}$	..	..	..	6	..
14	29·822	44·0	45·0	0·0	..	..	46·0	WSW	..	..	..	W	$\frac{1}{4}$	..	..	..	7	..
16	29·850	·0	44·0	0·0	..	..	45·5	SSW	..	WSW	4·45	Calm	..	..	..	..	7	..
18	29·873	44·2	44·2	0·0	..	..	..	S by W	..	..	..	W	$\frac{1}{4}$	..	..	..	9	..
20	29·896	44·4	44·6	−0·2	..	..	..	SSW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..
22	29·945	47·1	46·8	0·3	..	..	..	S by W	..	SW	0·60	Calm	..	13·87	0·28	20·775	10	..
Nov. 14. 0	29·971	50·6	49·5	1·1	..	..	..	SW	..	..	..	Calm	..	..	..	..	10	..
2	29·936	49·8	49·5	0·3	..	..	..	SW	..	WSW	0·54	Calm	..	..	..	..	10	..
4	29·997	49·7	49·7	0·0	..	..	54·3	Calm	..	SW	0·21	Calm	..	..	..	..	10	Transit
6	30·019	50·4	50·2	0·2	..	..	47·6	S	..	..	..	Calm	..	..	..	..	10	..
8	30·033	52·1	52·0	0·1	..	..	——	S	..	SSW	0·45	W	$\frac{1}{4}$−	..	..	..	10	..
10	30·044	52·0	52·0	0·0	..	..	54·6	S by E	..	..	..	Calm	..	..	..	..	10	..
12	30·044	53·0	52·7	0·3	..	..	44·8	S by W	..	..	..	Calm	..	..	..	..	10	..
14	30·039	52·9	52·8	0·1	..	..	——	S by W	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
16	30·028	53·1	53·1	0·0	..	..	47·5	S	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
18	30·011	53·6	53·4	0·2	..	..	46·5	SSW	..	..	..	SW	$\frac{1}{4}$	..	..	..	10	..
20	30·001	53·6	53·2	0·4	..	..	..	SSW	0 to $\frac{1}{2}$	..	..	SW	$\frac{1}{2}$	..	..	..	10	..
22	29·995	53·5	52·5	1·0	..	..	..	SSW	0 to $\frac{3}{4}$	SW	2·69	SW	$\frac{1}{4}$−	13·94	0·10	20·840	10	..
Nov. 15. 0	29·975	54·6	52·6	2·0	..	..	..	SSW	$\frac{1}{2}$ to $3\frac{1}{2}$	..	..	SW	$\frac{1}{2}$	..	..	..	10	..
2	29·923	56·6	53·4	3·2	..	..	..	SW	$2\frac{1}{2}$ to 4	SW	1·05	SW	$\frac{3}{4}$	..	..	..	10	..
4	29·903	55·4	53·1	2·3	..	..	57·1	SW	$2\frac{1}{2}$ to $3\frac{1}{2}$	..	..	WSW	$1\frac{1}{2}$	..	..	..	8	..
6	29·936	54·4	52·6	1·8	..	..	48·3	SW	$1\frac{1}{2}$ to 3	..	..	WSW	1+	..	..	..	$9\frac{1}{2}$	Transit
8	29·978	54·5	53·3	1·2	..	..	——	SW	0 to 1	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
10	29·991	54·6	53·6	1·0	..	..	57·5	SW	..	..	..	WSW	$\frac{1}{2}$	..	..	..	10	..
12	30·022	54·1	53·4	0·7	..	..	42·2	SW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	10	..
14	30·021	52·0	51·2	0·8	..	..	——	SW	..	..	..	WSW	$\frac{1}{4}$−	..	..	..	0	..
16	30·050	50·8	50·4	0·4	..	..	48·7	SW	..	..	..	WSW	$\frac{1}{4}$−	..	..	..	0	..
18	30·058	50·4	49·4	1·0	..	..	48·7	SW	..	..	..	WSW	$\frac{1}{4}$	..	..	..	8	..
20	30·102	48·8	48·5	0·3	..	..	..	SW	..	..	..	Calm	..	.	..	..	9	..
22	30·122	52·3	51·8	0·5	..	..	..	S by W	..	WSW	5·45	Calm	..	13·94	0·00	20·840	10	..

BAROMETER.

Nov. 13d and 14d. The greatest difference for the month of the mean daily heights on consecutive days occurred

DRY THERMOMETER.

Nov. 13d. 4h, 6h, 8h, and 20h. The readings were lower than those of the Wet Thermometer.

Nov. 15d. The mean daily temperature was the highest in the month.

TEMPERATURE OF THE DEW POINT.

Nov. 15d. The mean daily value was the greatest in the month. At 23h, on this day, the hygrometer was received from the maker, [after repair.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

Nov. 15d. The mean daily values were the greatest in the month.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
,, a thin drizzling rain is falling.	H B
Cirro-stratus and scud: the rain has ceased.	L
Overcast: heavy rain.	
,, slight drizzling rain is falling: gusts of wind to $1\frac{1}{2}$.	
,, ,, ,,	
,, heavy rain, with gusts of wind to $2\frac{1}{2}$ and upwards.	L
The wind is as violent as at the preceding observation, and the gusts are more frequent: rain falling.	H B
The wind has subsided very much since the last observation; the gusts seldom exceed 2: rain falling heavily.	
A steady rain is falling.	
Rain falling in heavy drops.	H B
Rain has been falling nearly continuously since the observation at 20^h: the wind in gusts to $1\frac{1}{2}$.	G
Overcast: cirro-stratus and scud: wind in gusts to 2: rain is falling.	L
Cirro-stratus and scud: wind in gusts to 2: heavy rain is falling.	L
Overcast: cirro-stratus and scud: slight rain falling.	H B
,, ,, the Moon was visible a few minutes before the observation.	
Cirro-stratus and scud near the S. horizon: since the last observation the sky has been occasionally clear: at $7^h. 0^m. 25^s$ a faint meteor was seen passing from the S. S. E. to S., at about 20° zenith distance: also one at $7^h. 39^m. 40^s$ was seen in Ursa Major, leaving a train of sparks.	
Thin cirro-stratus and scud in various parts of the sky, especially towards the S.	H B
Cirro-stratus near the horizon; and heavy vapour in the northern portion of the sky: the larger stars only are faintly visible.	G
Precisely the same as at the last observation.	
,, ,,	
The sky is nearly covered with a thin cirro-stratus: Venus is occasionally seen, and a few stars are visible near the zenith.	
A thin cirro-stratus covers the sky.	G
Cirro-stratus and scud cover the sky.	L
Cirro-stratus and scud cover the sky.	
Cirro-stratus, with slight rain.	L
Thick but fine rain has fallen continuously since the last observation: the atmosphere is so thick that objects at the distance of [100 yards are not visible.	G
The same as at the last observation.	G
Overcast: cirro-stratus and scud: a few drops of rain are falling.	H B
,, a thin rain is falling.	G
,, stratus.	D
,,	
,,	
,,	
,,	D
Cirro-stratus and scud.	L
Since the last observation the sky has been partially clear, but it is now again completely covered with cirro-stratus and scud: [gusts of wind to $\frac{3}{4}$	
Cirro-stratus and scud: gusts of wind to 1.	L
Fleecy clouds and scud: clear patches of sky in different directions.	D
Cirro-stratus and scud: the Moon is visible, with a faint corona around her.	
Overcast: cirro-stratus and scud.	
,,	D
,, slight drizzling rain.	L
Cloudless: the stars are shining very brightly.	
,, the stars are shining rather dimly.	
Cirro-stratus and scud: clear about the zenith.	
A thin cirro-stratus, with cirri and scud, cover the greater part of the sky.	L
Overcast: cirro-stratus and scud.	H B

ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.

Nov. 14^d. The mean daily value was the least in the month.

DEGREE OF HUMIDITY.

Nov. 13^d and 14^d. The mean daily values were the greatest in the month.

MINIMUM FREE THERMOMETER.

Nov. $12^d. 22^h$. The reading was higher than that of the Dry Thermometer at 0^h.

OSLER'S ANEMOMETER.

Nov. $13^d. 3^h$. At this time the direction changed from S. W. to N. W., and at the same time the pressure suddenly ceased; after 4^h the direction was S. W. again.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No.1, (Osler's).	RAIN. Reading of Rain-gauge No.2.	RAIN. Stand of Rain-gauge No.3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 16. 0	30·127	55·8	55·6	0·2	..	..	..	SW	..	..	..	WSW	¼	..	..	..	10	..
2	30·126	57·4	56·3	1·1	..	..	..	SW	..	..	..	W	¼	..	..	..	10	..
4	30·123	55·9	55·1	0·8	..	..	58·1	SW	..	..	..	WSW	¼	..	..	..	9+	..
6	30·146	54·7	54·2	0·5	..	..	49·0	WSW	..	..	..	Calm	..	..	..	..	10	Transit
8	30·164	53·6	53·2	0·4	..	..	——	WSW	..	..	..	Calm	..	..	..	..	9+	..
10	30·178	52·0	51·2	0·8	50·2	1·8	60·0	SW	..	..	..	Calm	..	..	..	..	10	..
12	30·179	49·1	49·2	-0·1	..	..	44·8	SSW	..	..	..	SW	¼	..	..	..	3	..
14	..	..	..	..	..	..	——	SW	..	..	..	..	..	..	..	..	..	1st Qr.
16	..	..	..	..	..	..	49·5	WSW	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	49·0	WSW	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	..
22	30·224	54·0	53·8	0·2	..	..	..	WSW	..	WSW	2·84	Calm	..	13·94	0·00	20·840	10	..
Nov. 17. 0	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	SW	..	..	..	..	..	..	..	..	..	..
4	30·188	52·1	51·7	0·4	..	..	54·6	WSW	..	..	..	W	¼	..	..	..	10	..
6	..	..	..	..	..	..	48·7	SW	..	..	..	..	..	..	..	..	..	..
8	30·196	50·8	50·9	-0·1	..	..	——	WSW	..	W	0·65	W	¼	..	..	..	10	Transit
10	..	..	..	..	..	..	55·0	SW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	46·0	SW	..	..	..	..	..	..	..	..	..	..
14	30·189	48·5	48·7	-0·2	..	..	——	SW	..	..	..	Calm	..	..	..	..	10	..
16	30·182	49·4	49·3	0·1	49·3	0·1	50·0	SW	..	WSW	1·75	Calm	..	..	..	..	10	..
18	30·162	49·8	49·7	0·1	..	..	50·0	SW	..	..	..	Calm	..	..	..	..	10	..
20	30·167	50·5	50·3	0·2	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
22	30·176	51·3	50·7	0·6	50·0	1·3	..	SW	..	SW	1·43	SW	¼-	13·94	0·00	20·845	10	..
Nov. 18. 0	30·157	51·6	50·7	0·9	..	..	..	S by W	..	..	..	S by W	¼-	..	..	..	10	..
2	30·127	52·0	50·6	1·4	..	..	..	SSW	0 to ½	..	..	SSW	¼	..	..	..	10	..
4	30·106	51·8	50·4	1·4	49·5	2·3	~~50·8~~	SSW	..	..	..	SSW	¼	..	..	..	10	..
6	30·099	51·0	49·6	1·4	..	..	49·5	SSW	..	..	..	SW	¼	..	..	..	10	..
8	30·098	50·8	49·6	1·2	..	..	——	SSW	..	..	..	SW	¼	..	..	..	10	Transit
10	30·094	50·5	49·3	1·2	48·5	2·0	53·0	SSW	..	..	..	SW	¼	..	..	..	10	In Equator
12	30·088	50·6	49·2	1·4	..	..	47·0	SSW	..	..	..	Calm	..	..	..	..	10	..
14	30·076	50·5	48·8	1·7	..	..	——	SSW	..	..	..	SSW	½	..	..	..	10	..
16	30·063	50·1	48·7	1·4	47·0	3·1	51·0	SSW	..	..	..	SSW	½	..	..	..	10	..
18	30·061	49·5	48·5	1·0	..	..	50·2	SSW	..	..	..	SSW	¼	..	..	..	10	..
20	30·083	49·5	48·6	0·9	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
22	30·088	49·8	48·8	1·0	49·5	0·3	..	SW	..	SW	4·86	SW	¼	13·94	0·00	20·845	10	..
Nov. 19. 0	30·085	50·5	49·2	1·3	..	..	..	SW	..	..	..	WSW	¼	..	..	..	10	..
2	30·076	50·6	49·5	1·1	..	..	..	SW	..	..	..	SW	¼	..	..	..	10	..
4	30·071	50·0	48·9	1·1	48·5	1·5	51·6	SW	..	SW	1·07	SW	¼-	..	..	..	10	..
6	30·076	49·1	48·3	0·8	..	..	46·4	SSW	..	..	..	SW	¼	..	..	..	10	..
8	30·074	48·9	48·2	0·7	..	..	——	SSW	..	..	..	SW	¼-	..	..	..	10	Transit
10	30·070	49·1	48·3	0·8	48·0	1·1	52·0	SSW	..	..	..	SSW	¼	..	..	..	10	..
12	30·054	48·5	47·3	1·2	..	..	41·9	SSW	..	..	..	SSW	¼	..	..	..	10	..
14	30·032	47·2	46·2	1·0	..	..	——	SSW	..	..	..	S	¼	..	..	..	10	..
16	30·023	47·0	45·9	1·1	46·8	0·2	50·0	SSW	..	..	..	S	¼	..	..	..	10	..
18	30·018	46·5	45·7	0·8	..	..	50·0	SSW	..	..	..	S	¼	..	..	..	10	..
20	30·018	46·7	46·0	0·7	..	..	..	SSW	..	SSW	2·28	S	¼	..	..	..	10	..
22	30·039	48·1	47·2	0·9	45·5	2·6	..	SW	..	SW	0·57	WSW	¼	13·94	0·00	20·850	10	..
Nov. 20. 0	30·037	48·5	47·4	1·1	..	..	..	SW	..	..	..	WSW	½	..	..	..	9	..

BAROMETER.—Nov. 19d. The daily range was the smallest in the month.
Nov. 19d and 20d. The least difference in the month of the daily heights on consecutive days occurred.
DRY THERMOMETER.—Nov. 16d. 2h. The reading was the highest in the month.
Nov. 16d. 12h, 17d. 8h and 14h. The readings were lower than those of the Wet Thermometer.
Nov. 19d. The daily range was the least in the month.
Nov. 20d and 21d. The greatest difference in the month in the mean daily temperatures on consecutive days occurred.
TEMPERATURE OF THE DEW POINT.—Nov. 20d and 21d. The difference in the mean daily values was considerable.
WEIGHT OF A CUBIC FOOT OF AIR.
Nov. 20d and 21d. The greatest difference in the month in the mean daily values on consecutive days occurred.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
,, ,,	H B
Overcast, with the exception of a break extending from the N. to the W. horizon.	L
Cirro-stratus and scud.	
Cirro-stratus and scud, with a few small breaks: the Moon is shining dimly: no stars are visible.	
Cirro-stratus and scud, with haze.	L
A thin cirro-stratus near the N. horizon, and also in other parts of the sky.	H B
Overcast: cirro-stratus and scud.	
The sky has remained overcast till the present time.	
Overcast: a very thin rain is falling: the sky was overcast throughout the day.	
Overcast: a thin rain is falling.	
,, the rain has ceased.	
,,	
,,	H B
Cirro-stratus and scud.	L
Cirro-stratus and scud.	
,,	L
Overcast: cirro-stratus and scud.	H B
,, ,,	
,, ,,	
,, ,,	H B
,, ,,	D
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
,, ,,	L
Overcast: cirro-stratus.	
,, ,,	L
,, ,,	D
,, ,,	
,, ,,	
,, ,,	D
,, ,,	L
,, ,, wind in gusts to ½.	
,, ,,	
,, ,,	
,, ,,	L
Cirro-stratus and scud, with a few breaks to no numerical amount.	H B
Cirro-stratus and scud, with breaks near the zenith and in other directions.	H B

TEMPERATURE OF THE WATER OF THE THAMES.

Nov. $18^d.22^h$. The highest reading in the month occurred.

MAXIMUM FREE THERMOMETER.

Nov. $18^d.22^h$. The reading was lower than those of the Dry Thermometer between 0^h and 14^h; it seems probable that the reading should have been 5° greater.

MINIMUM FREE THERMOMETER.

Nov. $17^d.22^h$. The reading was higher than that of the Dry Thermometer at 14^h.

CLOUDS.

Nov. $17^d.14^h$ to $19^d.22^h$. The sky was covered with cloud: it is the longest cloudy period in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 20. 2	30·032	52·0	50·6	1·4	..	..	..	SW	..	..	..	WSW	¼	..	..	..	10	..
4	30·055	53·0	51·6	1·4	51·0	2·0	..	WSW	..	..	..	SW	¼	..	..	..	10	..
6	30·070	50·5	50·2	0·3	..	..	53·7	SW	..	..	..	Calm	..	..	..	..	0	..
8	30·096	51·2	50·8	0·4	..	..	34·8	WSW	..	..	..	Calm	..	..	..	..	10	..
10	30·111	49·0	49·0	0·0	..	..	55·0	WSW	..	..	..	Calm	..	..	..	..	0	Transit
12	30·138	47·6	46·7	0·9	..	..	29·0	NNW	..	..	..	Calm	..	..	..	..	½	..
14	30·149	45·5	44·0	1·5	..	..	50·0	NW	..	..	..	NNW	¼	..	..	..	0	..
16	30·171	41·7	41·4	0·3	42·5	-0·8	50·0	W	..	..	..	Calm	..	..	..	..	0	..
18	30·185	39·4	39·4	0·0	..	..		W	..	..	..	Calm	..	..	..	..	0	..
20	30·202	36·7	36·7	0·0	..	..	..	W	..	..	..	Calm	..	..	..	..	1	..
22	30·225	37·2	37·4	-0·2	37·5	-0·3	..	WSW	..	SW	2·58	Calm	..	13·94	0·00	20·855	0	..
Nov. 21. 0	30·247	39·6	40·1	-0·5	..	..	..	WSW	..	..	..	Calm	..	..	..	..	10	..
2	30·229	41·0	40·9	0·1	..	..	..	SW	..	..	..	Calm	..	..	..	..	10	..
4	30·212	40·0	39·9	0·1	39·5	0·5	42·3	SSW	..	..	..	Calm	..	..	..	..	7	..
6	30·201	35·8	35·7	0·1	..	..	34·3	Calm	..	..	..	Calm	..	..	..	..	3	..
8	30·188	36·0	36·1	-0·1	..	..	43·8	Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·195	31·6	31·7	-0·1	31·0	0·6	25·5	Calm	..	..	..	Calm	..	..	..	..	0	Transit
12	30·184	33·1	32·8	0·3	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·178	33·4	33·3	0·1	..	..	49·8	Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·154	33·8	33·8	0·0	34·0	-0·2	49·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·142	33·6	33·7	-0·1	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
20	30·147	35·5	35·5	0·0	..	..	..	W	..	..	..	Calm	..	..	..	..	10	..
22	30·140	36·5	36·2	0·3	35·5	1·0	..	Calm	..	SW	0·34	Calm	..	13·94	0·00	20·865	10	..
Nov. 22. 0	30·121	38·8	37·4	1·4	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	30·094	41·8	41·2	0·6	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
4	30·073	43·0	42·8	0·2	43·0	0·0	44·1	NNW	..	..	..	Calm	..	..	..	..	10	..
6	30·064	42·4	42·0	0·4	..	..	36·4	NNW	..	..	..	NNW	¼	..	..	..	10	..
8	30·064	42·8	42·4	0·4	..	..		NNE	..	..	..	NNW	¼	..	..	..	10	..
10	30·059	43·3	41·6	1·7	39·0	4·3	44·3	ENE	..	..	..	NE	¼	..	..	..	10	Transit
12	30·057	42·2	41·2	1·0	..	..	34·2	Calm	..	..	..	Calm	..	..	..	..	10	..
14	30·043	42·0	40·9	1·1	..	..		Calm	..	..	..	Calm	..	..	..	..	10	..
16	30·030	41·8	40·4	1·4	39·5	2·3	49·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	30·033	40·5	40·0	0·5	..	..	47·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	30·043	40·5	39·2	1·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	30·059	41·9	39·9	2·0	39·0	2·9	..	Calm	..	ENE	0·31	SSE	¼	13·94	0·00	20·870	9¾	..
Nov. 23. 0	30·045	43·0	40·2	2·8	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
2	30·038	42·8	40·6	2·2	..	..	..	Calm	..	..	..	NE	¼	..	..	..	10	..
4	30·042	42·5	40·2	2·3	39·0	3·5	43·7	E	..	..	..	Calm	..	..	..	..	10	..
6	30·044	42·0	40·2	1·8	..	..	33·5	ENE	..	..	..	Calm	..	..	..	..	10	..
8	30·041	38·2	37·7	0·5	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·049	36·4	36·1	0·3	36·0	0·4	44·7	Calm	..	..	..	Calm	..	..	..	..	3	..
12	30·027	36·1	36·0	0·1	..	..	24·0	Calm	..	..	..	E	¼	..	..	..	9	Transit
14	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	47·5	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	46·5	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	Calm	..	..	..	..	..	..	..	..	..	..
22	29·920	40·7	39·2	1·5	..	..	..	Calm	..	ENE	0·35	Calm	..	13·94	0·00	20·875	10	..

BAROMETER.

Nov. 21d. 0h. The reading was the highest in the month.

DRY THERMOMETER.

Nov. 20d. 22h; 21d. 0h, 8h, 10h, and 18h. The readings were lower than those of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Nov. 20d. 4h. The reading as observed was the highest in the month.

Nov. 20d. 16h and 22h, and 21d. 16h. The readings were higher than those of the Dry Thermometer.

REMARKS.	Observer.
Overcast: cirro-stratus.	D
,, ,,	L
Cloudless, with the exception of a narrow bank: cumulo-stratus extending from the N.W. to the S. horizon: hazy, but the Moon and a few of the brighter stars can be seen.	
Cirro-stratus and scud.	
Cloudless: hazy.	L
Light clouds near the western horizon; with this exception the sky is cloudless, but hazy: a corona was occasionally visible around the Moon after this observation.	H B
Cloudless, but hazy, especially near the western horizon.	
Cloudless: hazy near the horizon.	
,,	
Cirro-stratus and haze near the horizon: foggy.	H B
Cloudless: foggy.	L
A very thick fog.	
A very dense fog.	L
The fog continues so dense that the Astronomical Observatory is invisible from the Magnetic Observatory: deposition of moisture.	H B
Cirro-stratus and vapour: a corona was visible around the Moon from $4^h.55^m$ till a short time before this observation; its diameter is 3°.	
Cloudless, but hazy. [the Moon from 9^h to $9^h.35^m$.	
The sky became quite covered with fog at $8^h.20^m$, which shortly afterwards cleared off considerably: a corona was visible round	H B
A dense fog: the Moon is invisible.	D
,, moisture is falling from the trees.	
,, ,,	
,, ,,	
,, ,,	D
Very foggy: the Astronomical Observatory is invisible.	L
The fog is not quite so dense as at the previous observation.	
Foggy.	L
Overcast: the fog has nearly disappeared.	D
,, cirro-stratus.	
,, ,,	D
,, cirro-stratus and scud.	H B
,, ,,	L
,,	
,,	
,, cirro-stratus.	
,, cirro-stratus and scud.	L
,, ,, a few breaks in various directions.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
,, ,,	L
,, ,, the Moon's place is visible.	
Cloudless: hazy: the Moon is shining very brightly.	
Cirro-stratus: fleecy clouds and scud.	L
Fleecy clouds and scud.	H B
Overcast: cirro-stratus and scud: hazy.	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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 24. 0	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	NE	..	NE	0·30	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
6	29·855	39·9	38·6	1·3	..	..	41·1	NNE	..	NNE	0·18	Calm	..	..	..	..	10	..
8	..	..	..	..	..	..	36·6	Calm	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	——	NNW	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	41·4	NNW	..	..	..	..	..	..	..	..	..	Transit Full
14	29·830	39·7	38·2	1·5	..	..	28·0	W	..	..	..	NNE	¼	..	..	..	10	..
16	29·830	39·3	38·0	1·3	36·5	2·8	——	NNW	..	..	..	N	¼	..	..	..	10	..
18	29·840	38·4	37·3	1·1	..	..	47·5	NNW	..	..	..	N	¼	..	..	..	8	..
20	29·869	37·9	37·0	0·9	..	..	45·0	NW	..	..	..	N	¼	..	..	..	10	..
22	29·897	39·7	38·0	1·7	35·0	4·7	.. ..	NW	..	NNW	0·74	WNW	¼–	13·94	0·00	20·875	10	..
Nov. 25. 0	29·907	42·0	39·7	2·3	..	..	..	NNW	..	..	..	WNW	¼–	..	..	..	9+	..
2	29·908	42·5	40·2	2·3	..	..	..	NNW	..	..	..	N by W	¼	..	..	..	9+	..
4	29·927	42·3	39·9	2·4	36·0	6·3	43·6	NNW	..	..	..	NW	¼	..	..	..	10	..
6	29·953	41·5	39·2	2·3	..	..	32·1	NW	..	..	..	N by W	¼	..	..	..	10	..
8	29·980	41·2	38·7	2·5	..	..	——	NW	..	..	..	N	¼	..	..	..	10	..
10	30·009	40·3	38·2	2·1	35·0	5·3	48·3	W	..	..	..	WNW	¼	..	..	..	10	..
12	30·043	39·2	38·0	1·2	..	..	24·3	SW	..	..	..	Calm	..	..	..	..	10	Apogee
14	30·051	38·1	36·8	1·3	..	..	——	WSW	..	..	..	Calm	..	..	..	..	9½	Transit
16	30·075	37·1	36·2	0·9	35·0	2·1	46·2	WSW	..	..	..	Calm	..	..	..	..	10	..
18	30·091	36·0	35·1	0·9	..	..	44·2	WSW	..	..	..	Calm	..	..	..	..	6	Greatest declination N.
20	30·121	33·0	32·2	0·8	..	..	..	WSW	..	..	..	Calm	..	..	..	..	0	..
22	30·156	33·7	32·9	0·8	32·5	1·2	..	WSW	..	WNW	1·27	Calm	..	13·94	0·00	20·875	0	..
Nov. 26. 0	30·167	39·9	37·1	2·8	..	..	..	SW	..	..	..	Calm	..	..	..	..	0	..
2	30·179	41·3	38·4	2·9	..	..	..	WSW	..	..	..	Calm	..	..	..	..	0	..
4	30·195	39·7	37·8	1·9	35·5	4·2	41·8	Calm	..	..	..	SSW	¼–	..	..	..	0	..
6	30·213	36·6	35·4	1·2	..	..	27·4	Calm	..	..	..	Calm	..	..	..	..	0	..
8	30·209	33·6	33·2	0·4	..	..	——	Calm	..	..	..	Calm	..	..	..	..	3	..
10	30·235	33·3	32·6	0·7	31·5	1·8	46·5	Calm	..	..	..	Calm	..	..	..	..	0	..
12	39·235	31·1	30·9	0·2	..	..	20·2	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·239	29·2	29·1	0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	Transit
16	30·233	30·2	30·0	0·2	..	..	45·0	Calm	..	..	..	Calm	..	..	..	..	1	..
18	30·227	28·8	29·0	–0·2	..	..	43·5	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·238	29·0	29·2	–0·2	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·239	30·2	30·0	0·2	29·0	1·2	..	Calm	..	SSW	0·77	S by W	¼	13·94	0·00	20·875	0	..
Nov. 27. 0	30·234	40·5	37·7	2·8	..	..	..	S	..	..	..	S by E	¼	..	..	..	½	..
2	30·212	43·1	41·5	1·6	..	..	..	S	..	..	..	SSW	¼	..	..	..	9	..
4	30·194	41·3	39·8	1·5	39·0	2·3	43·6	S	..	SW	1·34	Calm	..	..	..	..	4	..
6	30·198	40·5	38·8	1·7	..	..	29·5	S by E	..	..	..	Calm	..	..	..	..	10	..
8	30·172	36·5	36·1	0·4	..	..	——	Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·157	34·5	33·8	0·7	34·0	0·5	47·8	Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·130	34·2	33·1	1·1	..	..	24·5	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·083	34·5	33·4	1·1	..	..	—— 45·0 42·8	Calm	..	SSW	0·47	Calm	..	..	..	..	1	Transit
16	30·070	35·4	35·1	0·3	34·0	1·4	..	Calm	..	..	..	S	¼	..	..	..	2	..
18	30·052	32·3	32·0	0·3	..	..	..	Calm	..	..	..	S	¼	..	..	..	1	..

BAROMETER.
Nov. 27d. The mean daily height was the greatest in the month.

DRY THERMOMETER.
Nov. 26d. 18h. The reading was the lowest in the month.
Nov. 26d. 18h and 20h. The readings were lower than those of the Wet Thermometer.
Nov. 27d. The daily range was the greatest in the month.
Nov. 27d. The mean daily temperature was the lowest in the month.

REMARKS.	Observer.
Overcast: cirro-stratus and scud: the sky has been overcast throughout the day.	L
Cirro-stratus and scud: the Moon is occasionally visible, being often obscured by passing scud.	H B
Overcast: cirro-stratus and scud.	
The sky is mostly covered with cirro-stratus and fleecy clouds: a corona is visible around the Moon.	
Shortly after the last observation the clouds cleared off, leaving the sky very clear; it remained so till after 19^{h}: at present every part is covered with cirro-stratus and scud: a slight fog in the Park.	H B
Cirro-stratus and scud: hazy.	L
Cirro-stratus and scud.	
Cirro-stratus and scud, with a break towards the N.W. horizon.	L
Overcast: cirro-stratus and scud.	H B
,, ,, a slight fog.	
,, ,,	
,, ,,	H B
Cirro-stratus and fleecy clouds: the Moon is visible through the clouds.	D
The sky is nearly covered with fleecy clouds.	
Overcast: cirro-stratus.	
Cirro-stratus and fleecy clouds.	
Cloudless.	D
,, hazy.	L
Cloudless: hazy near the horizon.	
,, ,,	L
,, ,,	D
,,	
Thin clouds, in lines from the N.W. to S. E., are scattered in various directions: a corona is visible around the Moon.	
Cloudless.	D
,, the Moon is shining very brightly.	L
,, hazy: there are a few small fleecy clouds scattered about the sky.	
A few fleecy clouds and scud are scattered over the sky.	
Cloudless: foggy: the stars are dimly seen through the fog: at $16^{h}.45^{m}$ there was a corona round the Moon, which has now disappeared.	
Very foggy: the Moon can be seen through the fog.	L
The sky is cloudless, with the exception of a thin line of cirrus, extending from the W. to the N. N. E., at an altitude of about 20°.	H B
A few light clouds near the S. and S. E. horizon.	
The only part of the sky free from cloud is near the N. N.W. horizon, every other part being covered with cirro-stratus and scud.	H B
A few light cirri scattered over the sky: a bank of cumulo-stratus extending along the N.W. and S. horizon: a great deal of the S. part of the sky is covered with cirro-stratus.	L
Overcast.	
Cloudless: at $6^{h}.55^{m}$ a corona was visible round the Moon, which lasted till $7^{h}.15^{m}$: the stars are shining brightly.	
Cloudless, with the exception of a thin line of cirrus extending from N. to W. across the sky.	L
Splendidly clear from $11^{h}.50^{m}$ to $12^{h}.0^{m}$: a beautiful corona, with two concentric rings, was visible around the Moon; the S. E. part of the outer ring was very near the star γ Geminorum.	H B
Light clouds scattered about in various directions, but chiefly near the Moon's place: a faint and ill-defined lunar halo was visible from $13^{h}.40^{m}$ to $14^{h}.30^{m}$; its diameter was 45°.	
A few light clouds in various directions: from $15^{h}.45^{m}$ to $16^{h}.0^{m}$ a faint corona was visible around the Moon.	
A bank of clouds near the western horizon; every other part of the sky is clear.	

TEMPERATURE OF THE DEW POINT.

Nov. $25^{d}.4^{h}$. The greatest difference in the month between the observed temperatures of the air and the dew-point occurred at this time.

Nov. $26^{d}.16^{h}$. The observation was inadvertently omitted, Nov. $26^{d}.22^{h}$. The reading as observed was the lowest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

Nov. 27^{d}. The mean daily value was the greatest in the month.

AMOUNT OF CLOUDS.

Nov. 27^{d}. The mean daily value was the least in the month.

CLOUDS.

Nov. $25^{d}.20^{h}$ to Nov. $27^{d}.0^{h}$. The sky, with little exception, was cloudless: it is the longest period of clear sky in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Nov. 27. 20	30·031	32·5	32·0	0·5	..	..	..	Calm	..	..	..	S	¼	..	..	..	3	..
22	30·015	35·7	34·7	1·0	..	..	..	Calm	..	S	1·64	S	¼	13·94	0·00	20·880	10	..
Nov. 28. 0	30·001	40·8	39·3	1·5	..	..	..	S by E	..	..	..	S by E	¼	..	..	..	10	..
2	29·980	42·6	41·1	1·5	..	..	..	SSE	..	..	..	S by E	¼	..	..	..	10	..
4	29·953	42·8	41·0	1·8	40·0	2·8	44·3	SE	..	..	..	WSW by clouds	¼	..	..	..	10	..
6	29·945	41·5	40·0	1·5	..	..	35·5	SE	..	..	..	SSE	¼	..	..	..	10	..
8	29·918	41·1	39·7	1·4	..	..	—	SSE	..	..	..	SSE	¼	..	..	..	10	..
10	29·914	40·7	39·7	1·0	40·0	0·7	45·5	SSE	..	SSE	1·16	SSE	¼	..	..	..	10	..
12	29·886	40·7	40·2	0·5	..	..	30·9	SSE	..	..	..	Calm	..	..	..	..	10	..
14	29·880	40·5	40·2	0·3	..	..	—	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·880	39·5	38·3	1·2	37·0	2·5	44·0	Calm	..	E	0·55	Calm	..	..	..	..	10	Transit
18	29·882	38·1	37·3	0·8	..	..	42·0	ESE	..	..	..	Calm	..	..	..	..	10	..
20	29·889	38·2	37·0	1·2	..	..	..	ESE	..	..	..	Calm	..	..	..	..	10	..
22	29·904	37·5	36·7	0·8	37·0	0·5	..	E by S	..	ESE	0·50	Calm	..	13·94	0·00	20·890	8	..
Nov. 29. 0	29·910	38·6	38·0	0·6	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
2	29·908	39·2	38·9	0·3	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
4	29·926	40·4	38·8	1·6	38·0	2·4	40·8	E	..	E	0·26	ESE	¼	..	..	..	10	..
6	29·947	39·8	38·7	1·1	..	..	37·6	NE	..	..	..	ENE	¼	..	..	..	10	..
8	29·962	39·4	37·8	1·6	..	..	—	NE	..	..	..	NE	¼	..	..	..	10	..
10	29·994	39·4	37·8	1·6	35·5	3·9	40·0	NE	..	..	..	Calm	..	..	..	..	10	..
12	29·988	38·8	37·9	0·9	..	..	30·9	NE	..	..	..	NNE	¼	..	..	..	10	..
14	29·994	38·5	37·2	1·3	..	..	—	NE	..	..	..	NE	¼	..	..	..	10	..
16	29·990	38·2	36·8	1·4	36·0	2·2	43·5	NE	..	..	..	NNE	¼	..	..	..	10	Transit
18	29·987	38·1	36·6	1·5	..	..	41·0	NE	..	..	..	NNE	¼	..	..	..	10	..
20	29·997	37·5	35·3	2·2	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
22	30·016	37·8	35·7	2·1	32·5	5·3	..	N by E	..	NE	1·39	NE	¼	13·94	0·00	20·890	10	..
Nov. 30. 0	29·998	38·0	36·1	1·9	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
2	29·992	38·8	35·7	3·1	..	..	..	NNE	..	..	..	NNE	¼	..	..	..	10	..
4	29·986	37·1	34·9	2·2	34·0	3·1	41·1	NNE	..	..	..	N	¼	..	..	..	10	..
6	29·986	37·1	34·7	2·4	..	..	32·6	NNE	..	NNE	1·32	NE	¼	..	..	..	10	..
8	29·992	32·5	31·7	0·8	..	..	—	N	..	..	..	NE	¼	..	..	..	1½	..
10	29·986	34·0	32·6	1·4	30·5	3·5	38·0	N	..	..	..	NE	¼	..	..	..	10	..
12	29·980	33·8	32·9	0·9	..	..	21·4	N by W	..	N	0·83	N	¼	13·94	0·00	20·890	8	..
14	..	..	..	..	..	..	—	N by E	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	42·0	N by E	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	40·8	NNE	..	..	..	..	..	..	..	..	..	Transit
20	..	..	..	..	..	..	..	NNE	..	..	..	..	..	..	..	..	..	..
22	30·030	36·0	34·8	1·2	..	..	..	NNE	..	NNE	0·81	N	¼	13·94	0·00	20·890	10	..
Dec. 1. 0	..	..	..	..	..	..	39·6	N by E	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	34·1	N by W	..	..	..	..	..	..	..	..	..	..
4	30·013	36·8	35·2	1·6	..	..	—	N	..	..	..	N	¼	..	..	..	10	..
6	..	..	..	..	..	..	42·4	NNE	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	30·2	NNE	..	NNE	0·42	..	..	..	..	..	..	..
10	30·013	35·8	34·7	1·1	..	..	—	NE	..	..	..	N	¼	..	..	..	10	..
12	..	..	..	..	..	..	41·0	NE	..	..	..	..	..	..	..	..	..	..
14	29·997	34·3	33·7	0·6	..	..	41·0	NE	..	N	0·61	Calm	..	..	..	..	10	..

TEMPERATURE OF THE DEW POINT.

Nov. 27d. 22h. The observation was inadvertently omitted.

Nov. 30d. The mean daily value was the least in the month.

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.

Nov. 30d. The mean daily values were the least in the month: the values were nearly the same on Nov. 26d and 27d.

MINIMUM FREE THERMOMETER.

Nov. 29d. 22h. The reading was higher than that of the Dry Thermometer at 20h.

Nov. 30d. 22h. The reading was higher than that of the Dry Thermometer at 8h.

REMARKS.	Observer.
The state of the sky remained the same as before until $18^h. 20^m$, when clouds came up rapidly from the S.W., and the greater part was nearly overcast for a short time; at present a bank of cirro-stratus, extending from W. to N., is the only cloud.	H B
Cirro-stratus, fleecy clouds, and scud, with a few small breaks about the zenith.	L
Cirro-stratus and scud.	
Overcast: cirro-stratus.	L
Cirro-stratus and scud, with a few breaks to no numerical extent: the clouds appear to move from the W. S.W., whereas the vane points very nearly S.	H B
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	H B
,, ,,	D
,, ,,	
,, ,,	
,, ,, a few drops of rain are falling.	
,, ,,	D
About the zenith cirri and fleecy clouds: cirro-stratus near the horizon.	L
Overcast.	
,, slight rain.	L
,, cirro-stratus.	D
,, ,,	
,, ,,	D
,, ,, the reflexion of the London lights is high.	G
,, ,,	G
Overcast: cirro-stratus and scud.	H B
,,	L
,,	L
,,	D
,, cirro-stratus.	G
Overcast: cirro-stratus and scud.	H B
,, ,,	D
Cirro-stratus and scud.	L
Overcast: cirro-stratus and scud.	H B
About half an hour since the sky became nearly free from cloud, and has continued so till the present time, the only cloudy part being near the horizon in the S. and W.	H B
The sky became overcast rather suddenly at about $9^h. 20^m$.	D
Cirro-stratus, fleecy clouds, scud, and haze.	L
Cirro-stratus and scud, with a few breaks.	H B
Cirro-stratus and scud, with a few breaks.	
Overcast: stratus: the sky during the day has been generally overcast.	H B
,, cirro-stratus.	L

TEMPERATURE OF THE WATER OF THE THAMES.

Nov. $29^d. 22^h$. The lowest reading in the month occurred.

RAIN.

Nov. $30^d. 12^h$. The amount of rain collected in rain-gauge No. 4 during the month of November was $4^{in}\cdot 50$, and that collected in the gauge at Greenwich Hospital Schools in the same period was $4^{in}\cdot 32$.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 1. 16	29·978	34·5	33·9	0·6	33·5	1·0	..	NNE	..	..	..	Calm	..	..	..	..	10	..
18	29·972	35·0	34·2	0·8	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	Transit
20	29·955	35·6	34·9	0·7	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..
22	29·947	36·7	35·5	1·2	34·8	1·9	..	N	..	NE	0·69	N Nearly calm	¼	13·94	0·00	20·895	10	..
Dec. 2. 0	29·913	37·6	36·0	1·6	..	..	..	N	..	..	..	N by E	¼	..	..	..	10	..
2	29·897	38·4	36·1	2·3	..	..	..	N	..	..	..	N by E	¼	..	..	..	10	..
4	29·875	36·9	35·5	1·4	35·0	1·9	39·1	NNE	..	..	..	N	¼	..	..	..	10	..
6	29·848	35·8	34·9	0·9	..	..	32·3	NE	..	..	..	NNE	¼	..	..	..	10	..
8	29·845	35·7	35·0	0·7	..	..	40·2	ENE	..	..	..	NNE	¼	..	..	..	10	..
10	29·857	37·0	36·1	0·9	35·5	1·5	27·2	E by S	..	..	..	Calm	..	..	..	..	10	..
12	29·885	34·7	34·2	0·5	..	..		ESE	..	..	..	Calm	..	..	..	..	10	..
14	29·900	32·5	30·9	1·6	..	..	40·5	Calm	..	..	..	SE Nearly calm	¼	..	..	..	10	Last Qr.
16	29·929	32·5	31·0	1·5	30·0	2·5	40·0	NE	..	..	..	Calm	..	..	..	..	10	..
18	29·931	32·8	31·6	1·2	..	..		N	..	..	..	Calm	..	..	..	..	10	Transit
20	29·933	34·5	33·3	1·2	..	..	..	N	..	..	..	Calm	..	..	..	..	10	..
22	29·949	35·5	33·7	1·8	32·5	3·0	..	N by E	..	NNE	1·98	NNE	¼	13·94	0·00	20·900	10	..
Dec. 3. 0	29·956	36·5	35·0	1·5	..	..	..	N	..	..	..	NE	¼	..	..	..	10	..
2	29·944	38·0	35·9	2·1	..	..	..	N by E	0 to ½	N	0·64	N	¼	..	..	..	10	..
4	29·955	36·8	34·1	2·7	29·8	7·0	38·6	NNE	0 to 2	..	..	NNE	½	..	..	..	10	In Equator
6	29·964	36·2	33·6	2·6	..	..	34·1	NNE	0 to 1½	..	..	N by E	½	..	..	..	10	..
8	30·004	36·3	34·1	2·2	..	..		NNE	0 to 2½	..	..	N by E	¾	..	..	..	10	..
10	30·031	35·2	33·7	1·5	31·3	3·9	38·8	NNE	0 to ¼	..	..	N by E	½	..	..	..	10	..
12	30·059	35·4	33·8	1·6	..	..	30·5	NNE	..	..	..	NNE	¼	..	..	..	10	..
14	30·083	34·6	33·3	1·3	..	..		NNE	..	..	..	NNE	¼	..	..	..	10	..
16	30·103	34·5	32·9	1·6	31·0	3·5	40·0	NNE	..	..	..	NNE	¼	..	..	..	10	..
18	30·119	34·5	32·6	1·9	..	..	39·2	NNE	..	..	..	NNE	¼	..	..	..	10	..
20	30·135	34·2	32·5	1·7	..	..		NNE	..	..	..	NNE	¼	..	..	..	10	Transit
22	30·141	34·9	33·0	1·9	33·5	1·4	..	NNE	..	NNE	3·79	NNE	¼	13·94	0·00	20·900	10	..
Dec. 4. 0	30·127	36·2	34·3	1·9	..	..	..	NE	¼ to ½	..	..	NE	¼	..	..	..	10	..
2	30·102	37·1	34·3	2·8	..	..	..	ENE	½ to 2	..	..	E by N	½	..	..	..	10	..
4	30·091	35·6	33·4	2·2	31·0	4·6	38·0	ENE	0 to 1	..	..	ENE	½	..	..	..	10	..
6	30·086	34·1	32·8	1·3	..	..	26·1	ENE	..	..	..	NE	¼	..	..	..	5	..
8	30·084	32·8	32·0	0·8	..	..		NE	..	..	..	NNE	¼	..	..	..	9	..
10	30·071	32·3	31·5	0·8	30·0	2·3	41·7	ENE	..	..	..	NE	¼	..	..	..	0	..
12	30·060	30·7	30·2	0·5	..	..	18·8	NE	..	NE	1·50	Calm	..	..	..	..	0	..
14	30·041	28·9	28·2	0·7	..	..		Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·024	29·0	28·7	0·3	28·5	0·5	39·0	Calm	..	..	..	ENE	¼	..	..	..	0	..
18	30·011	27·9	27·7	0·2	..	..	39·0	Calm	..	..	..	Calm	..	..	..	..	2	..
20	30·003	27·0	26·7	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	0	Transit
22	29·999	28·4	28·2	0·2	26·0	2·4	..	Calm	..	ENE	0·47	N by E	¼	13·94	0·00	20·900	0	..
Dec. 5. 0	29·997	31·6	30·7	0·9	28·5	3·1	35·3	E	..	..	..	NE	¼	..	..	..	0	..
2	29·978	35·4	32·0	3·4	28·3	7·1	21·4	ESE	..	..	..	E	¼	..	..	..	¼	..
4	29·985	34·5	31·9	2·6	29·0	5·5		E	..	..	..	NE	¼	..	..	..	0	..
6	30·002	32·3	29·9	2·4	28·0	4·3	38·5	ESE	..	..	..	NE	¼	..	..	..	0	..
8	30·015	29·0	27·7	1·3	23·0	6·0	7·7	Calm	..	..	..	Calm	..	..	..	..	0	..
10	30·028	27·5	26·1	1·4	22·0	5·5		Calm	..	..	..	Calm	..	..	..	..	0	..
12	30·053	26·3	25·7	0·6	20·0	6·3	38·0	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·053	25·0	24·7	0·3	19·8	5·2	37·0	Calm	..	..	..	Calm	..	..	..	..	0	..

TEMPERATURE OF THE DEW POINT.

Dec. 4d. 22h. After this time the reading was taken at every observation, for the purpose of comparing the observed temperature with that deduced from the observations of the Dry and Wet-Bulb Thermometers at low temperatures.

TEMPERATURE OF THE WATER OF THE THAMES.

Dec. 1d. 22h. The highest reading in the month occurred.

REMARKS.	Observer.
Overcast.	L
,,	
,, slight rain falling.	L
,, cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, cirro-stratus and scud, with a few breaks.	H B
Cirro-stratus, fleecy clouds, and scud.	L
Overcast: cirro-stratus: about ten minutes after this observation the stars shone very brightly about the zenith, every other part being overcast: at $6^h.20^m$ it again became overcast and hazy.	
Overcast.	
,, a drizzling rain.	L
,, cirro-stratus and scud.	H B
,, ,, there are a few breaks towards the S. E., but to no numerical amount.	
,, ,,	
,, ,,	
,, ,,	H B
,, ,, a few drops of rain fell about $20^h.55^m$.	L
Overcast: cirro-stratus and scud: it was thought that on the face of the louds some flakes of snow were visible.	G
Cirro-stratus and scud.	L
Heavy cumulo-strati and scud moving rapidly from the N. N. E.	H B
Cirro-stratus and dark scud.	
,,	
,,	H B
,,	D
Overcast.	
,,	
,,	
,,	D
Cirro-stratus and scud.	L
Cirro-stratus and scud.	
Cirro-stratus and scud, with a few breaks.	L
Cirro-stratus and scud: the air is very cold.	D
,, the stars are shining S. of the zenith, and the clouds are much broken in every other part of the sky.	
Cirro-stratus and heavy vapour.	
Cloudless.	D
,, hazy: a few of the brightest stars only are visible about the zenith: at $12^h.5^m$ the stars are shining very brightly in every direction.	L
,,	
,,	
Fleecy clouds, through which the Moon is visible.	
Cloudless: hazy: the ground is covered with hoar frost.	L
,, vapour near the N. and N.W. horizon.	H B
Cloudless: vapour near the N. and N.W. horizon.	
Cloudless, with the exception of a few light cumuli near the N. and N.W. horizon.	H B
Cloudless: hazy.	L
Cloudless, with the exception of a cumulo-stratus extending along the W. and N.W. horizon.	
Cloudless.	
,,	L
,,	H B
,,	

CLOUDS.
From Dec. $4^d.10^h$ to $6^d.18^h$. The sky, with slight exceptions, was cloudless: it is the longest period of clear sky in the month.
AMOUNT OF CLOUDS.
Dec. 5^d. The mean daily value was the least in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 5. 16	30·069	24·1	23·8	0·3	21·0	3·1	..	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·079	23·0	22·7	0·3	21·0	2·0	..	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·103	21·9	21·8	0·1	21·0	0·9	..	Calm	..	..	..	Calm	..	..	..	..	0	..
22	30·143	22·3	22·2	0·1	18·0	4·3	..	Calm	..	E	0·85	Calm	..	13·94	0·00	20·910	0	Transit
Dec. 6. 0	30·148	29·2	27·5	1·7	22·5	6·7	..	ENE	..	..	..	Calm	..	..	..	..	0	..
2	30·120	32·2	30·7	1·5	26·0	6·2	..	ENE	..	..	..	Calm	..	..	..	..	0	..
4	30·140	31·7	31·0	0·7	28·5	3·2	35·3	Calm	..	..	..	Calm	..	..	..	..	¼	..
6	30·144	29·8	29·1	0·7	26·0	3·8	21·1	Calm	..	..	..	ENE	¼	..	..	..	1	..
8	30·150	27·6	27·4	0·2	26·0	1·6	——	Calm	..	..	..	Calm	..	..	..	..	1	..
10	30·166	25·2	25·2	0·0	23·5	1·7	43·5	Calm	..	..	..	ENE	¼	..	..	..	2	..
12	30·168	24·5	24·4	0·1	23·0	1·5	10·5	Calm	..	..	..	Calm	..	..	..	..	0	..
14	30·171	21·6	21·8	-0·2	21·0	0·6	——	Calm	..	..	..	Calm	..	..	..	..	0	..
16	30·166	21·8	21·8	0·0	21·5	0·3	37·0	Calm	..	..	..	Calm	..	..	..	..	0	..
18	30·173	24·4	24·2	0·2	22·5	1·9	36·0	Calm	..	..	..	Calm	..	..	..	..	0	..
20	30·212	28·0	27·7	0·3	26·0	2·0	..	E by S	..	..	..	Calm	..	..	..	..	10	..
22	30·211	32·0	30·9	1·1	28·5	3·5	..	ESE	..	E	0·68	E	¼	13·94	0·00	20·910	10	Transit
Dec. 7. 0	30·202	31·5	30·4	1·1	27·5	4·0	..	ESE	0 to ½	..	..	E	¼	..	..	..	10	..
2	30·203	31·5	30·5	1·0	26·8	4·7	..	E by S	..	ESE	0·80	ESE	¼	..	..	..	10	..
4	30·196	33·1	31·5	1·6	29·0	4·1	..	E by N	0 to 1	..	..	NE	¼	..	..	..	9½	..
6	30·204	31·8	30·6	1·2	29·0	2·8	33·2	E by N	0 to ½	..	..	ENE	½	..	..	..	9	..
8	30·220	29·0	27·9	1·1	23·0	6·0	24·5	E by S	..	..	..	NE	½	..	..	..	9	..
10	30·217	28·8	27·7	1·1	23·0	5·8	33·3	E by S	0 to 1½	..	..	ENE	½	..	..	..	8	..
12	30·218	25·4	24·7	0·7	21·0	4·4	14·8	SE	..	..	..	ENE	¼	..	..	..	0	..
14	..	..	..	..	..	..	36·5	ESE	..	E	0·92	..	..	..	..	..	..	..
16	..	..	..	..	..	..	35·2	NE	..	ENE	0·31	..	..	..	..	..	..	..
18	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	NE	..	..	..	..	..	..	..	..	..	..
22	30·064	30·6	29·3	1·3	..	..	..	NE	0 to 1½	NE	1·22	NE	¾	13·94	0·00	20·910	9	..
Dec. 8. 0	..	..	..	..	..	..	..	NE	½ to 2½	..	..	..	..	..	..	..	..	Transit
2	..	..	..	..	..	..	..	NE	1 to 4	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	30·8	NE	½ to 2½	NE	2·05	..	..	..	..	..	..	..
6	29·952	28·7	27·7	1·0	20·7	8·0	25·1	NE	0 to ½	..	..	NE	½	..	..	..	10	..
8	..	..	..	..	..	..	——	NE	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	31·5	NNE	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	21·2	NE	..	..	..	..	..	..	..	..	..	..
14	29·941	26·0	25·7	0·3	20·0	6·0	——	NE	..	..	..	Calm	..	..	..	..	10	..
16	29·955	25·8	25·5	0·3	20·0	5·8	35·2	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·965	26·6	26·1	0·5	21·0	5·6	34·0	N by E	..	..	..	Calm	..	..	..	..	10	..
20	29·990	27·0	26·7	0·3	23·0	4·0	..	N by E	..	..	..	NNE	¼	..	..	..	10	..
22	30·013	28·0	27·7	0·3	24·5	3·5	..	N by E	..	NNE	1·03	NNE	¼	13·94	0·00	20·910	10	..
Dec. 9. 0	30·019	29·3	28·0	1·3	25·0	4·3	31·1	N by E	0 to ¼	..	..	NNE	¼	..	..	..	10	Transit
2	30·011	29·5	28·3	1·2	23·8	5·7	27·8	N	0 to ¾	..	..	N	½	..	..	..	10	..
4	30·029	29·4	28·3	1·1	23·5	5·9	——	N by E	0 to ½	..	..	NNE	¼	..	..	..	10	..
6	30·032	29·3	28·5	0·8	23·0	6·3	30·9	N	..	..	..	N	¼	..	..	..	10	Perigee
8	30·036	29·4	28·7	0·7	24·0	5·4	24·5	N by E	..	NNE	2·09	NE	¼	..	..	..	10	Greatest Dec. S. and New
10	30·030	29·6	28·7	0·9	25·0	4·6	——	N	..	..	..	NE	½	..	..	..	10	..
12	30·023	30·0	29·4	0·6	26·3	3·7	35·0	N	..	N	0·35	NNE	¼	..	..	..	10	..
14	30·010	30·2	29·7	0·5	26·0	4·2	33·0	NNE	0 to ¾	..	..	N	½	..	..	..	10	..

BAROMETER.

Dec. 7d. 8h. The reading was the highest in the month.

DRY THERMOMETER.

Dec. 6d. 14h. The reading was the lowest in the month.

Dec. 6d. 14h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Dec. 5d. 22h. The reading as observed was the lowest in the year: the same reading occurred on Jan. 2d at 16h.

WEIGHT OF A CUBIC FOOT OF AIR.

Dec. 6d. The mean daily value was the greatest in the month.

REMARKS.	Observer.
Cloudless.	H B
,,	
,, hazy.	H B
,, ,,	L
Cloudless: hazy.	
,, ,, a few fine thin cirri towards the N.W.	L
Light cirri in the Western horizon.	H B
Vapour and scud near the N.W. horizon.	
,,	
Cirro-stratus and vapour near the W. horizon: a splendid meteor was seen at 9h. 55m, about 5° above Castor; its direction was [towards the N.	H B
Cloudless.	D
,,	
,,	
,, the stars, however, look dim, and those near the horizon are nearly obscured by heavy vapour.	
The sky is now covered with clouds, which have been gradually increasing since the last observation.	D
Overcast: cirro-stratus.	L
Overcast: cirro-stratus.	
,, ,,	L
Cirro-stratus and fleecy clouds.	D
Cirro-stratus and scud: breaks in various directions.	D
At about 6h. 35m the clouds became broken, and in a very few minutes the greater part of the sky was free from clouds; within the last five minutes they have as suddenly collected, and the sky is nearly wholly clouded.	G
The stars are shining in the zenith, and the larger ones are visible in various directions.	D
Cloudless: the stars are shining brightly: a few minutes after this observation the northern half of the sky became nearly overcast.	L
Cirro-stratus and scud: breaks N. of the zenith.	D
Overcast: cirro-stratus and scud.	L
Completely overcast: there was a slight fall of snow between 8h and 9h; the ground is covered with it.	
,, it has ceased snowing.	
,,	
,,	L
,, cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
,, ,,	L
,, ,,	L
,, ,,	H B
,, ,,	L
,, ,,	H B
,, ,,	

MAXIMUM FREE THERMOMETER.
Dec. 5d. 22h. The reading was lower than that of the Dry Thermometer at 2h.

MINIMUM RADIATION THERMOMETER.
Dec. 5d. 22h. The reading was the lowest in the year.

DIRECTION OF THE WIND.
Dec. 7d, at 10h and at 12h, the direction was by estimation E.N.E. at both times; and it was by Osler's Anemometer E. by S. at the former, and S.E. at the latter time: it is probable that the direction as estimated is erroneous in both cases.

CLOUDS.
Dec. 8d. 8h to 19d. 14h. With few exceptions the sky was covered with cloud: it is the longest cloudy period in the year.

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.	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.	By Estimation. Direction.	By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3 (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 9. 16	30·001	30·2	29·7	0·5	26·3	3·9	..	NNE	0 to $\frac{3}{4}$	..	..	N	$\frac{3}{4}$	..	..	..	10	..
18	29·988	30·3	29·7	0·6	..	..	..	NNE	0 to $\frac{1}{2}$	..	..	N	$\frac{1}{2}$	..	..	..	10	..
20	29·994	30·7	30·1	0·6	..	..	..	NNE	..	..	..	N	$\frac{1}{2}$	..	..	..	10	..
22	30·003	30·7	29·9	0·8	25·0	5·7	..	NNE	0 to $\frac{1}{2}$	NNE	1·85	NNE	$\frac{1}{4}$	13·94	0·00	20·910	10	..
Dec. 10. 0	29·986	30·5	29·2	1·3	24·5	6·0	..	NNE	..	..	..	NE	$\frac{1}{2}$	..	..	..	10	..
2	29·965	30·3	28·9	1·4	25·0	5·3	..	NNE	..	..	..	NNE	$\frac{1}{2}$	..	..	..	10	Transit
4	29·958	29·5	28·5	1·0	24·8	4·7	30·3	NE	0 to 1	..	..	NNE	$\frac{1}{2}$	..	..	..	10	..
6	29·960	29·5	28 7	0·8	24·8	4·7	27·7	NE	0 to $\frac{3}{4}$	..	..	N by E	$\frac{1}{2}$	..	..	..	10	..
8	29·951	30·2	29·2	1·0	26·0	4·2	——	NNE	..	..	..	NNE	$\frac{1}{4}$	..	..	..	10	..
10	29·929	30·1	29·4	0·7	25·0	5·1	30·4	NE	..	NE	1·46	NNE	$\frac{1}{4}$	..	..	..	10	..
12	29·928	29·5	28·7	0·8	24·5	5·0	24·7	ENE	0 to $\frac{1}{4}$	..	..	ENE	$\frac{1}{2}$	..	..	..	10	..
14	29·918	29·3	28·4	0·9	23·0	6·3	——	NE	..	..	..	ENE	$\frac{1}{4}$	..	..	..	10	..
16	29·902	28·7	28·2	0·5	23·0	5·7	34·0	NE	..	..	..	ENE	$\frac{1}{4}$	..	..	..	10	..
18	29·884	28·3	27·8	0·5	24·0	4·3	32·5	NNE	..	ENE	0·60	ENE	$\frac{1}{4}$	..	..	..	10	..
20	29·879	28·2	27·7	0·5	23·5	4·7	..	NNE	..	..	..	ENE	$\frac{1}{4}$	..	..	..	10	..
22	29·879	28·6	27·7	0·9	24·0	4·6	..	N	..	NE	0·23	Calm	..	13·94	0·00	20·910	10	..
Dec. 11. 0	29·869	29·0	28·0	1·0	22·5	6·5	..	NNE	..	..	..	Calm	..	..	..	..	10	..
2	29·846	29·5	28·3	1·2	23·0	6·5	..	N	..	..	..	Calm	..	..	..	..	10	Transit
4	29·861	28·8	28·0	0·8	23·0	5·8		NNE	..	..	..	E. N. E. very light.	..	..	..	..	10	..
6	29·865	28·8	28·3	0·5	24·5	4·3	29·5	NNE	..	..	..	N	$\frac{1}{4}$	..	..	..	10	..
8	29·878	29·0	28·0	1·0	23·8	5·2	22·9	Calm	..	..	..	N. very light	$\frac{1}{4}$—	..	..	..	10	..
10	29·873	25·2	24·6	0·6	21·0	4·2	—— 29·5	Calm	..	..	..	Calm	..	..	..	..	0	..
12	29·868	24·6	24·0	0·6	21·0	3·6	16·4 ——	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·856	26·5	25·4	1·1	21·0	5·5	(41·0)	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·846	27·3	26·5	0·8	21·5	5·8	32·2	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·834	27·5	26·8	0·7	22·0	5·5		Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·829	27·7	27·0	0·7	23·5	4·2	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·832	28·8	28·0	0·8	25·0	3·8	..	Calm	..	E	0·25	E	$\frac{1}{4}$	13·94	0·00	20·910	10	..
Dec. 12. 0	29·807	30·2	29·2	1·0	24·5	5·7	..	E	..	..	..	Calm	..	..	..	..	10	..
2	29·779	29·4	27·8	1·6	22·5	6·9	..	E	..	..	..	Calm	..	..	..	..	10	..
4	29·755	29·0	27·7	1·3	23·0	6·0	28·7	E	0 to $\frac{1}{2}$	..	..	E	$\frac{1}{4}$	..	..	..	10	Transit
6	29·737	28·0	26·8	1·2	22·0	6·0	23·2	ENE	..	..	..	Calm	..	..	..	..	10	..
8	29·693	27·0	25·9	1·1	22·0	5·0	——	E	..	E	1·07	E	$\frac{1}{4}$	..	..	..	10	..
10	29·695	26·7	25·4	1·3	21·5	5·2	30·2	ESE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
12	29·655	25·1	24·2	0·9	18·0	7·1	20·3	ESE	0 to $\frac{1}{4}$	..	..	E	$\frac{1}{2}$	..	..	..	10	..
14	29·605	23·6	22·7	0·9	16·0	7·6	——	ESE	0 to $\frac{1}{2}$	ESE	1·44	E	$\frac{3}{4}$	..	..	..	10	..
16	29·567	24·3	22·9	1·4	18·5	5·8	33·5	E	0 to $\frac{1}{2}$	..	..	E	$\frac{1}{2}$ to $\frac{3}{4}$	..	..	..	10	..
18	29·528	25·0	23·7	1·3	18·0	7·0	32·2	E	0 to 1	..	..	E	$\frac{1}{2}$	..	..	..	10	..
20	29·498	24·4	23·7	0·7	19 0	5·4	..	E	0 to $\frac{1}{2}$	..	..	E	$\frac{3}{4}$	..	..	..	10	..
22	29·485	25·7	24·7	1·0	21·0	4·7	..	E by N	0 to 2	E	1·24	E	$\frac{1}{4}$	13·94	0·00	20·910	10	..
Dec. 13. 0	29·446	26·2	25·2	1·0	21·0	5·2	28·2	E	0 to 1	..	..	E by S	$\frac{1}{2}$	..	..	..	10	..
2	29·407	25·0	24·5	0·5	21·0	4·0	24·4	E	0 to 1	..	..	ESE	$\frac{1}{2}$	..	..	..	10	..
4	29·375	25·6	24·9	0·7	22·5	3·1	——	E	0 to 1	..	..	ESE	$\frac{1}{2}$	..	..	..	10	Transit
6	29·364	26·2	25·3	0·9	24·0	2·2	26·8	E by S	0 to $1\frac{1}{4}$	..	..	ESE	$\frac{3}{4}$	..	..	..	10	..
8	29·359	27·7	26·7	1·0	24·0	3·7	22·2	ESE	0 to $\frac{3}{4}$	..	..	ESE	$\frac{1}{2}$	..	..	..	10	..
10	29·337	27·5	26·7	0·8	24·0	3·5	——	E	0 to 1	..	..	SE	$\frac{3}{4}$	..	..	..	10	..
12	29·327	27·1	26·7	0·4	24·5	2·6	33·0	E	$\frac{1}{2}$ constant	..	..	E	$\frac{1}{2}$	..	..	..	10	..
14	29·302	27·1	26·7	0·4	24·5	2·6	32·0	E	0 to $\frac{1}{4}$	..	..	E	$\frac{1}{2}$	..	..	..	10	..

DRY THERMOMETER.

Dec. 10^{d}. The daily range was the smallest in the year.

Dec. 13^{d}. The mean daily temperature was the lowest in the year.

TEMPERATURE OF THE DEW POINT.

Dec. $12^{d}.14^{h}$. The difference between the observed temperatures of the air and dew point was greater at this time than at any other during the month.

Dec. 13^{d}. The mean daily value was the least in the year.

Dec. 13^{d} and 14^{d}. The difference of the mean daily values was considerable.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
,, ,, very gloomy.	
,, ,,	H B
,, ,,	L
Overcast: cirro-stratus and scud.	
,, ,,	L
,, ,,	H B
,, ,,	H B
,, ,,	L
,, ,,	H B
,, dark cirro-stratus: the clouds are high: a keen cold wind.	G
,, ,, ,, ,,	
,, ,, ,, ,, some very fine snow or sleet is falling.	
,, ,, ,, ,,	
,, ,, ,, ,,	G
,, cirro-stratus.	L
Overcast: cirro-stratus.	
,, ,,	L
,, ,,	G
,, ,,	
,, ,, the clouds are high, as shewn by the height of the reflexion of the London lights.	G
Cloudless: at $9^h. 35^m$ a few stars became visible in the S.; ten minutes afterwards not a cloud could be seen; the stars, however, do not shine very brightly.	D
Overcast.	L
,,	
,,	
,,	
,,	L
,, cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
,, ,,	L
,,	
,, gusts of wind to $\frac{1}{2}$.	
,,	L
,, cirro-stratus: the wind is blowing in gusts to $\frac{1}{2}$: the reflexion of the London lights is rather high.	H B
,, ,,	
,, cirro-stratus and scud.	
,, ,, gusts of wind to $\frac{3}{4}$ and 1.	
,, ,,	H B
,, ,, gusts of wind to $\frac{1}{2}$.	L
Overcast: cirro-stratus and scud.	
,, ,,	L
,, ,,	H B
,, ,,	
,, ,,	
,, the reflexion of the London lights is low.	H B
,,	D
,,	

ELASTIC FORCE OF VAPOUR AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Dec. 13^d. The mean daily values were the least in the year.

MAXIMUM FREE THERMOMETER.
Dec. $10^d. 22^h$. The reading was lower than that of the Dry Thermometer at 0^h.
Dec. $12^d. 22^h$. The reading was lower than those of the Dry Thermometer at 0^h, 2^h, and 4^h.

TEMPERATURE OF THE WATER OF THE THAMES.
Dec. $11^d. 22^h$. The reading of the Maximum Thermometer is wrong: a vessel ran foul in the night and shook the ship very much.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1. (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3. (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 13. 16	29·299	27·1	26·7	0·4	23·5	3·6	..	E	..	..	..	E	$\frac{1}{2}$	..	..	..	10	..
18	29·299	27·2	26·8	0·4	24·0	3·2	..	E	..	..	..	E	$\frac{1}{2}$	..	..	..	10	..
20	29·312	27·3	26·8	0·5	24·0	3·3	..	E	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
22	29·343	28·2	27·1	1·1	23·5	4·7	..	E	..	ESE	4·41	E by S	$\frac{1}{4}$	13·94	0·00	20·910	10	..
Dec. 14. 0	29·348	30·5	29·1	1·4	25·5	5·0	..	E	..	..	..	ESE	$\frac{1}{4}$	..	..	..	10	..
2	29·364	30·7	29·8	0·9	26·0	4·7	..	E by N	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
4	29·384	30·8	30·3	0·5	28·0	2·8	36·0	ENE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
6	29·421	30·9	30·5	0·4	29·0	1·9	28·1	Calm	..	..	..	E	$\frac{1}{4}$	..	..	..	10	Transit
8	29·439	30·4	30·2	0·2	29·5	0·9		Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·449	30·1	30·0	0·1	29·5	0·6	37·3	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·452	30·2	30·0	0·2	29·0	1·2	25·4	Calm	..	..	..	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	32·0	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	31·0	Calm	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..
22	29·458	35·6	34·6	1·0	..	..	..	E	..	E	0·81	E	$\frac{1}{4}$	13·94	0·00	20·930	9	..
Dec. 15. 0	..	..	..	..	..	..	..	E	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	E	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	38·3	E	..	..	..	..	..	..	..	..	..	..
6	29·400	36·2	35·6	0·6	..	..	35·4	ENE	$\frac{1}{2}$ to $1\frac{1}{2}$	..	..	E	$\frac{1}{4}$	..	..	..	10	Transit
8	..	..	..	..	..	..		E	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	38·7	ENE	0 to 1	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	30·6	ENE	0 to $\frac{1}{2}$	..	..	..	..	..	..	..	..	..
14	29·244	36·3	35·3	1·0	..	..		ENE	0 to $\frac{1}{2}$	..	..	E	$\frac{1}{2}$	..	..	..	10	..
16	29·215	37·0	36·2	0·8	34·5	2·5	32·5	ENE	0 to $1\frac{1}{2}$	..	..	E	$\frac{1}{2}$	..	..	..	10	In Equator
18	29·215	36·8	36·2	0·6	..	..	32·0	ENE	0 to 2	..	..	E	$\frac{1}{4}$	..	..	..	10	..
20	29·205	36·6	36·2	0·4	..	..	..	ENE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
22	29·220	37·3	36·9	0·4	36·8	0·5	..	ENE	..	E	4·46	E	$\frac{1}{4}$	13·95	0·01	20·940	10	..
Dec. 16. 0	29·217	37·5	37·2	0·3	..	..	..	E	..	..	..	Calm	..	..	..	..	10	..
2	29·215	37·8	37·5	0·3	..	..	..	ENE	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
4	29·212	37·6	37·2	0·4	36·5	1·1	39·3	E by N	..	..	..	E	$\frac{1}{4}$	..	..	..	10	1st Qr.
6	29·214	37·2	37·2	0·0	..	..	37·1	E by N	..	..	..	E	$\frac{1}{4}$	..	..	..	10	Transit
8	29·225	36·8	36·7	0·1	..	..		ENE	..	..	..	Calm	..	..	..	..	10	..
10	29·235	37·3	37·2	0·1	36·0	1·3	39·0	E by N	..	..	..	Calm	..	..	..	..	10	..
12	29·233	36·8	36·8	0·0	..	..	34·2	ENE	..	..	..	Calm	..	..	..	..	10	..
14	29·222	37·2	37·2	0·0	..	..		NE	..	..	..	Calm	..	..	..	..	10	..
16	29·226	36·9	36·8	0·1	37·0	-0·1	33·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·228	37·1	37·2	-0·1	..	..	32·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·242	37·1	37·2	-0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·281	37·8	38·0	-0·2	38·0	-0·2	..	Calm	..	E	0·70	Calm	..	13·97	0·03	20·975	10	..
Dec. 17. 0	29·293	42·2	42·1	0·1	..	..	44·0	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·295	41·4	41·4	0·0	..	..	38·1	Calm	..	..	..	Calm	..	..	..	..	10	..
4	29·322	40·0	40·0	0·0	40·3	-0·3		Calm	..	..	..	Calm	..	..	..	..	10	..
6	29·342	38·7	38·7	0·0	..	..	46·8	SE	..	..	..	Calm	..	..	..	..	10	..
8	29·334	37·8	37·7	1·0	..	..	35·0	ENE	..	..	..	Calm	..	..	..	..	10	Transit
10	29·350	38·1	38·0	0·1	37·0	1·1		E	..	..	..	E	$\frac{1}{4}$	..	..	..	10	..
12	29·369	39·4	39·2	0·2	..	..	33·0	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·366	39·8	39·8	0·0	..	..	33·0	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·386	39·1	39·1	0·0	39·0	0·1		Calm	..	..	..	Calm	..	..	..	..	10	..

BAROMETER.

Dec. 15d. 20h. The reading was the lowest in the month.

Dec. 16d. The mean daily height was the least in the month.

DRY THERMOMETER.

Dec. 16d. 18h. 20h, and 22h. The readings were lower than those of the Wet Thermometer.

WEIGHT OF A CUBIC FOOT OF AIR.

Dec. 17d. The mean daily value was the least in the month.

TEMPERATURE OF THE DEW POINT.

Dec. 16d. 16h and 22h, and 17d. 4h, the readings were higher than those of the Dry Thermometer.

REMARKS.	Observer.
Overcast.	D
,,	
,,	D
,,	L
Overcast: cirro-stratus.	
,, ,, a slight fall of snow.	L
,, snow and sleet have been falling since 2^h.	D
,,	
,, snow falling: the place of the Moon is visible.	
,, no snow falling: a few stars have been visible since the last observation.	D
,,	L
Cirro-stratus and scud: the clouds are broken in many places.	H B
Cirro-stratus and scud: the sky has been generally overcast since the last observation: after 7^h the clouds cleared off near the zenith, and a few stars were visible.	H B
Overcast: very dark.	L
,,	
,,	
,, slight rain.	L
,, cirro-stratus and scud.	H B
Overcast: cirro-stratus and scud.	
,, ,,	H B
,, hazy: drizzling rain is falling.	L
,, thick fog.	
,, ,,	
,, ,,	L
,, damp fog.	H B
,, ,,	
,, rain falling.	
,, heavy rain commenced falling at $17^h. 10^m$, and continued till within a few minutes of the present time.	
,, the rain ceased shortly after the last observation: very foggy.	H B
,, a dense fog.	D
Cirro-stratus and scud: the fog has partially cleared off.	L
Overcast: a slight fog.	L
,, a dense fog.	H B
,, cirro-stratus and scud: foggy. [minutes.	
,, ,, the Moon is occasionally visible: the fog has increased considerably during the last twenty	
,, ,, a slight fog.	H B
,, one uniform cloud: a thin fog.	D
,, ,, ,,	
,, ,, ,,	

MINIMUM FREE THERMOMETER.

Dec. $16^d. 22^h$. The reading was higher than those of the Dry Thermometer at 8^h, 12^h, and 16^h.

TEMPERATURE OF THE WATER OF THE THAMES.

Dec. $14^d. 22^h$. The lowest reading between May and December.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 17. 18	29·405	38·8	38·8	0·0	..	..	..	ENE	..	..	..	Calm	..	..	..	..	10	..
20	29·446	38·7	38·7	0·0	..	..	..	E	..	..	..	SE	¼	..	..	..	10	..
22	29·496	39·4	39·4	0·0	39·0	0·4	..	E	..	E	1·23	Calm	..	13·97	0·00	20·980	10	..
Dec. 18. 0	29·525	41·5	41·4	0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
2	29·536	41·3	41·4	–0·1	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
4	29·589	42·0	42·1	–0·1	41·5	0·5	43·1	ENE	..	..	..	Calm	..	..	..	..	10	..
6	29·635	41·8	41·8	0·0	..	..	40·3	NE	..	E	0·80	E	¼	..	..	..	10	..
8	29·686	41·2	41·3	–0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	Transit
10	29·734	41·0	41·0	0·0	41·0	0·0	44·0	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·770	40·5	40·5	0·0	..	..	39·0	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·800	40·7	40·7	0·0	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·834	40·9	41·0	–0·1	41·0	–0·1	34·0	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·871	41·3	41·4	–0·1	..	..	33·5	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·908	40·6	40·7	–0·1	..	..	..	ENE	½ constant	..	..	ENE	½	..	..	..	10	..
22	29·964	40·2	40·2	0·0	40·0	0·2	..	NE	0 to 1	ENE	0·55	E	¼	13·99	0·04	21·018	10	..
Dec. 19. 0	29·998	40·6	40·1	0·5	..	..	..	ENE	0 to ½	..	..	ENE	¼ to ½	..	..	..	10	..
2	29·998	40·8	39·7	1·1	..	..	..	NE	0 to 1	..	..	NE	½	..	..	..	10	..
4	30·032	40·2	38·9	1·3	38·5	1·7	41·5	NE	0 to ¾	..	..	ENE	¼	..	..	..	10	..
6	30·064	39·5	37·7	1·8	..	..	31·3	NE	..	..	..	E	¼	..	..	..	10	..
8	30·097	38·8	36·7	2·1	..	..	——	NE	..	..	..	E	½	..	..	..	10	Transit
10	30·120	38·5	36·6	1·9	33·5	5·0	41·7	NE	..	..	..	E	¼	..	..	..	10	..
12	30·140	36·4	35·2	1·2	..	..	23·5	NNE	..	..	..	ENE	¼	..	..	..	10	..
14	30·138	35·3	34·7	0·6	..	..	——	NE	..	..	..	NE	¼	..	..	..	10	..
16	30·152	33·8	32·6	1·2	32·6	1·2	35·8	NE	..	..	..	NE	¼	..	..	..	0	..
18	30·158	32·3	31·2	1·1	..	..	34·5	NE	..	..	..	NE	¼	..	..	..	0	..
20	30·159	33·4	31·4	2·0	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
22	30·194	35·0	31·9	3·1	28·8	6·2	..	NE	½ to 3½	ENE	3·10	ENE	¾	13·99	0·00	21·020	10	..
Dec. 20. 0	30·206	34·6	31·4	3·2	..	..	..	NE	0 to 4	..	..	NE	1	..	..	..	3	..
2	30·191	34·5	31·0	3·5	..	..	..	NE	1 to 4	..	..	ENE	1¼	..	..	..	5	..
4	30·181	32·5	29·6	2·9	27·5	5·0	35·3	NE	1½ to 3	..	..	NE	1½	..	..	..	0	..
6	30·181	30·6	28·7	1·9	..	..	30·1	NE	0 to ¾	..	..	NE	1	..	..	..	0	..
8	30·184	30·6	28·7	1·9	..	..	——	NE	0 to 1	..	..	ENE	1½	..	..	..	0	..
10	30·184	31·3	29·1	2·2	27·0	4·3	37·4	ENE	0 to 2	..	..	E	1½	..	..	..	¾	Transit
12	30·194	30·5	28·8	1·7	..	..	21·9	ENE	0 to 2	..	..	E	1	..	..	..	4	..
14	30·195	31·0	29·7	1·3	..	..	——	NE	0 to 1½	..	..	ENE	1	..	..	..	10	..
16	30·194	31·7	30·8	0·9	26·5	5·2	34·0	NE	0 to 2	..	..	ENE	1 to 1½	..	..	..	10	..
18	30·198	32·3	31·2	1·1	..	..	34·0	NE	0 to 3	..	..	ENE	2	..	..	..	10	..
20	30·201	33·0	32·0	1·0	..	..	..	NE	½ to 2	..	..	ENE	2	..	..	..	10	..
22	30·210	31·2	29·7	1·5	27.0	4·2	..	NE	0 to 3	ENE	5·45	E	¾	13·99	0·00	21·020	10	..
Dec. 21. 0	30·212	34·0	31·8	2·2	..	..	..	ENE	1 to 4	..	..	E	1¼	..	..	..	10	..
2	30·205	34·5	31·7	2·8	..	..	..	ENE	½ to 3½	..	..	ENE	1½	..	..	..	10	..
4	30·204	34·8	32·0	2·8	28·5	6·3	35·2	ENE	½ to 4	..	..	E	1½	..	..	..	10	..
6	30·206	34·6	32·2	2·4	..	..	30·7	ENE	½ to 4½	..	..	ENE	1½	..	..	..	10	..
8	30·217	34·3	32·2	2·1	..	..	——	ENE	½ to 2½	..	..	ENE	1	..	..	..	9½	..
10	30·210	33·6	31·8	1·8	28·0	5·6	35·5	ENE	0 to 3	..	..	ENE	¾	..	..	..	9	Transit
12	30·203	33·5	31·7	1·8	..	..	21·5	ENE	0 to 2	..	..	ENE	1	..	..	..	9	..
14	..	..	..	..	..	..	——	ENE	½ to 2½	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	34·0	ENE	0 to 1	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	34·0	ENE	1 to 5	..	..	..	..	..	..	..	..	..

BAROMETER.

Dec. 18d. The daily range was the greatest in the month.

Dec. 18d and 19d. The greatest difference in the month between the mean daily heights for consecutive days occurred.

Dec. 20d and 21d. The least difference in the month between the mean daily heights for consecutive days occurred.

Dec. 21d. The daily range was the smallest in the year. Dec. 21d. The mean daily height was the greatest in the month.

DRY THERMOMETER.

Dec. 18d. 2h, 4h, 8h, 16h, 18h, and 20h. The readings were lower than those of the Wet Thermometer.

Dec. 20d. 2h. The greatest difference in the month between its reading and that of the Wet Thermometer occurred at this time.

TEMPERATURE OF THE DEW POINT.

Dec. 18d. The mean daily value was the greatest in the month. Dec. 18d. 16h. The reading was higher than that of the Dry Thermometer.

Dec. 19d and 20d. The greatest difference in the mean daily values for consecutive days in the month occurred.

REMARKS.	Observer.
Overcast: a thin fog.	D
,, ,,	D
,,	L
Overcast.	
,, a thick fog: the time-ball is invisible from the Magnetic Observatory.	L
,,	D
,, the air is very damp.	
,, ,, a thin fog.	D
A thick fog.	G
Foggy: at 12^h. 5^m rain began to fall.	G
Overcast: slight drizzling rain: a slight fog.	L
,, ,, very dark.	H B
,, a thin rain falling.	H B
,, rain falling.	D
,, a thin misty rain falling: a very gloomy morning.	G
Overcast: cirro-stratus and scud: a slight rain falling.	L
Overcast, with slight rain.	H B
Cirro-stratus and scud.	L
,, the Moon is occasionally visible: the scud passes quickly from the E.	G
,, the Moon is occasionally visible; she is at present obscured by scud.	H B
,,	D
,, the Moon is occasionally visible through the clouds.	L
Cirro-stratus and scud, with a few small breaks about the zenith.	
Cloudless, with the exception of a few cirri and fleecy clouds about the place of the Moon.	
Cloudless.	
Cirro-stratus and scud.	L
,,	H B
Cumuli and scud.	
Cumuli, fleecy clouds, and scud.	H B
Cloudless.	L
,,	
,, [coming rapidly from the E.	
Fleecy clouds and masses of scud in various directions: at about 9^h. 40^m nearly the whole of the sky was covered with scud	L
Fleecy clouds and scud.	H B
Cirro-stratus and scud: breaks near the zenith, but to no numerical amount.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	H B
,, ,,	L
Cirro-stratus and scud.	
,,	L
,,	H B
,,	
,, breaks near the Moon's place and the zenith.	H B
Large masses of scud are passing over from the E.: the Moon at times shines very brightly, but she is generally obscured by	D
No change. [clouds.	

ELASTIC FORCE OF VAPOUR, AND WEIGHT OF VAPOUR IN A CUBIC FOOT OF AIR.
Dec. 18^d. The mean daily values were the greatest in the month: the values were nearly the same on the 28th day.
ADDITIONAL WEIGHT OF VAPOUR REQUIRED FOR COMPLETE SATURATION OF A CUBIC FOOT OF AIR.
Dec. 18^d. The mean daily value was the least in the month: this was the only day in the year in which complete saturation prevailed.
Dec. 20^d. The mean daily value was the greatest in the month.
WEIGHT OF A CUBIC FOOT OF AIR.—Dec. 20^d and 21^d. The difference of the mean daily values was the least in the month.
DEGREE OF HUMIDITY.—Dec. 18^d. The mean daily value was the greatest in the month, and also in the year.
Dec. 20^d. The mean daily value was the least in the month.
MINIMUM THERMOMETER.—Dec. 17^d. 22^h. The reading was higher than that of the Dry Thermometer at 8^h.
Dec. 18^d. 22^h. The reading is that of the temperature of the air 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. / of Rad. Therm. / of Therm. in Water of the Thames.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 21. 20	..	..	..	..	..	..	..	ENE	¾ to 3½	..	..	..	..	..	..	..	..	..
22	30·137	31·8	31·4	0·4	..	..	..	ENE	1½ to 4	ENE	5·68	ENE	2	13·99	0·00	21·020	7	..
Dec. 22. 0	..	..	..	..	..	..	..	ENE	½ to 3¼	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	ENE	0 to 1¾	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	~~32·0~~	ENE	0 to ½	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	29·1	ENE	0 to 1½	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		NE	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	34·8	NE	..	ENE	2·04	..	..	..	..	..	..	..
12	..	..	..	..	..	..	23·2	NNE	..	..	..	..	..	..	..	..	..	Transit
14	30·065	30·4	28·7	1·7	..	..		NNE	..	..	..	NNE	¼	..	..	..	10	Apogee
16	30·070	30·3	28·7	1·6	24·5	5·8	34·0	N	..	..	..	N	¼	..	..	..	10	..
18	30·070	30·0	28·6	1·4	..	..	34·0	N	..	..	..	N	¼	..	..	..	10	..
20	30·083	29·4	28·5	0·9	..	..	..	N	..	..	..	N	¼	..	..	..	10	..
22	30·113	29·8	28·5	1·3	24·5	5·3	..	N	..	N	0·80	N	¼	13·99	0·00	21·020	10	..
Dec. 23. 0	30·112	31·7	30·6	1·1	..	..	..	N by E	..	..	..	N	¼	..	..	..	10	..
2	30·110	32·5	31·2	1·3	..	..	..	N	..	..	..	N	¼	..	..	..	10	Greatest declination N.
4	30·123	31·7	31·1	0·6	29·0	2·7	33·0	N	..	..	..	N	¼	..	..	..	10	..
6	30·130	31·4	30·2	1·2	..	..	29·5	N	..	..	..	Calm	..	..	..	..	10	..
8	30·155	30·9	30·0	0·9	..	..		NE	..	..	..	Calm	..	..	..	..	10	..
10	30·167	30·5	29·7	0·8	28·0	2·5	35·4	Calm	..	N	0·30	NE	¼–	..	..	..	10	..
12	30·173	30·5	29·7	0·8	..	..	25·5	Calm	..	..	..	Calm	..	..	..	..	10	Transit
14	30·178	30·1	29·2	0·9	..	..		E	..	..	..	Calm	..	..	..	..	10	..
16	30·174	29·8	28·9	0·9	26·3	3·5	33·8	NE	..	..	..	Calm	..	..	..	..	10	..
18	30·170	30·7	29·7	1·0	..	..	33·8	E	..	..	..	NE	¼	..	..	..	10	..
20	30·188	31·6	30·2	1·4	..	..	..	ESE	..	..	..	E	¼	..	..	..	10	..
22	30·199	31·5	30·3	1·2	24·5	7·0	..	E by S	..	ESE	0·41	Calm	..	13·99	0·00	21·020	10	..
Dec. 24. 0	30·192	32·0	30·4	1·6	..	..	..	E by N	..	..	..	SE	¼	..	..	..	10	..
2	30·172	32·1	31·2	0·9	..	..	..	E	..	..	..	SE	¼	..	..	..	10	..
4	30·175	32·3	31·2	1·1	30·0	2·3	32·8	E by N	..	..	..	E	¼	..	..	..	10	..
6	30·169	32·0	31·2	0·8	..	..	31·3	E by S	..	..	..	E	¼	..	..	..	10	..
8	30·176	31·8	31·5	0·3	..	..		E	..	..	..	E	¼	..	..	..	10	Full
10	30·180	32·4	31·6	0·8	30·3	2·1	32·5	E by S	..	..	..	E	¼	..	..	..	10	..
12	30·176	32·1	31·5	0·6	..	..	29·0	E by S	..	..	..	Calm	..	..	..	..	10	Transit
14	..	..	..	..	..	..		Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	33·8	Calm	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	33·8	ESE	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..		E by S	..	..	..	..	..	..	..	..	..	..
22	30·180	31·4	31·2	0·2	..	..	..	SE	..	ESE	0·60	ESE	¼	13·99	0·00	21·020	10	..
Dec. 25. 0	..	..	..	..	..	..	..	ESE	..	..	..	..	..	..	..	..	..	..
2	30·147	32·5	31·7	0·8	..	..	..	E by S	..	..	..	E	¼	..	..	..	10	..
4	..	..	..	..	..	..	34·1	E by S	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	31·1	SE	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..		E by S	..	..	..	..	..	..	..	..	..	..
10	30·130	32·7	32·2	0·5	..	..	33·8	SE	..	..	..	E	¼	..	..	..	10	..
12	..	..	..	..	..	..	27·7	E	..	..	..	..	..	..	..	..	..	..
14	30·014	33·4	32·6	0·8	..	..		ESE	..	..	..	Calm	..	..	..	..	10	Transit
16	29·998	33·3	32·8	0·5	..	..	33·5	E	..	..	..	Calm	..	..	..	..	10	..
18	30·028	33·0	32·7	0·3	..	..	33·2	E	..	..	..	Calm	..	..	..	..	10	..
20	30·020	32·6	32·4	0·2	..	..	..	ESE	..	..	..	Calm	..	..	..	..	10	..
22	30·033	33·2	33·0	0·2	32·5	0·7	..	E	..	ESE	0·68	Calm	..	13·99	0·00	21·020	10	..

TEMPERATURE OF THE DEW POINT.

Dec. 25d. 16h. The observation was accidentally omitted.

REMARKS.	Observer.
Cirro-stratus and scud.	L
Overcast: cirro-stratus and scud.	D
,, ,,	
,, ,,	
,, ,,	D
,, ,,	L
Overcast: cirro-stratus and scud.	
,, ,,	L
,, ,,	D
,, ,,	
,, ,,	D
,, ,,	H B
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	H B
,, ,,	L
Overcast: cirro-stratus and scud.	
,, ,,	L
,, a very thin rain is falling.	H B
,, ,,	
,, ,,	
,, ,,	H B
Cirro-stratus and scud.	L
Overcast: cirro-stratus.	G
Overcast: cirro-stratus.	
,, ,,	G
,,	L
,, a slight fog.	
,, ,,	
,, ,,	L
,, foggy.	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.	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.	By Estimation. Direction.	Force 0–6.	RAIN. Stand of Rain-gauge No. 1, (Osler's).	Reading of Rain-gauge No. 2.	Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0–10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 26. 0	30·010	34·5	34·2	0·3	..	..	..	ENE	..	..	..	Calm	..	..	..	..	10	..
2	29·981	34·5	34·2	0·3	..	..	..	ENE	..	..	..	Calm	..	..	..	..	10	..
4	29·972	33·3	33·0	0·3	31·5	1·8	36·5	NE	..	..	..	Calm	..	..	..	..	10	..
6	29·956	32·2	32·3	–0·1	..	..	27·6	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·958	32·0	31·8	0·2	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·967	31·2	31·2	0·0	31·0	0·2	38·6	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·955	30·8	31·0	–0·2	..	..	27·2	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·940	29·1	29·5	–0·4	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	Transit
16	29·948	28·1	28·5	–0·4	28·0	0·1	33·8	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·937	29·4	29·6	–0·2	..	..	33·8	Calm	..	..	..	Calm	..	..	..	..	10	..
20	29·957	28·6	28·7	–0·1	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	29·973	29·5	29·3	0·2	29·0	0·5	..	Calm	..	..	0·00	Calm	..	13·99	0·00	21·020	7	..
Dec. 27. 0	29·971	32·5	32·0	0·5	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
2	29·940	32·8	32·2	0·6	..	..	..	NE	..	..	..	Calm	..	..	..	..	8	..
4	29·936	32·6	32·4	0·2	32·0	0·6	40·5	Calm	..	..	..	Calm	..	..	..	..	9	..
							29·8											
6	29·929	31·9	32·0	–0·1	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
8	29·933	34·0	33·7	0·3	..	..	40·0	Calm	..	..	..	Calm	..	..	..	..	10	..
10	29·925	31·9	31·9	0·0	32·0	–0·1	27·2	Calm	..	..	..	Calm	..	..	..	..	10	..
12	29·931	33·1	32·9	0·2	..	..	——	Calm	..	..	..	Calm	..	..	..	..	10	..
14	29·897	33·5	33·3	0·2	..	..	33·8	Calm	..	..	..	Calm	..	..	..	..	6	..
							33·8											
16	29·908	34·4	34·3	0·1	34·5	–0·1	..	Calm	..	..	..	Calm	..	..	..	..	7	Transit
18	29·870	36·0	35·7	0·3	..	..	..	Calm	..	..	..	Calm	..	..	..	..	7	..
20	29·872	38·1	38·0	0·1	..	..	..	Calm	..	..	..	SSE	¼	..	..	..	10	..
22	29·871	39·6	39·7	–0·1	40·0	–0·4	..	Calm	..	SSE	0·57	SSE	¼	13·99	0·01	21·040	10	..
Dec. 28. 0	29·856	43·2	42·7	0·5	..	..	..	SSE	..	..	..	SSE	¼	..	..	..	7	..
2	29·836	46·0	44·5	1·5	..	..	..	S by E	..	..	..	SSE	¼	..	..	..	10	..
4	29·821	44·7	43·4	1·3	42·3	2·4	47·4	SSE	..	..	..	SSE	¼	..	..	..	10	..
6	29·805	43·3	42·2	1·1	..	..	40·5	SSE	..	..	..	S by E	¼	..	..	..	10	..
8	29·811	44·3	43·1	1·2	..	..	——	S by E	..	..	..	SSE	¼	..	..	..	10	..
10	29·805	44·5	44·2	0·3	44·5	0·0	48·2	S	..	..	..	S by E	¼	..	..	..	10	..
12	29·793	44·8	44·7	0·1	..	..	37·3	Calm	..	..	..	Calm	..	..	..	..	10	..
14	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	35·0	SSW	..	..	..	..	..	..	..	..	..	Transit
18	..	..	..	..	..	..	34·0	SSW	..	..	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	S by W	..	..	..	..	..	..	..	..	..	..
22	29·826	46·2	46·4	–0·2	..	..	..	S	..	S	2·97	S by E	¼	14·04	0·08	21·125	10	..
Dec. 29. 0	..	..	..	..	..	..	49·3	Calm	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	37·5	Calm	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	49·4	Calm	..	..	..	..	..	..	..	..	..	..
8	29·815	44·6	44·8	–0·2	..	..	35·3	Calm	..	..	..	Calm	..	..	..	..	10	..
10	..	..	..	..	..	..	——	Calm	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	36·5	Calm	..	..	..	..	..	..	..	..	..	..
14	29·810	42·9	43·0	–0·1	..	..	34·8	Calm	..	..	..	Calm	..	..	..	..	10	..
16	29·828	43·0	42·7	0·3	42·5	0·5	..	Calm	..	..	..	Calm	..	..	..	..	10	Transit
18	29·824	41·1	41·2	–0·1	..	..	..	NNE	..	..	..	Calm	..	..	..	..	10	..

DRY THERMOMETER.

Dec. 26d. 6h, 12h, 14h, 16h, 18h, and 20h; Dec. 27d. 6h and 22h; Dec. 28d. 22h; and Dec. 29d. 8h, 14h, and 18h. The readings were lower than those of the Wet Thermometer.

Dec. 27d and 28d. The greatest difference in the mean daily temperatures for consecutive days in the month occurred.

Dec. 28d. The daily range was the greatest in the month.

Dec. 28d. The mean daily temperature was the greatest in the month.

Dec. 28d. 2h. The reading was the highest in the month at the two-hourly observations.

REMARKS.	Observer.
Overcast: foggy.	H B
,, ,,	H B
,, ,,	L
,, a thick fog.	
,, ,,	
,, a thick fog, through which the Moon is visible.	L
Fog, through which the Moon is shining, with a fine corona around her.	D
,, ,, ,,	
Foggy: the Moon is still shining through the fog, but no stars are visible.	
The fog is rather more dense.	
,, a white frost.	D
Cirri near the zenith, and about 10° around it: the fog still continues dense.	H B
Overcast: foggy.	
The sky appears to be free from cloud in the zenith, and around it: the fog is not so dense now as it was ten minutes since; at that time the ball was invisible from the Magnetic Observatory.	H B
A little blue sky is visible E. of the zenith, and the fog is of much less density than at the previous observation; it appears to have a tendency to clear away.	D
Overcast: the fog has again become more dense.	
,, foggy.	
,, ,, the place of the Moon is faintly visible.	D
,, the fog still continues dense, but less so than at the last observation: the Moon's place is visible.	H B
The fog has cleared off very much within the last quarter of an hour, and at present the Moon and several of the larger stars are visible: at $14^h. 20^m$ an ill-defined lunar halo was visible around the Moon; its diameter was about 45°.	
Fleecy and thin clouds near the Moon's place: the halo still continues, but is very badly defined.	
The sky is covered with a thin cirro-stratus, through which the Moon and a few stars are to be seen: the halo is still visible, but is very faint.	
Thin cirro-stratus and scud: rain has been falling since the last observation.	H B
Cirro-stratus and scud.	L
Cirri about the zenith: cirro-stratus and scud towards the S. E.	
Cirro-stratus and scud.	L
Overcast: thin cirro-stratus and scud.	H B
,, ,,	
,, cirro-stratus and scud.	
Shortly after the last observation rain commenced falling, and has continued without intermission till the present time.	H B
Overcast: slight rain.	L
Overcast: cirro-stratus and scud: a thin rain is falling.	H B
The day has been overcast with drizzling rain: at present there is a damp fog.	H B
Overcast: foggy.	L
,, ,, there was a slight fall of rain at about $16^h. 30^m$.	
,, ,, very damp: the trees are dripping with moisture.	

TEMPERATURE OF THE DEW POINT.

Dec. 27^d and 28^d. The difference between the mean daily values was considerable.

Dec. $27^d. 10^h$, 16^h, and 22^h. The readings were higher than those of the Dry Thermometer.

Dec. $28^d. 10^h$. The reading as observed was the highest in the month.

WEIGHT OF A CUBIC FOOT OF AIR.

Dec. 27^d and 28^d. The difference of the mean daily values was the greatest in the month.

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.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6	RAIN. Stand of Rain-gauge No. 1, (Osler's).	RAIN. Reading of Rain-gauge No. 2.	RAIN. Stand of Rain-gauge No. 3, (Crosley's).	Amount of Clouds, 0—10.	Phases of the Moon.
d h	in.	°	°	°	°	°	°		from lbs. to lbs.		in.			in.	in.	in.		
Dec. 29. 20	29·838	39·2	39·2	0·0	..	..	..	NE	..	..	..	Calm	..	..	..	..	10	..
22	29·882	37·0	37·0	0·0	37·5	–0·5	..	N by E	..	NE	0·01	Calm	..	14·12	0·17	21·265	10	..
Dec. 30. 0	29·885	36·8	36·8	0·0	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
2	29·878	36·5	36·5	0·0	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
4	29·889	37·0	36·9	0·1	37·5	–0·5	40·9	NE	..	..	..	NE	¼–	..	..	..	10	..
6	29·898	38·4	38·2	0·2	..	..	34·1	NE	..	..	..	Calm	..	..	..	..	10	..
8	29·922	40·0	39·2	0·8	..	..	——	ENE	..	..	..	Calm	..	..	..	..	10	..
10	29·936	37·5	37·2	0·3	37·5	0·0	39·8	NE	..	..	..	Calm	..	..	..	..	0	In Equator
12	29·945	36·8	35·6	1·2	..	..	28·2	NE	..	..	..	NE	¼	..	..	..	10	..
14	29·947	34·1	34·1	0·0	..	..	——	N by E	..	..	..	Calm	..	..	..	..	10	..
16	29·954	34·8	34·7	0·1	34·5	0·3	35·8	Calm	..	..	..	Calm	..	..	..	..	10	..
18	29·952	36·0	36·1	–0·1	..	..	35·2	Calm	..	..	..	Calm	..	..	..	..	10	Transit
20	29·967	36·6	36·6	0·0	..	..	..	Calm	..	..	..	Calm	..	..	..	..	10	..
22	30·004	37·5	37·4	0·1	37·5	0·0	..	Calm	..	..	0·00	Calm	..	14·12	0·00	21·265	10	..
Dec. 31. 0	30·000	40·1	39·6	0·5	..	..	..	Calm	..	..	..	Calm	..	..	..	..	5	..
2	29·977	41·4	40·5	0·9	..	..	..	Calm	..	..	..	NE	¼	..	..	..	7	..
4	29·985	40·9	40·2	0·7	39·0	1·9	..	NE	..	..	..	E	¼	..	..	..	7	..
6	29·994	40·5	39·9	0·6	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
8	30·018	39·5	39·2	0·3	..	..	..	NE	..	..	..	NE	¼	..	..	..	10	..
10	30·034	39·4	39·3	0·1	39·0	0·4	..	NE	..	..	..	NE	¼	..	..	..	10	..
12	30·031	39·5	39·0	0·5	..	..	..	ENE	..	..	..	NE	¼	14·12	0·00	21·265	10	..
14	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	NE	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	NE	..	..	..	..	..	..	..	..	..	Transit
20	..	..	..	..	..	..	..	N by E	..	..	..	..	..	..	..	..	..	..
22	..	..	..	..	..	..	..	ENE	..	..	..	..	..	..	..	..	..	..

DRY THERMOMETER.

Dec. 30d. 18h. The reading was lower than that of the Wet Thermometer.

TEMPERATURE OF THE DEW POINT.

Dec. 29d. 22h and 30d. 0h. The readings were higher than those of the Dry Thermometer.

MINIMUM FREE THERMOMETER.

Dec. 29d. 22h. The reading was higher than that of the Dry Thermometer, and indicated the temperature of the air at that time.

REMARKS.	Observer.
Overcast: foggy: a slight drizzling rain.	L
,, foggy and damp.	H B
Overcast: foggy and damp.	
,, damp fog.	H B
,, very slight fog.	L
,,	
,,	
Cloudless: the stars are shining very brightly; ten minutes afterwards it was again quite overcast.	L
Overcast: cirro-stratus: one single star (Procyon) is visible through the clouds.	D
,, ,, a thin fog.	
,, a light fog.	
,, ,,	
,, ,,	
,, ,,	D
	H B
Cirro-cumuli and cirri about the zenith: cirro-stratus and scud near the horizon.	L
Cirro-cumuli and masses of scud.	H B
Cirri, cirro-stratus, and scud.	D
Overcast: cirro-stratus.	D
,,	L
,,	D
Cirro-stratus and scud: a few stars have been occasionally visible since $11^h. 30^m$.	H B

RAIN.

Dec. $31^d. 12^h$. The amount of rain collected in rain-gauge No. 4 for the month of December was $0^{in}\cdot36$, and that collected in the gauge at the Greenwich Hospital Schools was $0^{in}\cdot42$ in the same period.

ROYAL OBSERVATORY, GREENWICH.

TERM-DAY

METEOROLOGICAL OBSERVATIONS.

1844.

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.	BY ESTIMATION. Direction.	Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Jan. 21. 18	29·818	39·6	39·3	0·3	..	..	Calm	..	Calm	..	10
19	29·810	39·2	38·8	0·4	..	..	Calm	..	Calm	..	10
20	29·810	38·9	38·4	0·5	..	..	Calm	..	Calm	..	10
21	29·812	38·4	38·0	0·4	..	..	Calm	..	Calm	..	10
22	29·799	39·6	39·3	0·3	38·0	1·6	Calm	..	Calm	..	5
23	29·801	40·8	40·2	0·6	..	..	Calm	..	WSW	¼—	8
Jan. 22. 0	29·793	40·9	40·5	0·4	..	..	Calm	..	WSW	¼—	10
1	29·781	41·6	41·2	0·4	..	..	Calm	..	WSW	¼—	10
2	29·759	41·2	40·9	0·3	..	..	Calm	..	Calm	..	10
3	29·756	42·3	41·8	0·5	..	..	Calm	..	Calm	..	10
4	29·762	43·0	41·3	1·7	38·0	5·0	Calm	..	Calm	..	8
5	29·768	42·0	40·3	1·7	..	..	Calm	..	Calm	..	8
6	29·770	40·6	39·4	1·2	..	..	Calm	..	NE	¼—	8
7	29·782	39·3	38·5	0·8	..	..	Calm	..	Calm	..	2
8	29·796	37·0	36·9	0·1	..	..	Calm	..	Calm	..	2
9	29·809	36·0	36·1	—0·1	..	..	Calm	..	Calm	..	0
10	29·823	35·5	35·6	—0·1	35·5	0·0	Calm	..	Calm	..	0
11	29·838	34·5	34·7	—0·2	..	..	Calm	..	Calm	..	0
12	29·842	33·5	33·7	—0·2	..	..	Calm	..	Calm	..	5
13	29·846	33·4	33·5	—0·1	..	..	Calm	..	Calm	..	10
14	29·855	33·7	33·3	0·4	..	..	Calm	..	Calm	..	10
15	29·854	34·0	34·0	0·0	..	..	Calm	..	Calm	..	10
16	29·871	35·0	35·0	0·0	34·0	1·0	Calm	..	Calm	..	10
17	29·873	35·0	34·9	0·1	..	..	Calm	..	Calm	..	10
18	29·877	35·0	34·7	0·3	..	..	Calm	..	Calm	..	8
19	29·890	34·2	34·1	0·1	..	..	Calm	..	Calm	..	10
20	29·912	33·7	33·5	0·2	..	..	Calm	..	Calm	..	10
21	29·922	35·3	35·2	0·1	..	..	Calm	..	Calm	..	10
22	29·954	36·3	36·3	0·0	35·0	1·3	NNW	..	Calm	..	10
23	29·963	37·0	37·2	—0·2	..	..	NNW	..	Calm	..	6
Jan. 23. 0	29·971	39·7	39·4	0·3	..	..	N	..	NNW	¼—	9
1	29·969	41·6	40·7	0·9	..	..	NE	..	N	¼	9½
2	29·964	40·9	39·5	1·4	..	..	NNE	..	NE	¼	10
4	29·993	40·8	38·4	2·4	36·5	4·3	NNE	..	NE	¼	10
5	30·004	39·6	37·8	1·8	..	..	NNE	..	NE	¼	10
6	30·012	40·0	37·8	2·2	..	..	Calm	..	Calm	..	10
7	30·022	39·4	36·9	2·5	..	..	Calm	..	Calm	..	10
8	30·034	39·1	36·9	2·2	..	..	Calm	..	Calm	..	10
9	30·041	39·1	36·3	2·8	..	..	Calm	..	Calm	..	10
10	30·051	38·8	36·7	2·1	35·0	3·8	Calm	..	Calm	..	10
12	30·064	38·2	36·1	2·1	..	..	Calm	..	Calm	..	10
13	30·070	37·7	36·1	1·6	..	..	Calm	..	Calm	..	10
14	30·068	37·5	35·4	2·1	..	..	Calm	..	Calm	..	10
15	30·069	37·0	35·5	1·5	..	..	Calm	..	Calm	..	10
16	30·074	36·5	35·2	1·3	34·0	2·5	Calm	..	Calm	..	10
17	30·068	36·0	34·8	1·2	..	..	Calm	..	Calm	..	10
18	30·074	36·2	34·7	1·5	..	..	Calm	..	Calm	..	10
20	30·090	35·8	34·7	1·1	..	..	Calm	..	Calm	..	10
22	30·107	36·5	35·3	1·2	34·0	2·5	Calm	..	ENE	¼	10
23	30·112	38·3	36·4	1·9	..	..	Calm	..	ENE	¼	10

DRY THERMOMETER.
Jan. 22d. 9h to 13h, and at 23h. The readings were lower than those of the Wet Thermometer.

REMARKS.	Observer.
Overcast: cirro-stratus.	D
,, ,,	
,, ,,	
,, ,,	D
Light clouds and vapour: hazy.	J H
Scud: hazy.	
Stratus: foggy.	
,, scud seen in the zenith: foggy.	
,, foggy.	
,, ,,	J H
Cirro-stratus and light clouds: hazy.	D
Light clouds and vapour.	
,,	
Heavy vapour S.W. of the zenith: the rest of the sky is clear.	
,, ,,	
Cloudless.	
,,	D
,, hazy.	J H
Heavy vapour: the air thick and misty.	
Overcast: the air thick and misty.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
Cirro-stratus and scud.	
Overcast: the air thick and misty.	
,, ,,	
,, ,,	J H
,, cirro-stratus: a thick fog: the air is cold and damp.	P
Breaks in every direction: the clouds are of an undefinable character: the fog is much thinner.	
Light scud, broken in every direction.	
A few breaks in various parts of the sky: there are two distinct bodies of scud, both moving from the N., the one much lower than the other.	
Cirro-stratus and scud.	P
,,	J H
,,	
,,	
,,	
,,	
,,	
,, lightning in the S. E.	J H
,,	P
,,	
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	P
Cirro-stratus and scud.	J 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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Jan. 24. 0	30·112	38·5	36·7	1·8	..	..	Calm	..	ENE	¼	3
1	30·109	40·1	36·9	3·2	..	..	Calm	..	Calm	..	3
2	30·107	39·5	36·5	3·0	..	..	Calm	..	ENE	¼	10
3	30·109	39·5	36·4	3·1	..	..	Calm	..	SSW	¼	10
4	30·105	39·2	36·7	2·5	34·0	5·2	Calm	..	Calm	..	4
5	30·103	36·8	35·3	1·5	..	..	Calm	..	Calm	..	2
6	30·112	36·0	34·5	1·5	..	..	Calm	..	S by W	¼—	1
7	30·131	34·3	33·2	1·1	..	..	Calm	..	S by W	¼—	0
8	30·137	32·5	31·7	0·8	..	..	Calm	..	S by W	¼—	9
10	30·147	31·0	30·4	0·6	29·0	2·0	Calm	..	SSW	¼—	2
11	30·156	30·7	29·9	0·8	..	..	Calm	..	SSW	¼	0
12	30·169	30·2	29·6	0·6	..	..	Calm	..	Calm	..	0
13	30·164	31·2	30·7	0·5	..	..	Calm	..	Calm	..	0
14	30·168	32·8	31·7	1·1	..	..	Calm	..	Calm	..	5
15	30·169	32·2	31·7	0·5	..	..	Calm	..	Calm	..	0
16	30·178	31·6	30·9	0·7	30·5	1·1	SSW	..	Calm	..	3
17	30·172	32·2	31·8	0·4	..	..	SSW	..	Calm	..	0
18	30·166	32·7	32·2	0·5	..	..	SSW	..	Calm	..	0
19	30·163	32·0	31·8	0·2	..	..	SSW	..	Calm	..	0
20	30·179	32·0	31·8	0·2	..	..	SSW	..	Calm	..	1
21	30·181	33·8	33·5	0·3	..	..	SSW	..	SW	¼—	6
22	30·183	35·6	34·7	0·9	33·5	2·1	SSW	..	W	¼	10
23	30·175	38·0	36·8	1·2	..	..	SW	..	SW	¼	10
Jan. 25. 0	30·165	39·1	37·8	1·3	..	..	SW	..	SW	¼	10
1	30·143	40·0	38·7	1·3	..	..	SW	..	Calm	..	10
2	30·106	43·0	41·3	1·7	..	..	SW	..	SW	¼	8
3	30·100	43·2	41·7	1·5	..	..	SW	..	SW	¼	9½
4	30·088	43·0	41·4	1·6	40·0	3·0	SW	..	SW	¼	10
5	30·089	42·2	40·2	2·0	..	..	SW	..	Calm	..	10
6	30·074	41·7	40·0	1·7	..	..	SW	0 to ½	W	½	10
7	30·039	41·7	40·2	1·5	..	..	SW	½ constant	W	½	10
8	30·040	42·1	40·5	1·6	..	..	SW	0 to ¼	W	½	8
9	30·035	41·7	40·8	0·9	..	..	SW	..	W	¾	10
10	30·032	41·1	41·0	0·1	39·5	1·6	SW	..	WSW	¾	10
Feb. 20. 18	29·516	29·0	28·2	0·8	..	..	Calm	..	Calm	..	10
19	29·484	30·0	28·7	1·3	..	..	Calm	..	SSW	¼—	10
20	29·453	31·7	30·2	1·5	..	..	Calm	..	SSW	¼—	10
21	29·428	33·2	31·9	1·3	..	..	Calm	..	SSW	¼	10
22	29·406	34·2	31·8	2·4	30·5	3·7	SSW	..	SSW	¼	10
23	29·371	35·0	34·0	1·0	..	..	Calm	..	Calm	..	10
Feb. 21. 0	29·339	35·6	34·9	0·7	..	..	Calm	..	SSW	¼	10
1	29·287	37·3	36·7	0·6	..	..	Calm	..	SSW	¼	10
2	29·259	37·1	36·0	1·1	..	..	Calm	..	S by E	¼	10
3	29·219	38·0	36·9	1·1	..	..	SE	..	S by E	¼	10
4	29·183	36·8	36·2	0·6	36·0	0·8	E by S	..	ESE	¼—	10
5	29·150	36·8	36·1	0·7	..	..	E	..	E	¼—	10
6	29·137	35·5	35·2	0·3	..	..	E	..	E	¼	10
7	29·129	35·3	35·1	0·2	..	..	Calm	..	E	¼—	10
8	29·131	35·0	34·7	0·3	..	..	Calm	..	E by N	¼	10

REMARKS.	Observer.
Vapour: hazy: the clouds gradually disappeared about $22^h. 30^m$.	J H
Fleecy clouds and vapour: hazy.	
,,	
Vapour: hazy.	J H
Thin cloud and vapour generally prevalent.	P
,,	
A few clouds in the W. horizon: haze generally prevalent.	
Cloudless: foggy.	
Stars are faintly visible in and around the zenith: very hazy.	P
Near the horizon, all round, there are a few clouds: vapour prevalent.	G
Cloudless.	
,,	G
,,	D
One half of the sky is now covered with cirro-stratus: vapour prevalent.	
Cloudless: the stars are shining very brilliantly.	D
Vapour: the stars look dim.	J H
Cloudless: hazy.	
,, very hazy.	J H
,,	P
A few clouds only in the western horizon: hazy.	
Scud scattered about the sky in every direction: the morning unusually fine.	P
Thin and small cumuli cover the sky, with the exception of small patches of blue sky seen between them to no numerical extent: the upward rays of light from the Sun are marked on the clouds above him, as they pass between the openings of the cumuli: there does not appear to be any upper cloud.	G
Overcast: cirro-stratus.	P
Overcast: cirro-stratus.	D
,, ,,	J H
Cirro-stratus and fleecy clouds.	D
Cirro-stratus and vapour.	D
Overcast: thin cirro-stratus.	P
Overcast.	P
Cirro-stratus and scud.	G
,, the wind occasionally blows in gusts to $\frac{3}{4}$.	G
Light fleecy clouds and scud.	J H
Cirro-stratus: rain falling: gusts of wind.	
Overcast: cirro-stratus: rain falling slightly.	J H
Cirro-stratus and scud.	P
,,	
,,	
,, a few small flakes of snow have this minute begun to fall.	P
,, the snow still continues falling slightly at intervals.	J H
,, snow has been falling in small flakes during the last half hour.	G
Cirro-stratus and scud: sleet falling.	J H
,, no sleet falling.	G
,, sleet falling slightly.	J H
,, no sleet falling.	J H
,,	P
,,	
,,	
,,	
,, a thin rain 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.	WIND. By Estimation. Direction.	WIND. By Estimation. Farce 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Feb. 21. 9	29·123	34·5	34·3	0·2	..	..	Calm	..	E by N	$\frac{1}{4}$	10
10	29·122	34·5	34·3	0·2	33·0	1·5	Calm	..	E by N	$\frac{1}{4}$	10
11	29·127	34·4	34·2	0·2	..	..	Calm	..	E by N	$\frac{1}{4}$	10
12	29·137	34·3	34·1	0·2	..	..	Calm	..	E by N	$\frac{1}{4}$	10
13	29·140	33·0	33·1	−0·1	..	..	E by N	..	Calm	..	10
14	29·146	32·7	32·6	0·1	..	..	E by N	..	Calm	..	10
15	29·142	32·7	32·4	0·3	..	..	E by N	..	Calm	..	10
16	29·128	32·5	32·2	0·3	31·0	1·5	E by N	..	ENE	$\frac{1}{4}$	10
17	29·124	32·3	32·2	0·1	..	..	ENE	..	ENE	$\frac{1}{4}$	10
18	29·117	32·5	32·2	0·3	..	..	ENE	..	ENE	$\frac{1}{2}$	10
19	29·115	32·5	32·2	0·3	..	..	ENE	..	NE	$\frac{1}{2}$	10
20	29·129	32·7	32·4	0·3	..	..	ENE	..	NE	$\frac{1}{4}$	10
21	29·141	33·4	33·1	0·3	..	..	NE	..	NE	$\frac{1}{4}$	10
22	29·176	32·1	32·0	0·1	31·5	0·6	NE	0 to $1\frac{1}{2}$	NE	$\frac{1}{4}$	10
23	29·202	33·1	32·1	1·0	..	..	NE	$\frac{1}{2}$ to 2	NE	$\frac{3}{4}$	10
Feb. 22. 0	29·242	33·2	32·0	1·2	..	..	NE	$\frac{1}{2}$ to $2\frac{1}{2}$	NE	$\frac{1}{2}$	10
1	29·274	33·1	31·8	1·3	..	..	NE	$\frac{1}{2}$ to 2	NE	$\frac{1}{2}$	10
2	29·299	33·5	32·0	1·5	..	..	NE	$\frac{1}{2}$ to 2	NE	$\frac{1}{2}$	10
3	29·324	33·5	31·9	1·6	..	..	NE	0 to $1\frac{1}{2}$	NE	$\frac{3}{4}$	10
4	29·368	34·4	31·7	2·7	25·0	9·4	NNE	$\frac{1}{2}$ to 2	NE	$\frac{1}{2}$	10
5	29·404	33·9	31·1	2·8	..	..	NNE	0 to $\frac{1}{2}$	NNE	$\frac{3}{4}$	10
6	29·446	33·2	30·9	2·3	..	..	N by E	..	NNE	$\frac{1}{2}$	8
7	29·510	30·6	29·7	0·9	..	..	N	..	N	$\frac{1}{4}$	1
8	29·545	29·4	28·8	0·6	..	..	N	..	N	$\frac{1}{4}$	0
9	29·567	28·7	28·2	0·5	..	..	NNW	..	Calm	..	1
10	29·599	28·1	27·7	0·4	24·0	4·1	NNW	..	Calm	..	0
12	29·643	27·5	26·7	0·8	23·5	4·0	NW	..	Calm	..	0
13	29·670	25·3	24·7	0·6	..	..	Calm	..	Calm	..	0
14	29·674	24·6	24·1	0·5	20·5	4·1	Calm	..	Calm	..	0
15	29·675	24·4	23·9	0·5	..	..	Calm	..	Calm	..	0
16	29·681	24·4	23·8	0·6	20·0	4·4	Calm	..	Calm	..	0
17	29·683	23·7	23·6	0·1	..	..	Calm	..	Calm	..	0
18	29·686	23·5	23·2	0·3	19·5	4·0	Calm	..	Calm	..	0
19	29·690	24·1	23·8	0·3	..	..	Calm	..	Calm	..	0
20	29·695	25·5	24·7	0·8	21·5	4·0	SW	..	Calm	..	0
21	29·708	27·4	26·7	0·7	..	..	SW	.	SW	$\frac{1}{4}$−	1
22	29·703	31·1	30·3	0·8	27·0	4·1	SW	..	W	$\frac{1}{4}$	2
23	29·695	35·0	32·0	3·0	..	..	SW	..	SW	$\frac{3}{4}$	2
Feb. 23. 0	29·687	36·5	32·5	4·0	25·0	11·5	SSW	..	WSW	$\frac{3}{4}$	2
1	29·658	37·0	32·9	4·1	..	..	SSW	0 to $\frac{1}{2}$	WSW	$\frac{3}{4}$	7
2	29·610	38·7	34·7	4·0	33·5	5·2	S by W	0 to 1	WSW	$\frac{3}{4}$	10
3	29·589	38·3	34·8	3·5	..	..	S	0 to $\frac{1}{2}$	WSW	$\frac{3}{4}$	10
4	29·509	37·6	35·0	2·6	31·0	6·6	S	$\frac{1}{2}$ to $2\frac{1}{2}$	SSW	1	10
5	29·443	34·4	33·8	0·6	..	..	S	0 to 1	S	$\frac{1}{4}$+	10
6	29·360	34·5	34·1	0·4	33·0	1·5	S	$\frac{1}{2}$ to $1\frac{1}{2}$	S	$\frac{3}{4}$	10
7	29·281	34·4	34·1	0·3	..	..	S	1 to $3\frac{1}{2}$	S	1	10
8	29·170	34·7	34·4	0·3	33·5	1·2	S	$3\frac{1}{2}$ to 5	S	$1\frac{1}{2}$	10
9	29·078	36·0	35·5	0·5	..	..	S	1 to 3	S	1 +	10
10	29·012	41·4	41·1	0·3	40·0	1·4	SSW	1 to $3\frac{1}{2}$	S	2	10

DRY THERMOMETER.
Feb. 21^{d}. 13^{h}. The reading was lower than that of the Wet Thermometer.
Feb. 23^{d}. 4^{h}. 30^{m}. From this time additional observations were taken. (See the section of Extraordinary Meteorological Observations.)

REMARKS.	Observer.
Cirro-stratus and scud: a thin rain falling.	P
,, ,,	P
,, ,,	G
,, ,,	
,, sleet falling.	
,, ,, very dark.	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, no sleet falling.	
,,	
,,	G
,, sleet and snow falling.	D
,, ,,	
Cirro-stratus and scud: sleet and snow falling.	
,, ,,	
,, no sleet falling.	
,, sleet falling.	D
,, no sleet falling.	G
,, the clouds appear thinner to the S., and the horizon is bright in the E.	
The horizon in the N. and E. is clear to the altitude of 5°, above which the clouds are much broken, and small portions of blue sky are seen: near the zenith the clouds are a little broken; the remainder of the sky is still cloudy.	G
The sky is now clear, with the exception of a bank of cirro-stratus in the S. horizon, and a few small detached clouds a little S.W. of the zenith.	D
Cloudless.	D
Vapour N. of the zenith.	J H
Cloudless.	J H
,,	D
,,	
,,	
,,	
,,	
,,	
,,	
,,	
,,	
Lines of cirrus in the N.W.	D
Light clouds and scud.	J H
Light clouds.	
Light clouds.	
Light clouds and scud.	J H
Scud and vapour.	P
,,	J H
Overcast: cirro-stratus.	D
,, ,, sleet falling.	
,, ,, ,,	
,, ,, a thin rain and sleet falling: gusts of wind to 1+.	
,, ,, rain falling.	
,, ,, ,, gusts of wind to 2+.	
,, ,, ,, strong gusts of wind.	D
,, ,, rain in squalls: gusts of wind to 3.	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.	From Osler's Anemometer. Pressure in pounds per square foot.	By Estimation. Direction.	By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Feb. 23. 11	28·946	45·0	44·6	0·4	..	..	SW	4 to 7	SSW	3	10
12	28·905	46·5	45·7	0·8	..	..	SW	4 to 6	SSW	3	10
13	28·847	47·0	46·7	0·3	..	..	SW	4 to 7	SSW	2½	10
14	28·796	48·3	47·4	0·9	..	..	SW	5 to 7	SSW	2½	10
15	28·755	48·6	47·7	0·9	..	..	SSW	5 to 7	SSW	2½	10
16	28·689	48·3	48·2	0·1	47·5	0·8	SW	5 to 8	SSW	2½	10
17	28·691	49·0	48·5	0·5	..	..	SW	1 to 6	SSW	2½	10
18	28·756	39·5	39·7	−0·2	..	..	NW	½ to 1½	SSW	2	10
19	28·832	38·1	37·3	0·8	..	..	NW	1 to 2½	NW	1 +	10
20	28·879	37·2	36·2	1·0	..	..	WNW	½ to 1½	W	¾	6
21	28·932	37·4	36·2	1·2	..	..	W	½ to 1½	W	½+	0
22	28·988	38·5	37·4	1·1	34·0	4·5	W	½ to 1½	WNW	1	4
23	29·028	42·2	39·9	2·3	..	..	W	1 to 4	W	1	7
Feb. 24. 0	29·061	43·3	39·4	3·9	..	..	WNW	½ to 3	W by N	¾	10
1	29·098	43·5	39·6	3·9	..	..	NW	½ to 2	WNW	½	10
2	29·125	43·2	39·2	4·0	..	..	NW	½ constant	NW	¾	9
3	29·178	40·7	37·5	3·2	..	..	N by W	..	NNE	¼	10
4	29·215	40·1	37·2	2·9	35·0	5·1	N by W	..	N by W	¼	10
5	29·272	38·9	36·6	2·3	..	..	N	..	NNW	¼	6
6	29·325	37·6	35·7	1·9	..	..	N	..	N by W	¼	6
7	29·381	36·0	34·7	1·3	..	..	Calm	..	N	¼	10
8	29·438	35·8	34·4	1·4	..	..	Calm	..	N	¼	10
9	29·468	34·0	32·9	1·1	..	..	Calm	..	Calm	..	4
10	29·503	33·1	32·2	0·9	31·0	2·1	Calm	..	Calm	..	4
11	29·522	33·0	32·2	0·8	..	..	Calm	..	Calm	..	3
12	29·537	33·3	32·5	0·8	..	..	SW	..	S	¼	7
Mar. 20. 10	29·686	32·2	30·2	2·0	26·5	5·7	N	..	N	½	0
11	29·723	31·4	29·4	2·0	..	..	N	..	N	½	0
12	29·747	30·9	28·9	2·0	..	..	N by W	..	N	½−	0
13	29·770	30·8	28·7	2·1	..	..	NNW	..	N	¼	0
14	29·798	31·0	28·7	2·3	..	..	NNW	..	N	¼	0
15	29·806	30·5	28·2	2·3	..	..	NNW	..	N	¼	0
16	29·819	30·3	28·4	1·9	25·0	5·3	NNW	..	NNW	¼	0
17	29·839	30·0	28·2	1·8	..	..	NW	..	NNW	¼	0
18	29·854	29·0	27·5	1·5	..	..	WNW	..	NW	¼	0
19	29·876	28·5	27·2	1·3	..	..	W	..	Calm	..	0
20	29·885	29·8	29·2	0·6	..	..	W by S	..	Calm	..	2
21	29·911	31·3	30·1	1·2	..	..	NW	..	NW	¼−	0
22	29·914	36·0	32·2	3·8	29·0	7·0	N	..	N	½	0
23	29·921	39·7	36·2	3·5	..	..	NNW	..	N	½	3
Mar. 21. 0	29·930	40·5	36·7	3·8	..	..	NNW	..	NW	¼+	6
1	29·919	42·3	37·5	4·8	..	..	NNW	..	N by W	¼	5
2	29·912	42·5	37·6	4·9	..	..	NNW	..	NNW	¼	6
3	29·893	44·1	37·7	6·4	..	..	NW	..	NNW	¼	4
4	29·887	43·7	37·7	6·0	31·0	12·7	NW	..	NNW	¼	5
5	29·879	42·8	37·2	5·6	..	..	W	..	NW	½	8
6	29·871	42·2	36·8	5·4	..	..	WSW	..	W by S	¼−	8
7	29·869	40·6	35·9	4·7	..	..	WSW	..	W	¼	3
8	29·863	38·1	34·2	3·9	..	..	WSW	..	WSW	¼	0

DRY THERMOMETER.

Feb. $23^d. 18^h$. The reading was lower than that of the Wet Thermometer.

PRESSURE OF THE WIND AT OSLER'S ANEMOMETER.

Feb. $23^d. 17^h$. At $16^h. 45^m$ the pressure was 6 lbs.; at $17^h. 10^m$ it was 1 lb., the pressures inserted above are from these recorded pressures.

REMARKS.	Observer.
Overcast: cirro-stratus: rain in squalls: the gale increasing: gusts to 4.	G
,, no rain: gusts of wind to 4 nearly.	G
,, rain falling: gusts of wind to $3\frac{1}{2}$.	P
,, ,, ,,	
,, ,, gusts of wind to 3.	P
,, ,, a gale of wind.	J H
,, ,,	
,, ,, strong gusts of wind.	J H
,, cirro-stratus and scud: gusts of wind to $1\frac{1}{2}$.	D
A great portion of the sky N. of the zenith is now clear; the rest of the heavens is still covered with cloud, which is chiefly scud.	
Cloudless.	D
Thin fleecy clouds appear in all parts of the sky, but more particularly in the N.W.	G
Fleecy clouds spread all over the sky: hazy: the Sun is shining, but not brightly.	G
Cirro-stratus and scud: wind in gusts to 1.	P
,, wind in gusts to $\frac{3}{4}$ +.	P
,,	G
,, a great haze.	G
,, ,,	D
Clear to the N. and E. of the zenith: fleecy clouds and scud in the remaining portion of the sky.	D
Scud in every direction, but chiefly N. of the zenith.	P
Cirro-stratus and scud.	P
,,	J H
,,	
Light fleecy clouds and scud: the clouds are principally N. of the zenith.	
,, ,,	
Cirro-stratus and scud.	J H
Cloudless: the wind in frequent gusts to $\frac{3}{4}$.	G
,,	
,,	G
,,	P
,,	
,,	P
,,	D
,,	
,,	D
,,	J H
A few light clouds: hazy.	
Cloudless, but hazy.	J H
There are a few fleecy clouds to the S., but to no numerical extent.	G
A few white clouds of a fleecy character and haze to the S.: a large cumulo-stratus in the W. and N.W.: cumuli forming in the [N. and E., and partially in the S.	G
Cumuli, cumulo-strati, scud, and haze.	P
Cumuli, cumulo-strati, and haze.	D
Cumuli, cumulo-strati, scud, and haze.	P
,,	P
Loose cumuli and cumulo-strati are spread about the sky, with scud and haze.	G
With the exception of a small portion of blue sky about the zenith, every other part of the sky is covered with cirro-stratus, scud, or haze.	G
The sky is clear about the zenith; every other part is covered with fleecy cumuli and irregularly formed cumulo-strati; a dense haze prevails.	D
Long lines of stratus near the horizon in the W., S., and E., and a few small cumuli S.E. of the zenith: the great haze still [continues.	
Cloudless: hazy.	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.	WIND. By Estimation: Direction.	WIND. By Estimation: Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Mar. 21. 9	29·861	36·5	32·5	4·0	..	..	WSW	..	WSW	¼	1
10	29·844	35·5	31·7	3·8	24·5	11·0	WSW	..	W	½	1
11	29·837	34·0	31·0	3·0	..	..	WSW	..	W	¼	0
12	29·817	33·0	30·7	2·3	..	..	WSW	..	W	¼+	0
13	29·795	32·5	30·5	2·0	..	..	WSW	..	W	¼	0
14	29·755	34·1	32·0	2·1	..	..	WSW	..	W	¼	10
15	29·748	34·0	32·2	1·8	..	..	WSW	..	Calm		10
16	29·711	34·9	32·2	2·7	29·5	5·4	WSW	..	W	¼	10
17	29·702	35·0	33·4	1·6	..	..	WSW	..	W	¼	10
18	29·681	36·2	33·4	2·8	..	..	WSW	..	W	¼	10
19	29·666	36·5	35·0	1·5	..	..	SW	..	SW	¼−	10
20	29·654	38·2	36·3	1·9	..	..	SW	..	SW	¼	9¾
21	29·646	40·1	37·9	2·2	..	..	SW	..	SSW	¼	10
22	29·612	43·1	40·7	2·4	38·0	5·1	SW	..	SW	½	8
23	29·595	44·3	41·9	2·4	..	..	SW	0 to ½	SW	¾	10
Mar. 22. 0	29·585	45·2	42·6	2·6	..	..	SW	0 to ½	SW	½	10
1	29·554	48·5	45·2	3·3	..	..	SW	½ to 1½	SSW	¾	10
2	29·531	49·5	45·3	4·2	..	..	SW	½ to 1½	SSW	1	10
3	29·504	46·6	43·7	2·9	..	..	SSW	½ to 1½	SSW	¾	10
4	29·477	45·8	43·2	2·6	40·0	5·8	SSW	0 to 1	SSW	½	10
5	29·463	44·8	42·4	2·4	..	..	SSW	0 to 1	SW	½	10
6	29·473	43·5	41·7	1·8	..	..	SSW	0 to 1	SSW	¼+	10
7	29·443	42·6	40·8	1·8	..	..	S by W	..	SSW	¼+	10
8	29·440	42·6	40·9	1·7	..	..	S by W	..	SSW	¼+	10
9	29·429	42·1	41·2	0·9	..	..	S	..	SSW	¼	10
10	29·417	41·6	41·2	0·4	40·8	0·8	S	..	Calm	..	10
11	29·399	41·7	41·2	0·5	..	..	Calm	..	Calm	..	10
12	29·386	42·0	41·4	0·6	..	..	Calm	..	Calm	..	10
13	29·379	41·9	41·5	0·4	..	..	Calm	..	Calm	..	10
14	29·367	41·5	41·3	0·2	..	..	Calm	..	Calm	..	10
15	29·360	41·3	41·2	0·1	..	..	Calm	..	Calm	..	10
16	29·349	41·1	41·1	0·0	41·0	0·1	Calm	..	Calm	..	10
17	29·352	41·0	41·0	0·0	..	..	Calm	..	Calm	..	10
18	29·365	40·8	40·8	0·0	..	..	Calm	..	Calm	..	10
19	29·379	40·7	40·6	0·1	..	..	NNW	..	NNW	¼	10
20	29·400	40·4	39·7	0·7	..	..	NW	..	NNW	¼	10
21	29·420	40·6	39·6	1·0	..	..	NW	..	NW	¼	10
22	29·443	41·2	40·1	1·1	37·5	3·7	NNW	..	NNW	¼	10
23	29·453	42·2	40·9	1·3	..	..	NNW	..	NNW	¼	10
Mar. 23. 0	29·461	44·7	41·9	2·8	..	..	NNW	..	NNW	¼	10
1	29·466	45·3	42·0	3·3	..	..	NNW	..	NNW	¼	10
2	29·476	46·7	41·7	5·0	..	..	NW	..	NNW	¼	10
3	29·477	47·1	42·5	4·6	..	..	WNW	..	NNW	¼	10
4	29·482	48·5	43·2	5·3	36·0	12·5	W	..	W	¼	7
5	29·481	47·8	41·7	6·1	..	..	NW	..	W	¼	7
6	29·481	46·1	41·1	5·0	..	..	WNW	..	WNW	¼	7
7	29·500	45·0	41·6	3·4	..	..	WNW	..	Calm	..	8
8	29·512	41·9	39·6	2·3	..	..	Calm	..	Calm	..	9
9	29·518	39·4	37·8	1·6	..	..	SW	..	Calm	..	0
10	29·518	37·8	36·4	1·4	34·5	3·3	SW	..	Calm	..	0
11	29·515	36·5	35·1	1·4	..	..	Calm	..	Calm	..	0
12	29·513	36·3	34·8	1·5	..	..	SSW	..	Calm	..	0

REMARKS.	Observer.
Vapour and haze.	J H
Vapour, principally W. of the zenith.	J H
Cloudless.	P
,,	
,, the stars look dim and small.	
Overcast: very dark.	
,, ,,	
,, ,,	
,, ,,	
,,	
,,	
The cirro-stratus is broken in many places, where small patches of blue sky are visible.	
Cirro-stratus and scud.	P
,,	D
,,	
Overcast: cirro-stratus: a thin rain falling.	
,, ,,	
,, ,,	
,, ,,	D
,, ,,	P
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,, rain has just commenced falling.	
,, ,, no rain.	P
,, ,, a very thin rain falling.	D
,, ,, ,,	
,, ,, ,,	
, ,, ,,	
,, ,, no rain.	
,, ,,	
,, ,,	
,, ,,	
,, ,, rain falling.	
,, ,,	
,, ,, a thin rain falling.	D
,, ,, no rain.	J H
,, ,,	
Overcast: cirro-stratus.	
,, ,,	
,, ,,	
,, ,,	J H
Cirro-stratus, cumulo-stratus, and haze.	D
,,	
,,	
,,	
Cirro-stratus and thick haze: the Moon and Venus, with one or two of the principal stars, are visible through the clouds.	
The clouds cleared away immediately after 8^h, and the sky is now cloudless; the stars, however, shine rather dimly.	
Cloudless.	D
,,	J H
,,	J 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.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force 0—6.	Amount of Clouds 0—10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.			
Apr. 21.	18	30·020	45·0	45·2	—0·2	. .	. .	SW	. .	SW	¼	10
	19	30·028	47·1	46·7	0·4	. .	. .	Calm	. .	SW	¼	9
	20	30·019	52·3	51·1	1·2	. .	. .	Calm	. .	Calm	. .	4
	21	30·019	56·0	53·5	2·5	. .	. .	Calm	. .	SW	¼	4
	22	30·037	59·8	55·3	4·5	51·0	8·8	WSW	. .	WSW	¼	¼
	23	30·034	61·3	55·1	6·2	. .	. .	W	. .	WSW	¼	2
Apr. 22.	0	30·033	62·7	55·3	7·4	. .	. .	W	. .	W	¼	4
	1	30·019	63·2	55·3	7·9	. .	. .	WNW	. .	W	¼	7
	2	30·012	62·8	54·3	8·5	. .	. .	W	. .	W	¼	4
	3	30·003	63·1	54·3	8·8	. .	. .	W	. .	W	¼	4
	4	30·001	66·2	56·2	10·0	46·0	20·2	NW	. .	W	½	3
	5	30·001	65·2	55·2	10·0	. .	. .	WNW	. .	W by N	¼	3
	6	30·001	62·1	54·5	7·6	. .	. .	WNW	. .	W	¼	4
	7	30·003	60·8	53·7	7·1	. .	. .	WNW	. .	W	¼	2
	8	30·024	57·2	52·3	4·9	. .	. .	W	. .	W	¼	9
	9	30·045	56·4	51·8	4·6	. .	. .	NNW	. .	Calm	. .	9
	10	30·062	53·6	51·0	2·6	48·5	5·1	N by E	. .	Calm	. .	8
	11	30·087	54·3	51·5	2·8	. .	. .	Calm	. .	Calm	. .	9
	12	30·090	55·1	51·8	3·3	. .	. .	N	. .	Calm	. .	10
	13	30·089	52·8	51·2	1·6	. .	. .	N	. .	Calm	. .	10
	14	30·082	51·9	49·9	2·0	. .	. .	N	. .	Calm	. .	9
	15	30·091	49·8	48·2	1·6	. .	. .	N by W	. .	Calm	. .	9
	16	30·094	47·5	46·5	1·0	45·5	2·0	N	. .	Calm	. .	2
	17	30·106	47·2	46·2	1·0	. .	. .	N by W	. .	N	¼	0
	18	30·110	47·0	45·9	1·1	. .	. .	N	. .	N	¼	0
	19	30·124	47·1	45·7	1·4	. .	. .	N	. .	N	¼	1
	20	30·127	48·6	46·2	2·4	. .	. .	N	. .	N	¼	½
	21	30·126	51·3	47·7	3·6	. .	. .	N by E	. .	N by E	¼	0
	22	30·122	56·4	51·4	5·0	45·3	11·1	NNE	. .	NNE	¼	0
	23	30·112	57·7	50·3	7·4	. .	. .	N	. .	N by E	¼	0
Apr. 23.	0	30·099	58·5	50·9	7·6	. .	. .	NNE	. .	N by E	¼	0
	1	30·079	63·6	54·8	8·8	. .	. .	WSW	. .	W by N	¼	1
	2	30·071	64·9	55·5	9·4	. .	. .	W	. .	NW	¼	2
	3	30·047	65·2	56·0	9·2	. .	. .	WSW	. .	NW	¼	¼
	4	30·020	64·8	55·3	9·5	44·2	20·6	W by S	. .	WNW	½	2
	5	29·994	65·1	55·3	9·8	. .	. .	WSW	. .	WNW	½	2
	6	29·984	64·4	55·2	9·2	. .	. .	W by S	. .	WNW	¼	1
	7	29·976	60·0	54·5	5·5	. .	. .	SW	. .	W	¼	3
	8	29·981	56·7	52·2	4·5	. .	. .	SW	. .	W	¼	2
	9	29·984	53·5	50·7	2·8	. .	. .	SW	. .	W	¼	0
	10	29·981	52·9	50·2	2·7	48·0	4·9	SW by W	. .	W	½	0
	11	29·976	51·2	49·3	1·9	. .	. .	WSW	. .	W by S	½	0
	12	29·962	49·2	47·6	1·6	. .	. .	WSW	. .	W by S	¼	½
	13	29·956	47·4	45·9	1·5	. .	. .	WSW	. .	WSW	¼	0
	14	29·949	45·7	43·4	2·3	. .	. .	WSW	. .	WSW	½	0
	15	29·936	42·7	40·8	1·9	. .	. .	WSW	. .	W by S	¼	1
	16	29·926	41·8	40·5	1·3	39·2	2·6	WSW	. .	SW	½	2
	17	29·926	41·2	40·4	0·8	. .	. .	WSW	. .	W by S	¼	5
	18	29·933	41·6	40·7	0·9	. .	. .	WSW	. .	SW	¼	7
	19	29·943	43·4	42·7	0·7	. .	. .	WSW	. .	W by S	¼	3
	20	29·954	48·1	46·6	1·5	. .	. .	W by S	. .	W by S	¼	2
	21	29·969	52·7	49·0	3·7	. .	. .	W by N	. .	W	¼	2

DRY THERMOMETER.

April 21d. 18h. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Overcast: a slight fog.	D
Cirro-stratus and haze.	
Fleecy clouds and small fragments of scud.	
,,	D
A few light cumuli are scattered about the sky.	J H
,,	
Cumuli and light fleecy clouds.	
,,	
Light fleecy clouds.	
,,	J H
Cumuli and light fleecy clouds.	D
,,	
Cumuli, light clouds, and haze.	
Cirri and small cumuli in various directions: hazy.	
The sky is now nearly covered with cirro-stratus and haze: the Moon is visible through the clouds.	
,, ,,	
,, ,,	D
Cirro-stratus and scud.	J H
Overcast.	
,, cirro-stratus.	
Cirro-stratus and scud.	
,,	
,,	
Cloudless.	
,,	
Generally clear.	
A few light clouds in the S.	
Cloudless.	J H
,,	H B
,,	
Cloudless.	
A few cumuli and cirri in various parts of the sky: thick haze all around the horizon.	
,, ,, a thick bank of cumuli in the N. horizon.	
A few light cumuli scattered about the sky.	H B
Light cumuli and fleecy clouds in various directions.	J H
,, ,,	
Light fleecy clouds.	
Light clouds.	
Scud near the W. horizon.	
Cloudless.	
,,	J H
,,	H B
A few light clouds near the Moon's place.	
Cloudless.	
,,	
A thick bank of clouds covers the sky near the N. horizon.	
,, ,	
Cirro-stratus.	
Cirro-stratus and undefined clouds.	
Light fleecy clouds and cumuli.	
Cirri and fleecy clouds.	
Cumuli in various directions.	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. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Apr. 23. 22	29·977	56·1	50·7	5·4	44·8	11·3	WNW	0 to $\frac{1}{2}$	W by S	$\frac{1}{4}$	7
23	29·992	58·7	52·2	6·5	..	..	WNW	..	W	$\frac{1}{4}$	8
Apr. 24. 0	29·998	59·3	52·2	7·1	..	..	W	..	W by S	$\frac{1}{4}$	9
1	30·005	58·7	51·4	7·3	..	..	NW	..	NW	$\frac{1}{4}$	$9\frac{1}{2}$
2	30·000	62·0	53·9	8·1	..	..	NW	..	WNW	$\frac{1}{4}$	8
3	29·985	61·1	52·2	8·9	..	..	NW	..	W	$\frac{1}{4}$	9
4	29·996	61·7	53·0	8·7	42·4	19·3	NW	..	NW	$\frac{1}{4}$	6
5	30·000	61·8	53·4	8·4	..	..	N	..	N by W	$\frac{1}{4}$	7
6	30·000	59·2	52·0	7·2	..	..	N	..	NNE	$\frac{1}{4}$	2
7	30·007	57·8	51·6	6·2	..	..	N	..	N	$\frac{1}{4}$	2
8	30·031	54·8	48·9	5·9	..	..	NNE	..	NNE	$\frac{1}{4}$	3
9	30·039	51·3	46·4	4·9	..	..	Calm	..	NNE	$\frac{1}{4}$	0
10	30·060	48·6	45·2	3·4	41·5	7·1	Calm	..	Calm	..	0
11	30·074	46·8	43·2	3·6	..	..	Calm	..	Calm	..	0
12	30·087	45·6	41·4	4·2	..	..	Calm	..	Calm	..	0
13	30·080	43·0	40·2	2·8	..	..	Calm	..	Calm	..	0
14	30·095	43·5	38·5	5·0	..	..	NE	..	Calm	..	0
15	30·115	42·0	40·0	2·0	..	..	Calm	..	Calm	..	0
16	30·089	40·4	37·8	2·6	36·5	3·9	Calm	..	Calm	..	0
17	30·083	39·5	37·6	1·9	..	..	Calm	..	NE	$\frac{1}{4}$	0
18	30·083	38·3	37·1	1·2	..	..	Calm	..	Calm	..	0
19	30·090	42·4	40·3	2·1	..	..	Calm	..	Calm	..	0
20	30·093	49·1	45·6	3·5	..	..	ESE	..	Calm	..	0
21	30·098	52·6	46·4	6·2	..	..	Calm	..	E	$\frac{1}{4}$	0
22	30·101	56·5	49·7	6·8	39·0	17·5	S	..	Calm	..	0
23	30·090	59·5	52·0	7·5	..	..	Calm	..	SSE	$\frac{1}{4}$	0
Apr. 25. 0	30·072	61·7	53·7	8·0	..	..	Calm	..	S	$\frac{1}{4}$	0
1	30·061	66·3	57·0	9·3	..	..	Calm	..	S	$\frac{1}{4}$	4
2	30·044	66·4	58·0	8·4	..	..	Calm	..	S by E	$\frac{1}{4}$	3
3	30·012	66·1	56·8	9·3	..	..	Calm	..	S by E	$\frac{1}{4}$	$\frac{1}{2}$
4	29·998	65·8	57·7	8·1	49·0	16·8	Calm	..	S by E	$\frac{1}{4}$	$\frac{1}{4}$
5	29·981	63·1	56·2	6·9	..	..	Calm	..	E by S	$\frac{1}{4}$	1
6	29·979	61·8	56·2	5·6	..	..	Calm	..	E by S	$\frac{1}{4}$	0
7	29·974	58·0	52·7	5·3	..	..	Calm	..	E by S	$\frac{1}{4}$	0
8	29·971	54·3	50·9	3·4	..	..	Calm	..	E	$\frac{1}{4}$	0
9	29·971	50·7	48·8	1·9	..	..	Calm	..	E by S	$\frac{1}{4}$	0
10	29·966	50·3	48·7	1·6	46·8	3·5	Calm	..	E by S	$\frac{1}{4}$	0
May 20. 18	29·747	45·1	44·7	0·4	..	..	N	..	NE	$\frac{1}{4}$	10
19	29·749	45·7	45·6	0·1	..	..	N	..	NE	$\frac{1}{4}$	10
20	29·733	47·2	46·6	0·6	..	..	N	..	NNE	$\frac{1}{4}$	10
21	29·729	48·5	48·2	0·3	..	..	N	..	NNE	$\frac{1}{4}$—	10
22	29·740	49·0	49·1	−0·1	47·0	2·0	N	..	NNE	$\frac{1}{4}$	10
23	29·740	50·5	50·4	0·1	..	..	N	..	NNE	$\frac{1}{4}$	10
May 21. 0	29·755	52·5	51·7	0·8	..	..	Calm	..	N	$\frac{1}{4}$—	10
1	29·777	54·8	53·5	1·3	..	..	ENE	..	NNE	$\frac{1}{4}$	10
2	29·800	55·8	53·9	1·9	..	..	E	..	E	$\frac{1}{4}$	10
3	29·820	58·0	54·5	3·5	..	..	E by N	..	E	$\frac{1}{4}$	10
4	29·836	57·2	53·4	3·8	49·0	8·2	ENE	..	E by N	$\frac{1}{4}$	7
5	29·843	59·3	53·7	5·6	..	..	ENE	..	E by N	$\frac{1}{4}$	$\frac{1}{4}$
6	29·850	59·3	54·1	4·2	..	..	NE	..	E	$\frac{1}{4}$	0

DRY THERMOMETER.

May $20^{d}.22^{h}$. The reading was lower than that of the Wet Thermometer.

REMARKS.	Observer.
Fleecy clouds.	J H
Light clouds : hazy.	
Cirro-stratus and scud.	
,,	
Light clouds : hazy in the N.	
,, ,,	J H
Fleecy clouds and thin scud.	H B
Fleecy clouds and thin scud ; the Sun is shining occasionally.	
Cumuli and fleecy clouds.	
Cumuli and fragments of scud.	
Cirro-stratus and light fleecy clouds.	
Cloudless.	H B
,,	G
,,	
,,	G
,,	J H
,,	
,,	J H
,,	H B
,,	
,,	H B
,,	D
,,	
,,	D
,,	G
,,	J H
A few cumuli scattered about the sky, but to no numerical amount.	H B
Cumuli and fleecy clouds.	H B
Large white cumuli scattered over the sky.	D
Only a few small cumuli are now visible.	D
Cloudless, with the exception of a few small fleecy clouds.	J H
Light fleecy clouds, principally W. of the meridian.	J H
There are a few cirro-cumuli and cymoid cirri N. E. of the zenith, but to no numerical amount.	G
Cloudless.	G
,,	H B
,,	
,,	H B
Overcast : cirro-stratus.	G
,, ,, a very thin rain falling.	
,, ,, ,,	
,, ,, ,,	G
,, ,, ,,	J H
,, ,, ,,	
Overcast : cirro-stratus.	J H
,, ,, the rain has ceased.	H B
,, cirro-stratus and scud.	P
,, cirro-stratus : the clouds are darker.	
Scud in every direction : the sky of an unusually deep blue.	
A small quantity of scud only in the West : the clouds have gone off gradually since $2^h. 40^m$.	P
The sky is cloudless, with the exception of a few cymoid cirri in the North to no numerical amount.	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.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force 0—6.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
May 21. 7	29·863	58·3	54·1	4·2	..	..	NE	..	E	¼	3
8	29·881	56·1	52·7	3·4	..	..	NE	..	E	¼	3
9	29·906	54·2	52·0	2·2	..	..	NE	..	E	¼	9
10	29·910	52·9	51·1	1·8	48·0	4·9	ENE	..	E	¼	10
11	29·932	51·3	50·2	1·1	..	..	ENE	..	E	¼	9
12	29·944	49·0	48·6	0·4	..	..	ENE	..	ENE	¼	1
13	29·950	47·3	47·3	0·0	..	..	ENE	..	ENE	¼	1
14	29·955	46·3	46·4	—0·1	..	..	ENE	..	ENE	¼	2
15	29·960	48·5	48·2	0·3	..	..	ENE	..	ENE	¼	10
16	29·973	48·2	48·0	0·2	47·8	0·4	NE	..	ENE	¼	10
17	29·984	48·1	48·2	—0·1	..	..	NE	..	ENE	¼	10
18	29·995	49·1	48·8	0·3	..	..	NE	..	ENE	¼	10
19	30·014	50·7	50·0	0·7	..	..	NE	..	ENE	¼	10
20	30·026	52·5	50·9	1·6	..	..	NE	..	NE	¼	10
21	30·037	52·5	51·0	1·5	..	..	NE	..	NE	¼	10
22	30·052	55·7	53·0	2·7	49·0	6·7	NE	..	ENE	¼	10
23	30·048	60·7	56·7	4·0	..	..	NE	..	ENE	¼—	10
May 22. 0	30·046	61·9	57·0	4·9	..	..	N	..	NE	¼—	9
1	30·041	65·3	58·9	6·4	..	..	NNE	..	NE	¼—	6
2	30·040	65·9	59·2	6·7	..	..	N	..	N	¼—	8
4	30·037	64·2	58·6	5·6	51·8	12·4	N	0 to 1	N	¼	3
5	30·038	59·6	55·9	3·7	..	..	N	..	N	¼	10
6	30·033	57·8	55·5	2·3	..	..	N by E	..	N	¼	10
7	30·039	55·5	53·8	1·7	..	..	N	..	N	¼	10
8	30·026	54·7	53·0	1·7	..	..	N	..	N	¼	10
9	30·039	52·5	51·7	0·8	..	..	N	0 to ¾	N by E	½	10
10	30·052	51·2	50·2	1·0	49·5	1·7	N by E	0 to ½	N by E	½	10
May 24. 10	29·853	49·8	47·0	2·8	44·0	5·8	NNE	..	NNE	½	10
11	29·861	49·5	46·7	2·8	..	..	NNE	½ to 1	NE	½	10
12	29·853	49·2	46·2	3·0	..	..	NNE	¼ to 1	NNE	½	10
13	29·848	48·6	45·9	2·7	..	..	NE	0 to ½	ENE	¼	10
14	29·851	48·0	45·4	2·6	..	..	NE	0 to ¾	ENE	¼	10
15	29·852	47·6	45·2	2·4	..	..	NE	0 to ½	NE	¼	10
16	29·862	46·7	44·2	2·5	43·0	3·7	NE	0 to 1	N by E	½	10
17	29·867	45·9	43·8	2·1	..	..	NNE	0 to ½	N	¼	9
18	29·876	46·4	43·9	2·5	..	..	NE	0 to ¼	N	¼	10
19	29·885	47·5	45·2	2·3	..	..	NE	0 to ¼	NE	¼	10
20	29·891	50·8	47·3	3·5	..	..	NE	0 to ½	NE	¼	10
21	29·891	50·7	48·2	2·5	..	..	NE	0 to ½	NE	¼+	10
22	29·905	53·4	49·8	3·6	46·5	6·9	NE	0 to ½	NE	½	10
23	29·911	52·5	49·7	2·8	..	..	NNE	¾ to 1½	NE	¾	10
May 25. 0	29·917	53·5	49·8	3·7	..	..	NNE	½ to 3	NNE	¼	10
1	29·915	54·3	49·9	4·4	..	..	NE	½ to 1½	N	½	10
2	29·911	61·0	53·6	7·4	..	..	NE	½ to 3	N	¼	8
3	29·900	63·5	52·4	11·1	..	..	NE	1 to 2½	NE	½	0
4	29·900	63·8	52·0	11·8	39·0	24·8	NE	1 to 2½	NE	½	0
5	29·901	61·7	50·9	10·8	..	..	NNE	1 to 3	N	½	0

DRY THERMOMETER.
May 21d. 14h and 17h. The readings were lower than those of the Wet Thermometer.

REMARKS.	Observer.
Cymoid cirri to the N. and E., slowly moving from the E.	G
There have been some fine specimens of cymoid and linear cirri; at present a fine specimen of the delicate cymoid cirrus has just passed the zenith from the E.: the Sun is behind a cirro-stratus, whose prevailing colour is blue; near the edges it is yellow, approaching to gold colour: a cirro-stratus cloud in the N.E.	
A fine sun-set, the clouds being of a rich orange colour: the sky is now nearly covered with a thin cloud of the cirro-cumulous character, and scud.	
The sky is covered with scud.	
,, there are a few breaks in the S.E.	G
The sky is cloudless, with the exception of a thick bank of cirro-stratus near the N. horizon.	H B
,, ,, ,,	
Vapour in the N. and E.: the stars appear dim.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, cirro-stratus: a thin rain is falling.	
,, ,, ,,	
,, the rain has ceased.	
,, cirro-stratus and scud.	
,, ,,	H B
,, ,,	P
,, ,, there are a few small breaks in various parts of the sky, which do not affect the notation.	
Fleecy clouds and scud: a few small breaks.	
Cumuli, fleecy clouds, and scud, with haze.	
Cumuli, and large masses of scud, with haze.	P
Cumuli, cirri, and portions of scud.	H B
Cirro-stratus and scud: towards the N. the clouds are dark.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	H B
A short time since the greater part of the heavens was free from cloud: within the last quarter of an hour so large a quantity of scud has come up from the N. as wholly to cover the sky.	G
Overcast: cirro-stratus.	
,, ,,	G
,,	J H
,,	
,,	J H
,, cirro-stratus and scud.	H B
Cirro-stratus and scud: breaks in various directions.	
Overcast: cirro-stratus and scud.	H B
Cirro-stratus and scud.	P
,, about five minutes since there were a few small breaks near the Sun.	
Cirro-stratus and scud: gloomy.	P
,, ,,	G
,, ,,	G
Overcast.	J H
,, cirro-stratus and scud.	H B
Cirro-stratus and scud: there is a very extensive break towards the N.	H B
Cloudless.	P
,,	P
,,	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. Direction.	WIND. From Osler's Anemometer. Pressure in pounds per square foot.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0—6.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
May 25. 6	29·921	59·6	48·9	10·7	..	..	NNE	2 to 3½	N	½	0
7	29·943	56·3	46·9	9·4	..	..	NNE	¾ to 2	NNE	¼	½
8	29·968	51·7	45·8	5·9	..	..	NNE	0 to 2	NNE	¾	0
9	29·989	47·3	43·7	3·6	..	..	NNE	½ to 2½	NE	¾	0
10	29·992	46·0	42·4	3·6	38·5	7·5	NNE	0 to ½	NE	¾	0
June 19. 10	29·906	54·4	51·9	2·5	48·0	6·4	W	..	W	½—	10
11	29·912	53·0	51·1	1·9	..	..	W	..	W	¾	10
12	29·927	52·6	50·8	1·8	..	..	W	..	W	½	10
13	29·931	50·6	49·3	1·3	..	..	WNW	..	W	¾	3
14	29·942	48·6	46·8	1·8	..	..	WSW	..	W	¾	7
15	29·943	48·6	46·4	2·2	..	..	WSW	..	W	½	8
16	29·939	47·9	46·2	1·7	44·5	3·4	WSW	..	Calm	..	9
17	29·950	48·1	46·2	1·9	..	..	SW	..	SW	¼—	9
18	29·950	50·1	48·4	1·7	..	..	SW	..	SW	¼	10
19	29·944	53·1	50·9	2·2	..	..	SW	..	SSW	¼	10
20	29·943	56·5	53·2	3·3	..	..	SW	..	SW	¼	10
21	29·935	57·5	53·8	3·7	..	..	SW	..	SW	¼	10
22	29·929	57·4	51·2	6·2	46·5	10·9	SW	..	W	½	10
23	29·914	59·3	56·2	3·1	..	..	SW	0 to ½	SW	½	10
June 20. 0	29·896	58·5	57·2	1·3	..	..	SSW	0 to ½	SW	¼	10
1	29·881	62·2	60·4	1·8	..	..	SW	0 to ½	SW	¼	10
2	29·876	65·7	61·9	3·8	..	..	SW	0 to ½	SW	½	10
3	29·872	67·0	62·8	4·2	..	..	WSW	½ to 2	SW	¾	9
4	29·860	69·1	63·8	5·3	60·0	9·1	WSW	½ to 1	SW	¾	9
5	29·851	68·7	61·7	7·0	..	..	WSW	½ to 2½	SW	¾	10
6	29·858	68·3	61·7	6·6	..	..	W by S	0 to 2	SW	1	10
7	29·860	66·5	61·7	4·8	..	..	W by S	0 to 1	W by S	½	10
8	29·868	65·0	59·3	5·7	..	..	W	½ to 1½	W by S	½	3
9	29·893	63·0	58·2	4·8	..	..	WSW	0 to ½	WSW	¼	10
10	29·895	61·0	58·4	2·6	56·0	5·0	WSW	0 to 1	W	¾	9½
11	29·894	57·5	55·7	1·8	..	..	SW	½ to 1	SW	¾	4
12	29·887	56·3	54·7	1·6	..	..	SW	½ to 1½	WSW	¾	5
13	29·882	56·0	54·4	1·6	..	..	SW	½ constant	WSW	¾	7
14	29·878	55·5	54·0	1·5	..	..	SW	¼ to ¾	WSW	¾	6
15	29·866	55·3	53·5	1·8	..	..	SW	½ to 1	WSW	¾	4
16	29·867	55·0	53·0	2·0	50·0	5·0	SW	½ constant	WSW	½	4
17	29·873	54·5	52·3	2·2	..	..	SW	0 to ¾	WSW	½	3
18	29·870	56·0	53·6	2·4	..	..	WSW	0 to 1	WSW	½	6
19	29·868	58·0	54·9	3·1	..	..	WSW	0 to ½	WSW	½	6
20	29·866	60·0	56·6	3·4	..	..	WSW	½ to 1	WSW	½	8
21	29·869	62·5	57·2	5·3	..	..	WSW	½ to 1	WSW	½	5
22	29·853	70·2	61·6	8·6	56·0	14·2	WSW	0 to ½	SW	½	5
23	29·846	73·8	62·0	11·8	..	..	SW	..	SW	½	3
June 21. 0	29·836	75·5	64·0	11·5	..	..	SW	0 to ½	SW	½	4
1	29·830	75·7	64·4	11·3	..	..	SW	0 to ½	SW	½	4
2	29·806	77·1	65·2	11·9	..	..	SW	0 to ½	SSW	½	2
3	29·785	76·6	64·7	11·9	..	..	SW	½ to 1½	SSW	½	3

REMARKS.	Observer.
Cloudless.	H B
A few light clouds.	J H
Cloudless.	J H
,, the wind in frequent gusts to 1: the air is cold.	G
,,	G
Overcast: cirro-stratus and scud.	G
,, ,,	
,, ,, at about $11^h. 10^m$ several stars were visible near the zenith, and since that time one or two have been frequently visible for a short time.	G
The clouds have generally passed off since the last observation: scud in the W. and N.W.	J H
Scud and undefined clouds.	
Scud generally scattered over the sky.	J H
The sky is nearly covered with scud.	D
Cirro-stratus and scud.	
Overcast: cirro-stratus.	D
,, cirro-stratus and scud.	P
Cirro-stratus and scud.	
,,	P
,,	G
,,	J H
Overcast: a thin rain is falling.	D
,, cirro-stratus.	D
Cirro-stratus and scud.	P
Cumulo-strati and scud.	J H
Cirro-stratus and scud.	J H
,,	D
,,	D
Cirro-stratus and heavy scud: breaks occasionally visible.	P
Cirri and dark scud: the clouds broke almost immediately after the last observation.	P
Cirro-stratus and scud; the cirro-stratus is thin and high, the scud is in large masses, passing rapidly from the W.	G
The cirro-stratus mentioned in the observation at 9^h gradually became less and less dense: till a short time since there did not appear to be any upper cloud; the scud, however, continues the same, passing rapidly from the W. in large masses: near the horizon in the N. a large portion of very clear sky is at times visible.	G
Scud in various directions.	J H
,,	
Cirro-stratus and scud.	
,,	
,,	
,,	
,,	
,,	
,,	
Fleecy clouds and scud.	
,,	J H
Cirri and cirro-cumuli in different directions: the clouds S.E. of the zenith are very fine specimens of the cirro-cumulus, verging into cirro-stratus.	D
Cirri and light fleecy clouds.	
Cumuli, cirri, and small fleecy clouds are scattered in various parts of the sky.	
,, ,,	
Cirri and small cumuli.	
,, the specimens of cirrus have been of the most beautiful kind during the whole of the morning.	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.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
June 21. 4	29·769	76·0	63·3	12·7	53·2	22·8	SW	$\frac{1}{2}$ to 1	SSW	$\frac{3}{4}$	6
5	29·741	73·6	62·0	11·6	..	..	SW	$\frac{1}{2}$ to 1	SSW	$\frac{3}{4}$	4
6	29·725	72·0	61·5	10·5	..	..	SW	0 to 1	SSW	$\frac{3}{4}$	4
7	29·706	70·5	61·6	8·9	..	..	SW	..	SSW	$\frac{3}{4}$	8
8	29·694	69·3	61·3	8·0	..	..	SW	..	SW by W	$\frac{1}{2}$	8
9	29·675	66·4	60·6	5·8	..	..	Calm	..	WSW	$\frac{1}{4}$	8
10	29·679	62·8	58·8	4·0	56·0	6·8	Calm	..	WSW	$\frac{1}{4}$	4
11	29·651	61·2	57·7	3·5	..	..	Calm	..	Calm	..	7
12	29·628	60·6	57·2	3·4	..	..	Calm	..	Calm	..	7
13	29·611	59·9	56·7	3·2	..	..	Calm	..	Calm	..	7
14	29·596	59·5	56·3	3·2	..	..	Calm	..	SW	$\frac{1}{4}$	5
15	29·594	58·6	56·2	2·4	..	..	Calm	..	Calm	..	8
16	29·590	57·7	55·7	2·0	53·5	4·2	Calm	..	Calm	..	8
17	29·591	56·9	55·3	1·6	..	..	Calm	..	Calm	..	8
18	29·607	58·1	56·3	1·8	..	..	Calm	..	Calm	..	7
19	29·612	59·7	57·4	2·3	..	..	Calm	..	Calm	..	8
20	29·638	61·8	58·7	3·1	..	..	Calm	..	Calm	..	$9\frac{1}{2}$
21	29·643	63·2	59·1	4·1	..	..	Calm	..	SW	$\frac{1}{4}$	7
22	29·659	68·8	61·2	7·6	57·0	11·8	W by N	..	W	$\frac{1}{4}$	7
23	29·656	68·5	60·7	7·8	..	..	W	..	W	$\frac{1}{4}$	6
June 22. 0	29·658	75·2	63·6	11·6	..	..	W	..	SW	$\frac{1}{4}$—	6
1	29·663	76·2	62·7	13·5	..	..	W	..	WSW	$\frac{1}{4}$+	2
2	29·667	77·5	63·1	14·4	..	..	W	..	W	$\frac{1}{4}$+	2
3	29·657	77·4	63·3	14·1	..	..	W	..	WSW	$\frac{1}{4}$	3
4	29·650	79·6	65·9	13·7	52·5	27·1	W	..	WSW	$\frac{1}{4}$	3
5	29·658	76·0	64·2	11·8	..	..	SW	0 to $\frac{1}{2}$	SW	$\frac{1}{2}$	3
6	29·665	72·9	61·8	11·1	..	...	SW	..	SW	$\frac{1}{2}$	0
7	29·668	72·2	61·7	10·5	..	..	WSW	..	SW	$\frac{1}{4}$	0
8	29·673	68·2	58·7	9·5	..	..	SW	..	SW	$\frac{1}{4}$	0
9	29·690	63·9	56·5	7·4	..	..	Calm	..	SW	$\frac{1}{4}$	0
10	29·698	61·1	55·3	5·8	50·0	11·1	Calm	..	SW	$\frac{1}{4}$	0
11	29·707	58·8	54·0	4·8	..	..	Calm	..	SW	$\frac{1}{4}$—	0
12	29·708	57·5	53·7	3·8	..	..	Calm	..	SW	$\frac{1}{4}$	0
July 21. 19	30·091	56·8	55·4	1·4	..	..	Calm	..	Calm	..	0
20	30·088	64·3	59·6	4·7	..	..	Calm	..	Calm	..	0
21	30·083	66·2	59·7	6·5	..	..	Calm	..	Calm	..	0
22	30·059	72·9	62·2	10·7	51·0	21·9	Calm	..	SW	$\frac{1}{4}$	0
July 22. 0	30·045	77·0	64·2	12·8	...	..	..	..	SW	$\frac{1}{4}$	0
1	30·024	75·7	66·8	8·9	..	..	..	..	SW	$\frac{1}{4}$	0
2	30·014	78·0	68·2	9·8	..	..	..	..	SW	$\frac{1}{4}$	0
3	29·997	79·3	69·2	10·1	..	..	..	..	SW	$\frac{1}{4}$	0
4	29·985	79·3	71·4	7·9	50·0	29·3	..	..	SW	$\frac{1}{4}$—	0
5	29·961	78·0	72·5	5·5	..	..	..	..	SSW	$\frac{1}{4}$—	0
6	29·958	77·9	72·7	5·2	..	..	..	..	SSW	$\frac{1}{4}$—	0
7	29·943	74·7	72·2	2·5	..	..	..	..	Calm	..	0
8	29·935	71·7	69·0	2·7	..	..	Calm	..	ESE	$\frac{1}{4}$—	0
9	29·935	66·3	59·7	6·6	..	..	Calm	..	S	$\frac{1}{4}$—	0
10	29·931	64·7	57·9	6·8	56·0	8·7	Calm	..	S	$\frac{1}{4}$—	0
12	29·923	62·0	56·8	5·2	..	..	Calm	..	Calm	..	0
13	29·926	60·2	56·2	4·0	..	..	Calm	..	Calm	..	0
14	29·913	59·4	55·4	4·0	..	..	Calm	..	Calm	..	0

OSLER'S ANEMOMETER.
July 21^{d}. 22^{h}. 40^{m} to 22^{d}. 8^{h}. The traversing board was unclamped.

REMARKS.	Observer.
Fleecy clouds and badly-formed cirri.	J H
Cirri and small cumuli.	
,,	
Fleecy clouds and scud.	
Light scud.	
The scud has assumed a more stormy character.	
A dark bank of scud in the N. and W.; light scud scattered in other directions.	J H
The southern portion of the sky is clear; every other part is covered with cirro-stratus.	G
The stars are shining about the zenith; the remainder of the sky is nearly overcast.	D
,, ,, ,,	
Cirro-stratus and scud.	
,,	
,,	
,,	
,,	
,,	
,,	
The S.W. portion of the sky is very nearly free from cloud, but the remaining part is covered.	D
Cumuli and large masses of scud.	P
,,	
Cumuli and large masses of scud: haze in the N.	
Cumuli and scud.	
,,	
,,	P
Large white cumuli in all directions.	D
,,	
Cloudless.	
,,	
,,	
,,	
,,	D
,,	P
,,	P
Cloudless.	P
,,	
,,	P
,,	G
Cloudless.	G
,,	B
,,	G
,,	B
,,	P
,,	
,,	
,,	
,,	
,,	
,,	P
,,	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
July 22. 15	29·907	58·0	55·4	2·6	..	..	Calm	..	Calm	..	0
16	29·900	56·2	55·4	0·8	54·0	2·2	Calm	..	Calm	..	0
17	29·893	55·5	54·4	1·1	..	..	Calm	..	Calm	..	1
18	29·892	56·5	55·4	1·1	..	..	Calm	..	Calm	..	1
19	29·889	62·0	58·4	3·6	..	..	Calm	..	Calm	..	1
20	29·897	70·4	63·5	6·9	..	..	Calm	..	SE	¼	7
21	29·890	75·1	66·3	8·8	..	..	Calm	..	ESE	¼	7
22	29·874	76·1	66·7	9·4	62·0	14·1	Calm	..	Calm		7
23	29·853	81·5	69·6	11·9	..	..	SSE	..	SE	¼	9
July 23. 0	29·843	78·1	66·6	11·5	..	..	SSE	..	S by E	¼—	6
1	29·841	82·0	68·7	13·3	..	..	SE	..	S by E	½	2
2	29·837	81·5	68·2	13·3	..	..	E	..	S	½	2
4	29·811	78·5	67·2	11·3	60·0	18·5	E by N	0 to 1	E	1	0
5	29·809	76·4	69·2	7·2	..	..	E by N	0 to 1	E	½	0
6	29·807	73·7	68·0	5·7	..	..	E	0 to 1½	E	½	0
7	29·807	71·5	66·2	5·3	..	..	E by N	0 to ½	E	½	1
8	29·807	67·7	64·7	3·0	..	..	E	..	E	¼	3
9	29·816	64·0	61·7	2·3	..	..	E by N	..	E	½	4
10	29·818	62·5	60·2	2·3	58·5	4·0	ENE	..	E	¼	3
11	29·813	60·0	58·2	1·8	..	..	ENE	..	E	¼	3
12	29·806	60·1	59·4	0·7	..	..	ENE	..	Calm	..	0
13	29·795	60·0	59·6	0·4	..	..	ENE	..	Calm	..	0
14	29·787	60·4	59·7	0·7	..	..	Calm	..	Calm	..	1
15	29·778	60·9	60·1	0·8	..	..	Calm	..	Calm	..	5
16	29·779	62·5	61·3	1·2	62·0	0·5	Calm	..	Calm	..	9
17	29·771	62·8	61·5	1·3	..	..	Calm	..	E	¼—	8
18	29·762	62·7	61·5	1·2	..	..	ENE	..	ENE	¼—	10
19	29·794	63·8	62·4	1·4	..	..	Calm	..	ENE	¼—	10
20	29·802	67·0	64·5	2·5	..	..	Calm	..	E by N	¼—	9
22	29·814	75·6	68·4	7·2	64·5	11·1	E	..	ESE	¼	4
23	29·814	78·3	70·4	7·9	..	..	NE	..	ENE	¼	3
July 24. 0	29·813	79·7	70·5	9·2	..	..	NE	..	ENE	¼	½
1	29·821	78·6	70·3	8·3	..	..	NE	..	E	¼	½
2	29·817	77·6	69·6	8·0	..	..	NE	..	E	¼	6
3	29·812	74·8	67·8	7·0	..	..	NE	..	E	½	8
4	29·798	75·2	66·8	8·4	64·5	10·7	NE	..	SW	½	7
6	29·800	74·9	68·5	6·4	..	..	E	..	SW	¼	1
8	29·816	66·4	62·5	3·9	..	..	E by N	..	E	¼	0
9	29·843	63·5	61·2	2·3	..	..	E by N	..	E	¼	0
10	29·850	63·2	61·0	2·2	59·0	4·2	E	..	SE	¼	0
11	29·850	61·5	60·4	1·1	..	..	Calm	..	SE	¼	0
12	29·855	61·2	60·2	1·0	..	..	Calm	..	SSE	¼	0
13	29·846	59·7	59·2	0·5	..	..	Calm	..	SE	¼—	0
14	29·845	58·1	57·8	0·3	..	..	Calm	..	Calm	..	0
15	29·837	57·9	57·6	0·3	..	..	Calm	..	Calm	..	0
16	29·834	56·8	56·9	—0·1	56·0	0·8	Calm	..	Calm	..	0
17	29·836	56·3	56·4	—0·1	..	..	Calm	..	Calm	..	0
18	29·837	59·0	59·0	0·0	..	..	Calm	..	Calm	..	0
19	29·837	62·0	61·9	0·1	..	..	Calm	..	Calm	..	0
20	29·840	68·1	64·9	3·2	..	..	Calm	..	SE	¼—	5

DRY THERMOMETER.
July 24^{d}. 16^{h} and 17^{h}. The readings were lower than those of the Wet Thermometer.

REMARKS.	Observer.
Cloudless.	G
,,	
Cloudless, with the exception of a few clouds near the horizon in the W.: the Sun is rising without a cloud near him.	
A few white mottled clouds extending from S.W. to N.W., within 20° of the horizon; the other parts of the sky are cloudless.	
White clouds reaching in the W. to 45°, and to the horizon in the S.W. and N.W.: the upper parts of these clouds are a fine kind of cirro-cumuli.	G
Extending across the zenith, from the S.E. to the N.W., is a very thin mottled cloud: the N.E. portion of the sky is the only part clear.	B
Cumuli and cirri: light broken clouds in the zenith.	B
Scud, plentiful and in every direction, together with cirri.	P
,, ,,	B
Light fleecy clouds and scud.	B
Fleecy clouds and scud.	P
Cirri and scud.	P
Cloudless, with the exception of a few small clouds scattered about the sky, of no numerical extent.	G
Cloudless.	
,,	
A few cirrus clouds in the N.W.; otherwise cloudless.	
Cirri in the S. S.W., S.W., and N.W.; also a bank of cirro-stratus near the horizon, in the N.W.	
A large portion of the western hemisphere is covered with a thin dark cloud of no definite modification.	
A thin veil of cloud in the western hemisphere.	G
,,	B
Cloudless.	
,,	
One long cloud, about 15° from the horizon, extending nearly from the S. E. to the N.W.	
The S.W. hemisphere is covered with thin clouds, the rest of the sky being clear: the stars look dim.	
The sky is almost covered with scud; there is some red scud in the W.	
Cirri and scud: the clouds are tinged with an amber colour.	
,, a gloomy looking sky.	
,, ,,	
Cirro-stratus and scud.	B
Light fleecy clouds, cirri, and scud.	D
,,	
A few light clouds.	
,,	
Massive cumuli and cumulo-strati.	
Cumulo-strati, cumuli, and scud.	D
,,	B
Cumuli and scud.	
Cloudless, with the exception of a few light cirri in the N.	
,, ,,	B
Cloudless.	G
Cloudless, except a small bank of cloud near the N. horizon, to no numerical extent.	
Cloudless.	G
,, the sky is remarkably clear.	D
,,	
,,	D
,,	P
,, a thin fog.	
,, a dense fog.	
,, a thick fog.	P
The sky is half covered with a kind of fleecy clouds, many of them being long, and branching off like cirri.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
July 24. 21	29·834	73·5	67·5	6·0	..	..	Calm	..	SE	¼–	8
22	29·844	76·1	69·7	6·4	66·0	10·1	E	..	SE	¼	2
23	29·829	77·3	70·8	6·5	..	..	SSW	..	Calm	..	5
July 25. 0	29·824	82·4	72·3	10·1	..	..	S	..	S	¼	4
1	29·811	83·2	72·5	10·7	..	..	S	..	S	¼+	7
2	29·798	85·1	73·0	12·1	..	..	SSW	..	S	¼	7
3	29·793	84·1	70·5	13·6	..	..	SSW	..	SSW	¼	6
4	29·788	81·3	68·9	12·4	61·0	20·3	SW	..	SSW	¼	7
5	29·772	77·6	67·2	10·4	..	..	SSW	..	S	¼–	9
6	29·765	76·0	66·4	9·6	..	..	Calm	..	S by W	¼–	9
7	29·771	74·2	65·2	9·0	..	..	Calm	..	Calm	..	10
8	29·777	71·9	63·9	8·0	..	..	Calm	..	Calm	..	9¾
9	29·781	70·3	63·4	6·9	..	..	Calm	..	..	..	..
10	29·773	68·0	63·4	4·6	60·0	8·0	Calm	..	Calm	..	10
Aug. 20. 18	29·623	51·8	49·9	1·9	..	..	WSW	..	WSW	¼	7
19	29·626	51·8	50·0	1·8	..	..	WSW	..	WSW	¼	5
20	29·624	54·0	51·0	3·0	..	..	W	0 to 1	W	½	1
21	29·625	55·6	52·1	3·5	..	..	WNW	0 to ½	WNW	¼	7
22	29·626	57·9	52·7	5·2	48·0	9·9	WNW	0 to ¼	WNW	¼	4
23	29·627	59·8	53·4	6·4	..	..	WNW	0 to ½	WNW	½	9
Aug. 21. 0	29·630	60·3	54·0	6·3	..	..	WNW	0 to ½	WNW	½	10
1	29·626	58·5	52·8	5·7	..	..	WNW	0 to ½	WNW	½	10
2	29·622	61·6	55·0	6·6	..	..	WNW	½ to 1	WNW	¾	10
3	29·619	62·5	55·0	7·5	..	..	W	½ to 1	WNW	¾	10
4	29·615	63·4	56·8	6·6	47·5	15·9	W	0 to ½	WNW	¼	10
5	29·609	59·8	54·4	5·4	..	..	WSW	0 to ½	WSW	½	10
6	29·604	59·4	54·7	4·7	..	..	W by S	..	W	½	10
7	29·609	58·0	53·6	4·4	..	..	W	..	WNW	¼	10
8	29·614	57·6	53·9	3·7	..	..	WNW	..	WNW	½	10
9	29·621	56·0	53·3	2·7	..	..	W	..	W	¼	10
10	29·618	55·3	52·8	2·5	50·0	5·3	WSW	..	W	¼	10
12	29·622	53·8	52·5	1·3	..	..	WSW	..	WSW	¼	10
13	29·611	53·5	52·2	1·3	..	..	WSW	..	WSW	¼	10
14	29·607	53·3	52·1	1·2	..	..	SW	..	SW	¼	10
15	29·602	53·2	51·6	1·6	..	..	SW	..	SW	¼	10
16	29·600	52·8	51·4	1·4	50·5	2·3	SW	..	SW	¼	10
17	29·595	52·5	51·0	1·5	..	..	SW	..	SW	¼	10
18	29·589	52·6	51·2	1·4	..	..	SW	..	SW	¼	10
19	29·590	52·9	51·7	1·2	..	..	SW	.	WSW	¼	10
20	29·592	54·1	52·5	1·6	..	..	SW	..	WSW	¼	10
21	29·591	55·8	53·7	2·1	..	..	SW	..	WSW	¼	5
22	29·593	58·3	54·8	3·5	53·0	5·3	WSW	..	SW	¼	10
23	29·588	61·5	57·2	4·3	..	..	SW	..	SW	¼	9¾
Aug. 22. 0	29·591	61·6	57·6	4·0	..	..	SW	..	SSW	¼	9¾
1	29·586	62·5	57·7	4·8	..	..	WSW	..	SW	¼	10
2	29·584	59·8	55·1	4·7	..	..	WSW	..	WSW	¼	10
3	29·580	60·7	55·9	4·8	..	..	WSW	..	WSW	¼	10
4	29·572	61·3	55·6	5·7	50·0	11·3	WSW	..	WSW	¼	10
5	29·573	59·4	55·2	4·2	..	..	WSW	..	WSW	¼	10
6	29·570	60·3	55·9	4·4	..	..	WSW	..	WSW	¼	10

July 25^{d}. 9^{h}. At this observation the direction and strength of the wind, the amount of cloud, and the general remarks were omitted: there is no doubt that they were all the same as at 10^{h}. See the general remarks at 10^{h}.

REMARKS.	Observer.
The sky is nearly covered with a white fleecy cloud.	G
Cirri near the zenith, and ill-formed cumuli near the horizon.	G
Large cumuli are scattered over the sky.	D
Cumuli and thin fleecy clouds.	D
Cumuli, cirri, fleecy clouds, and scud.	P
,,	D
Cumuli, cirri, and small fragments of scud: cirro-cumuli in the zenith.	
Cumuli, cirri, cumulo-strati, and thin fleecy clouds.	D
Cumuli and scud : a few drops of rain fell a short time since.	B
,, the weather is gloomy.	B
Cirro-stratus and dark scud, the latter moving from the S.W.	P
Cirro-stratus and scud: a break E. of the zenith: light airs occasionally spring up from the S.W.	
	P
No change during the last hour; the whole of the sky is covered with cirro-stratus and scud.	G
Cirro-stratus and scud: a large portion of the sky N. of the zenith is clear.	D
Fleecy clouds and scud.	
A few fragments of scud are scattered in various directions; the sky is otherwise clear.	
The sky is now mostly covered by cumuli, cirro-strati, and scud.	D
Cumuli and small fragments of scud are scattered over the sky.	H B
Nimbi, cirro-strati, and scud, in every direction.	
Overcast: cirro-stratus and scud.	
,, ,,	
,, nimbi, cirro-strati, and scud.	
,, ,,	H B
,, cirro-stratus and scud.	D
,, ,,	
,, ,,	
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,, ,,	
,, ,,	D
,, ,,	H B
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,, ,,	
Cumuli, cirro-cumuli, and scud, are scattered over the sky.	H B
,, ,,	B
Cumuli, cirro-cumuli, and scud: a small break in the N.	
Cirro-stratus and scud : a small break in the N. E.	
Cumulo-stratus, cirro-stratus, and scud.	
,, it is very dark and gloomy: a few drops of rain are falling.	B
,,	G
Cumulo-stratus and scud: breaks in the S. E., but of no numerical amount.	H B
,, the clouds are lighter than at the last observation.	
Cirro-stratus and scud: breaks near the zenith and in the 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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d	h	in.	°	°	°	°	°		from lbs. to lbs.			
Aug. 22.	7	29·573	58·8	55·9	2·9	..	..	WSW	..	WSW	¼	9¾
	8	29·580	57·0	53·9	3·1	..	..	SW	..	WSW	¼	10
	9	29·593	56·2	53·7	2·5	..	..	SSW	..	WSW	¼	10
	10	29·593	55·6	53·4	2·2	51·5	4·1	SW	..	WSW	¼	10
	12	29·601	53·4	52·0	1·4	..	..	SW	..	WSW	¼—	4
	13	29·599	52·8	51·7	1·1	..	..	SW	..	WSW	¼—	4
	14	29·590	52·0	51·2	0·8	..	..	Calm	..	WSW	¼	1
	15	29·594	50·5	50·1	0·4	..	..	Calm	..	Calm	..	0
	16	29·593	50·7	50·2	0·5	51·0	—0·3	Calm	..	Calm	..	3
	17	29·596	49·0	48·7	0·3	..	..	Calm	..	Calm	..	1
	18	29·605	48·4	48·0	0·4	..	..	Calm	..	SW	¼—	5
	19	29·612	50·1	49·4	0·7	..	..	Calm	..	SW	¼—	4
	20	29·613	56·0	53·7	2·3	..	..	Calm	..	SW	¼	8
Aug. 30.	10	30·069	56·0	54·7	1·3	53·0	3·0	E by N	..	Calm	..	0
	11	30·089	53·2	52·7	0·5	..	..	E by N	..	Calm	..	2
	12	30·102	52·7	52·4	0·3	..	..	E by N	..	Calm	..	0
	13	30·096	53·2	52·6	0·6	..	..	Calm	..	Calm	..	8
	14	30·105	50·6	50·6	0·0	..	..	Calm	..	Calm	..	0
	15	30·110	48·8	49·0	—0·2	..	..	Calm	..	Calm	..	0
	16	30·114	47·6	48·0	—0·4	47·5	0·1	Calm	..	Calm	..	0
	17	30·120	47·3	47·3	0·0	..	..	Calm	..	E	¼	0
	18	30·143	46·3	46·6	—0·3	..	..	Calm	..	Calm	..	0
	19	30·175	49·8	50·0	—0·2	..	..	Calm	..	Calm	..	9
	20	30·189	51·3	51·0	0·3	..	..	Calm	..	Calm	..	¼
	21	30·197	59·9	56·2	3·7	..	..	Calm	..	E	¼	½
	22	30·212	63·7	59·2	4·5	56·0	7·7	Calm	..	SE	¼	2
	23	30·207	65·9	60·2	5·7	..	..	Calm	..	SE	¼	1
Aug. 31.	0	30·211	69·3	62·3	7·0	..	..	ESE	..	ESE	¼	3
	1	30·212	70·5	63·2	7·3	..	..	Calm	..	SE	¼	0
	2	30·202	71·7	63·5	8·2	..	..	..	..	SSE	¼	0
	3	30·198	71·6	63·7	7·9	..	..	..	..	E	¼	0
	4	30·196	69·8	62·5	7·3	58·0	11·8	..	..	E	¼	0
	5	30·196	67·5	61·5	6·0	..	..	..	..	E	½	0
	6	30·208	65·5	61·0	4·5	..	..	..	..	E	¼	0
	7	30·218	62·3	59·1	3·2	..	..	..	..	E	¼	0
	8	30·227	58·7	57·0	1·7	..	..	..	..	E	¼—	0
	9	30·238	56·9	56·1	0·8	..	..	..	..	Calm	..	0
	10	30·237	55·8	55·3	0·5	55·0	0·8	..	..	Calm	..	0
Sep. 18.	10	29·896	50·5	49·4	1·1	48·0	2·5	NNE	..	N	¼	6
	11	29·908	47·2	47·1	0·1	..	..	NE	..	Calm	..	1
	12	29·911	46·0	46·2	—0·2	..	..	NE	..	N	¼	1
	13	29·894	45·3	45·5	—0·2	..	..	NNE	..	Calm	..	0
	14	29·891	44·6	44·7	—0·1	..	..	N by E	..	Calm	..	0
	15	29·890	43·6	43·9	—0·3	..	..	N by E	..	Calm	..	0
	16	29·878	43·2	43·3	—0·1	42·5	0·7	N	..	Calm	..	0
	17	29·873	42·8	42·8	0·0	..	..	N	..	Calm	..	0

DRY THERMOMETER.
August 30^d. 15^h, 16^h, 18^h, and 19^h; and Sep. 18^d. 12^h to 16^h. The readings were lower than those of the Wet Thermometer.

DEW POINT.
Aug. 22^d. 16^h. The reading was higher than that of the Dry Thermometer.

OSLER'S ANEMOMETER.
August 31^d. 1^h. After this time the registering pencil was off the rack-work.

REMARKS.	Observer.
Cumuli, cumulo-strati, and scud: breaks near the zenith and in the S. E.	H B
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,,	H B
Cirro-stratus for the most part in the S.: the stars are shining through a haze.	B
Cirro-stratus is dimly seen through the mist in the S.: the stars are shining through haze.	
,,	
Cloudless: there is still a mist, but the sky is clearer, so that stars of the 4th magnitude are visible.	
Cirro-stratus in patches about the N. E. and S. horizon: there is still a haze.	
There are a few scattered cirri and cirro-strati about the eastern horizon.	
Cirro-strati, and long lines of twisted cirri extending from the S.W. to the N. E.	
Long lines of cirri extending from the N. E. to the S.W.	
Cirro-strati and fleecy clouds principally over the zenith.	B
At 9^{h}. 10^{m} the sky was cloudless, at 15^{m} about one tenth of the sky was covered with cloud in the S. E., and at 9^{h}. 20^{m} it was covered with dark scud; at 9^{h}. 45^{m} the Moon was again shining brightly, and the sky between her and the horizon was clear: at present it is cloudless.	G
The sky continued cloudless till 10^{h}. 48^{m}; at that time a small cloud was visible under the Moon, and now there are clouds from the horizon to the place of the Moon, extending from the N. N. E. to the S. S.W.	
The sky has been wholly covered with cloud since the last observation, and it is now cloudless: the cloud covers the sky in less than five minutes from its first appearance, and as soon disappears after it has begun to do so.	G
The sky is nearly covered with a thin white fleecy kind of cloud.	D
Cloudless: the clouds disappeared soon after the observation at 13^{h}.	
,,	
,,	D
,,	H B
,, a thick fog.	H B
Cirro-stratus and a fleecy kind of scud.	B
Cloudless, with the exception of a little scud in the S. E.	
Small patches of scud are passing across the sky.	B
Small white cumuli range along the horizon, from the S. E. to S.W.; some loose cumuli are about the zenith, and to the N. of it.	G
A few light cirri and cumuli.	H B
Cumuli and small fragments of scud.	H B
Cloudless, with the exception of a few tufts of scud.	B
,,	B
,,	H B
,,	H B
Cloudless: a very fine day.	G
,,	G
,, with the exception of a few very small cirri.	B
,, ,,	B
,,	D
,,	D
The sky continued covered by a thin cirro-stratus till about ten minutes since, at which time a break appeared in the N., and at present four-fifths of the N. hemisphere are clear; the S. is still overcast.	G
A bank of cloud remains in the S., near the horizon; the remainder of the sky is cloudless.	
Cloudless, except near the S. horizon.	G
,,	D
,,	
,,	D
,,	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. Direction.	WIND. FROM OSLER'S ANEMOMETER. Pressure in pounds per square foot.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Sep. 18. 18	29 ·875	42 ·2	42 ·4	−0 ·2	..	..	N	..	NE	¼	0
19	29 ·874	42 ·6	42 ·5	0 ·1	..	..	N by E	..	N	¼—	0
20	29 ·866	44 ·7	43 ·9	0 ·8	..	..	N	..	N	¼—	0
21	29 ·867	49 ·7	48 ·7	1 ·0	..	..	N by E	..	N by E	¼—	0
22	29 ·862	51 ·7	50 ·2	1 ·5	48 ·0	3 ·7	N	..	NE	¼	10
23	29 ·847	54 ·5	51 ·8	2 ·7	..	..	N by W	..	N	¼	9
Sep. 19. 0	29 ·834	58 ·2	54 ·8	3 ·4	..	..	N by W	..	N	¼	8
1	29 ·831	58 ·2	55 ·3	2 ·9	..	..	NNE	..	N	¼	8
2	29 ·819	60 ·8	56 ·5	4 ·3	..	..	NE	..	NNE	¼—	9
3	29 ·809	59 ·6	55 ·9	3 ·7	..	..	NE	..	NNE	¼—	7
4	29 ·800	58 ·9	55 ·0	3 ·9	51 ·0	7 ·9	NNE	..	NE	½	3
5	29 ·803	57 ·1	53 ·8	3 ·3	..	..	NE	..	NE	¼	5
6	29 ·817	54 ·0	52 ·4	1 ·6	..	..	NE	..	ENE	¼	2
7	29 ·825	53 ·9	52 ·5	1 ·4	..	..	NE	..	Calm	..	3
8	29 ·819	52 ·5	51 ·6	0 ·9	..	..	..	..	N	¼—	0
9	29 ·827	50 ·4	49 ·8	0 ·6	..	..	..	..	Calm	..	0
10	29 ·832	48 ·1	48 ·1	0 ·0	48 ·0	0 ·1	..	..	N	¼	0
11	29 ·842	47 ·5	47 ·7	−0 ·2	..	..	..	..	Calm	..	0
12	29 ·850	49 ·0	49 ·0	0 ·0	..	..	..	..	Calm	..	0
13	29 ·843	49 ·4	49 ·5	−0 ·1	..	..	..	..	N	¼—	0
14	29 ·844	50 ·0	50 ·0	0 ·0	..	..	..	..	Calm	..	0
15	29 ·841	50 ·3	50 ·4	−0 ·1	..	..	..	..	Calm	..	10
16	29 ·839	50 ·5	50 ·6	−0 ·1	51 ·0	−0 ·5	..	..	Calm	..	0
17	29 ·839	50 ·1	50 ·2	−0 ·1	..	..	..	..	Calm	..	10
18	29 ·847	51 ·1	50 ·9	0 ·2	..	..	..	..	Calm	..	10
19	29 ·864	50 ·9	50 ·9	0 ·0	..	..	..	..	Calm	..	10
20	29 ·868	51 ·3	51 ·2	0 ·1	..	..	..	..	Calm	..	10
22	29 ·886	52 ·3	51 ·4	0 ·9	49 ·8	2 ·5	..	..	Calm	..	10
23	29 ·908	55 ·5	53 ·2	2 ·3	..	..	NE	..	Calm	..	10
Sep. 20. 0	29 ·906	57 ·4	54 ·5	2 ·9	..	..	NE	..	Calm	..	10
1	29 ·897	59 ·6	55 ·3	4 ·3	..	..	NE	..	Calm	..	4
2	29 ·888	61 ·5	56 ·9	4 ·6	..	..	N	..	N	¼—	5
3	29 ·882	58 ·7	55 ·2	3 ·5	..	..	NE	..	N	¼	3
4	29 ·878	60 ·6	54 ·5	6 ·1	47 ·0	13 ·6	E	..	E by N	¼—	8
5	29 ·876	59 ·7	54 ·5	5 ·2	..	..	Calm	..	E	¼—	3
6	29 ·886	57 ·7	53 ·5	4 ·2	..	..	Calm	..	E	¼—	3
7	29 ·890	53 ·7	51 ·4	2 ·3	..	..	Calm	..	E by S	¼—	2
8	29 ·900	52 ·7	51 ·3	1 ·4	..	..	Calm	..	Calm	..	0
9	29 ·907	52 ·4	51 ·5	0 ·9	..	..	Calm	..	Calm	..	3
10	29 ·908	50 ·3	50 ·2	0 ·1	50 ·0	0 ·3	Calm	..	Calm	..	4
11	29 ·907	49 ·5	49 ·2	0 ·3	..	..	Calm	..	Calm	..	2
12	29 ·910	48 ·8	48 ·9	−0 ·1	..	..	Calm	..	Calm	..	3
13	29 ·915	48 ·0	48 ·2	−0 ·2	..	..	Calm	..	Calm	..	0
14	29 ·918	47 ·5	47 ·8	−0 ·3	..	..	Calm	..	Calm	..	0
15	29 ·923	46 ·0	46 ·2	−0 ·2	..	..	Calm	..	Calm	..	0
16	29 ·921	45 ·5	45 ·7	−0 ·2	45 ·5	0 ·0	Calm	..	Calm	..	0
17	29 ·923	46 ·0	46 ·2	−0 ·2	..	..	Calm	..	Calm	..	0
18	29 ·924	46 ·6	46 ·8	−0 ·2	..	..	Calm	..	Calm	..	2
19	29 ·941	48 ·8	48 ·9	−0 ·1	..	..	NE	..	ENE	¼	3
20	29 ·938	49 ·3	49 ·3	0 ·0	..	..	NE	..	ENE	¼	2
21	29 ·946	51 ·5	51 ·2	0 ·3	..	..	NE	..	NE	¼	2

DRY THERMOMETER.

Sep. $18^d. 18^h$; $19^d. 11^h$, 13^h, 15^h, 16^h, and 17^h; and $20^d. 12^h$ to 19^h. The readings were lower than those of the Wet Thermometer.

Sep. $19^d. 16^h$. The reading was lower than that of the Dew Point.

OSLER'S ANEMOMETER.

Sep. $18^d. 22^h. 40^m$. On changing the registering sheet of paper at this time, the observer inadvertently omitted to remove the traversing board previously used, which caused the instrument to stop after 7^h.

REMARKS.	Observer.
Cloudless.	H B
,, a ground haze.	B
,, ,,	
Scud scattered over the sky.	B
The sky is covered by a thin veil of cloud; frequent gleams of sunshine and portions of blue sky are seen in different directions.	G
Cirro-stratus and scud.	D
Cirro-stratus, scud, and a few cumuli.	H B
Cumulo-stratus towards the N. E., and cirro-stratus and scud in various directions.	H B
Cirro-stratus and scud in broken masses: the Sun is shining at intervals.	B
Cumuli, cumulo-strati, and scud in large masses.	B
Cumulo-strati in the N.W.; cumuli are scattered in various directions.	D
Cumuli and fragments of scud.	D
There are many detached loose clouds of a fibrous texture in all directions; and, in the N. N.W., about the place of the Sun, there are some stratus clouds with coloured edges.	G
A large quantity of loose cloud and low scud is frequently passing.	G
Cloudless.	H B
,,	
Splendidly clear.	H B
Cloudless.	B
There is a sky fog which obscures the stars, yet the observer considers that there is no absolute cloud.	
The same as at the last observation.	
The same.	
Overcast: cirro-stratus.	
Thick fog, through which stars of the second magnitude are visible.	
Cirro-stratus: there is a small break in the S. E.	
,, a misty rain is falling.	
Cirro-stratus covers the whole sky: there is no rain falling.	
Cirro-stratus: heavy rain falling.	B
,, no rain is falling at present.	H B
Overcast: cirro-stratus and scud.	
Overcast: cirro-stratus and scud.	
Cumuli, cirro-strati, and scud: the sky near the Sun's place is free from cloud.	
Cumuli, a few cirri, and large masses of scud: a considerable portion of the sky to the N. is free from cloud.	
Cumulo-strati, cumuli, cirro-cumuli, and masses of scud.	H B
Cumulo-strati, cumuli, cirri, and scud; the cirri mostly about the zenith.	B
,, ,,	
,, ,,	
A bank of very dark cumulo-strati in the N.: tufts of cirri scattered about the sky.	
A few very faint cirri.	B
Cirri and light fleecy clouds near the Moon's place.	H B
Cumulo-strati in the S., and cirri in lines from the N. E. to S. W., and in the N. W.	B
A bank of dark stratus cloud about the place of the Moon, and fleecy clouds in different parts of the sky.	G
The same as at the last observation.	
Cloudless.	
,,	
,,	
,,	
,,	
A bank of cloud near the horizon in the E., and some thin clouds N. of the zenith.	
A large kind of cirro-cumulus N. of the zenith, and some yellowish clouds near the Sun.	
Cirri near and around the zenith: loose clouds to the S.	
Cirri and cirro-cumuli; there have been good specimens of both since the last observation.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Sep. 20. 22	29·952	58·2	55·7	2·5	55·3	2·9	NE	0 to 1½	NE	½	7
23	29·958	59·6	55·9	3·7	..	..	NE	0 to 1	NE	½	3½
Sep. 21. 0	29·960	60·2	56·3	3·9	..	..	NE	0 to 2	NE	½	8
1	29·961	60·6	56·7	3·9	..	..	NE	0 to ¾	NE	¼	7
2	29·958	59·8	56·1	3·7	..	..	NE	0 to 1	NE	½	9
3	29·981	58·0	54·6	3·4	..	..	NE	0 to 1½	ENE	¼	10
4	29·970	58·6	54·9	3·7	55·2	3·4	NE	0 to 1½	ENE	½	10
5	29·970	55·7	54·4	1·3	..	..	NE	..	NE	½	10
6	29·979	54·6	53·6	1·0	..	..	NE	..	ENE	¼	10
7	29·984	53·5	52·0	1·5	..	..	NE	..	NE	¼	10
8	29·992	51·0	50·0	1·0	..	..	NNE	..	ENE	¾	10
9	29·992	50·6	49·8	0·8	..	..	NE	..	NE	¼	7
10	30·001	51·2	49·2	2·0	46·5	4·7	NE	..	NE	½	9
11	29·998	48·9	47·5	1·4	..	..	NE	..	NE	¼	4
12	30·004	47·5	46·9	0·6	..	..	NE	..	NE	¼	5
Oct. 20. 18	29·395	45·5	44·9	0·6	..	..	Calm	..	Calm	..	10
19	29·413	45·5	45·0	0·5	..	..	Calm	..	Calm	..	10
20	29·415	45·8	45·1	0·7	..	..	Calm	..	Calm	..	10
21	29·420	46·3	45·8	0·5	..	..	Calm	..	S	¼	10
22	29·438	48·2	47·1	1·1	48·0	0·2	Calm	..	Calm	..	10
23	29·444	48·5	46·8	1·7	..	..	Calm	..	S	¼	10
Oct. 21. 0	29·437	48·6	46·8	1·8	..	..	Calm	..	Calm	..	10
1	29·437	48·2	46·7	1·5	..	..	Calm	..	Calm	..	10
2	29·454	47·8	47·0	0·8	..	..	Calm	..	Calm	..	10
3	29·439	47·4	46·8	0·6	..	..	Calm	..	Calm	..	10
4	29·436	46·8	46·5	0·3	46·5	0·3	Calm	..	S	¼	10
5	29·444	45·8	45·3	0·5	..	..	Calm	..	S	¼	10
6	29·461	44·9	44·5	0·4	..	..	N	..	Calm	..	10
7	29·474	44·3	43·8	0·5	..	..	N	..	Calm	..	10
8	29·480	43·5	43·3	0·2	..	..	NNW	..	Calm	..	10
9	29·484	43·3	42·8	0·5	..	..	NW	..	NW	¼	10
10	29·499	42·7	42·7	0·0	43·0	—0·3	NW	..	NW	¼	10
11	29·514	42·5	42·3	0·2	..	..	WNW	0 to ½	NW	¼	10
12	29·526	43·0	43·1	—0·1	..	..	WSW	..	WSW	¼	10
13	29·539	43·1	43·1	0·0	..	..	WSW	..	WSW	¼	10
14	29·552	43·3	43·3	0·0	..	..	W by S	..	WSW	¼	10
15	29·556	43·4	43·4	0·0	..	..	SW	..	SW	¼	10
16	29·557	43·6	43·6	0·0	43·5	0·1	SW	0 to 1	SW	¼	10
17	29·571	43·8	43·8	0·0	..	..	WSW	..	WSW	¼	10
18	29·584	44·0	44·0	0·0	..	..	WSW	..	WSW	¼	10
19	29·608	44·2	44·3	—0·1	..	..	WSW	..	WSW	¼	10
20	29·636	44·4	44·5	—0·1	..	..	WSW	0 to ½	WSW	¼	10
21	29·649	45·0	44·9	0·1	..	..	WSW	..	WSW	¼	10
22	29·675	45·2	44·9	0·3	45·0	0·2	WSW	..	W	¼	10
23	29·693	46·1	45·4	0·7	..	..	WSW	..	WSW	¼	10
Oct. 22. 0	29·708	48·0	46·4	1·6	..	..	WSW	0 to ½	W by S	¼	10
1	29·722	49·9	47·6	2·3	..	..	WSW	..	W	¼	9
2	29·738	52·4	49·6	2·8	..	..	W by S	..	W	¼	9
3	29·754	51·0	48·0	3·0	..	..	WSW	..	W	¼	10
4	29·738	51·4	48·4	3·0	46·5	4·9	W	..	W	¼	2

DRY THERMOMETER.

Oct. 21^{d}. 12^{h}, 19^{h}, and 20^{h}. The readings were lower than those of the Wet Thermometer; and at 10^{h} the reading was lower than that of the Dew Point.

REMARKS.	Observer.
Cirro-cumuli, cumuli, and fragments of light scud.	H B
Cumulo-stratus near the N. E. and S.W. horizon: scud passing rapidly from the E.	
Cumulo-stratus, cirro-stratus, and scud.	
,, an extensive break near the zenith.	
,,	
,,	
Nimbi and scud: rain falling.	
,, no rain at present.	
Cumulus, cirro-stratus, and scud: breaks in many places, but to no numerical extent.	
The same as at the last observation.	H B
Overcast, but the clouds are thin.	G
Scud principally S. of the zenith.	J H
The sky is occasionally covered with white flaky clouds; at present it is clear in the S. E.	G
Cirro-cumuli, fleecy clouds, and scud towards the S. and S.W.	H B
Cirro-cumuli and scud chiefly towards the S.: the sky towards the N. is free from cloud.	H B
Overcast: cirro-stratus and scud: rain falling.	H B
,, ,,	
,, ,, ,,	
Overcast: cirro-stratus and scud: the rain has ceased.	H B
,, stratus.	L
,, ,,	D
Overcast: stratus: rain falling.	L
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	L
,, ,, ,,	H B
,, ,, ,,	
,, ,, heavy rain falling.	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	H B
,, ,, rain falls steadily.	D
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, ,,	
,, ,, rain falling slightly.	
,, ,, a steady rain falling.	
,, ,, ,,	
,, ,, rain falling slightly: the clouds appear much lighter in the S.	D
,, ,, a slight rain falling.	L
,, ,, no rain.	
Overcast: stratus.	
Cirro-stratus and scud: the sky is clearing towards the W. and the zenith.	
The upper clouds appear to be cirro-cumuli; cumulo-strati near the N. horizon: large quantities of scud.	
Cirro-stratus and scud.	L
Cumulo-strati near the horizon in the W., and fragments of scud in various directions.	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.	WIND. BY ESTIMATION. Direction.	WIND. BY ESTIMATION. Force. 0—6.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Oct. 22. 5	29·751	49·6	47·7	1·9	..	..	W	..	W	$\frac{1}{4}$	1
6	29·769	48·3	46·1	2·2	..	..	W	..	W	$\frac{1}{4}$	0
7	29·789	44·0	43·6	0·4	..	..	Calm	..	Calm	..	0
8	29·796	42·2	41·9	0·3	..	..	SSW	..	Calm	..	0
9	29·798	41·6	41·6	0·0	..	..	Calm	..	Calm	..	0
10	29·811	41·1	40·9	0·2	41·0	0·1	SSW	..	Calm	..	0
11	29·833	39·2	39·1	0·1	..	..	Calm	..	Calm	..	0
12	29·828	39·6	39·3	0·3	..	..	SW	..	Calm	..	0
13	29·827	38·6	38·5	0·1	..	..	Calm	..	Calm	..	0
14	29·819	37·5	37·5	0·0	..	..	Calm	..	Calm	..	0
15	29·815	35·2	35·4	—0·2	..	..	Calm	..	Calm	..	0
17	29·795	36·5	36·2	0·3	34·5	2·0	Calm	..	Calm	..	0
18	29·795	34·5	34·5	0·0	..	..	Calm	..	Calm	..	0
19	29·796	30·7	30·8	—0·1	..	..	Calm	..	Calm	..	0
20	29·802	31·5	31·4	0·1	..	..	Calm	..	Calm	..	0
21	29·812	31·9	31·8	0·1	..	..	Calm	..	Calm	..	0
22	29·793	34·3	34·3	0·0	34·8	—0·5	Calm	..	Calm	..	0
23	29·786	38·1	37·7	0·4	..	..	NNE	..	Calm	..	0
Oct. 23. 0	29·780	42·2	42·0	0·2	..	..	NNE	..	Calm	..	0
1	29·770	47·1	46·2	0·9	..	..	Calm	..	Calm	..	0
2	29·752	50·4	48·6	1·8	..	..	NE	..	NE	$\frac{1}{4}$	4
3	29·743	52·4	49·7	2·7	..	..	ENE	..	ENE	$\frac{1}{4}$	9
4	29·734	52·0	49·7	2·3	48·0	4·0	ENE	..	Calm	..	9+
5	29·703	50·3	48·2	2·1	..	..	ENE	..	Calm	..	8+
6	29·688	48·3	47·0	1·3	..	..	NE	..	Calm	..	9+
7	29·690	48·3	46·7	1·6	..	..	NE	..	Calm	..	10
8	29·688	47·9	46·4	1·5	..	..	NE	..	Calm	..	10
9	29·684	47·8	46·4	1·4	..	..	NE	..	Calm	..	10
10	29·675	47·6	46·2	1·4	44·5	3·1	NE	..	ENE	$\frac{1}{4}$	10
11	29·665	47·4	46·2	1·2	..	..	N	..	ENE	$\frac{1}{4}$	10
12	29·655	47·1	46·4	0·7	..	..	N	..	SW	$\frac{1}{4}$	10
13	29·647	47·5	46·2	1·3	..	..	NNE	..	SW	$\frac{1}{4}$	10
14	29·631	47·3	46·5	0·8	..	..	NE	..	S	$\frac{1}{4}$	10
15	29·623	47·7	46·7	1·0	..	..	NE	..	S	$\frac{1}{4}$	$9\frac{1}{2}$
16	29·597	47·3	46·5	0·8	46·0	1·3	NE	..	SSE	$\frac{1}{2}$	10
17	29·609	47·5	46·7	0·8	..	..	NE	..	E	$\frac{1}{4}$	10
18	29·614	47·8	46·9	0·9	..	..	NNE	..	SE	$\frac{1}{4}$	10
19	29·605	47·8	46·7	1·1	..	..	NE	..	ENE	$\frac{1}{4}$	10
20	29·608	47·7	46·8	0·9	..	..	NNE	..	NE	$\frac{1}{4}$	10
21	29·596	48·0	47·2	0·8	..	..	NNE	..	NE	$\frac{1}{4}$	10
22	29·595	48·8	48·1	0·7	47·0	1·8	NNE	..	NE	$\frac{1}{4}$	10
23	29·605	48·6	48·2	0·4	..	..	NNE	..	NE	$\frac{1}{4}$	10
Oct. 24. 0	29·594	48·6	48·6	0·0	..	..	N by E	..	NE	$\frac{1}{4}$	10
1	29·579	49·0	48·9	0·1	..	..	NNE	..	NE	$\frac{1}{4}$	10
2	29·566	49·6	49·3	0·3	..	..	NNE	..	NNE	$\frac{1}{4}$	10
3	29·557	50·1	49·2	0·9	..	..	NNE	..	NE	$\frac{1}{2}$	10
4	29·569	49·8	48·9	0·9	48·5	1·3	NNE	0 to $\frac{1}{2}$	NNE	$\frac{1}{2}$+	10
5	29·578	49·6	49·1	0·5	..	..	NNE	..	NE	$\frac{1}{4}$	10
6	29·563	49·2	48·9	0·3	..	..	N	0 to $\frac{1}{2}$	NE	$\frac{1}{4}$	10
7	29·568	49·0	48·7	0·3	..	..	N	0 to $\frac{1}{2}$	NE	$\frac{1}{4}$	10
8	29·570	49·0	48·9	0·1	..	..	N	0 to $\frac{1}{2}$	NE	$\frac{1}{4}$	10

DRY THERMOMETER.

Oct. 22^{d}. 15^{h} and 19^{h}. The readings were lower than those of the Wet Thermometer. At 22^{h} the reading was lower than that of the DEW POINT.

Oct. 22^{d}. 16^{h}. The observations at this time were inadvertently omitted.

OSLER'S ANEMOMETER.

Oct. 23^{d}. 11^{h} to 16^{h}. The directions of the wind by the anemometer and by estimation differ greatly: there is no doubt of the correctness of the anemometer, therefore the directions by estimation must be in error.

REMARKS.	Observer.
A few clouds N. of the zenith: hazy.	D
Cloudless: hazy in the N.	D
Cloudless and hazy.	L
Cloudless.	D
,,	
,	D
,	L
,,	
,, hazy.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, a dense fog.	
,, ,,	
,, ,,	L
,, ,,	H B
,, ,,	H B
	J M
Cloudless: slight fog.	H B
,, ,,	
The fog has cleared off since the last observation: the sky towards the N. is perfectly free from cloud, but the greater part towards the S. is covered with cirro-cumuli.	
Cumuli and large quantities of scud.	H B
The sky is nearly covered with scud.	L
,,	
Cirro-stratus and scud.	
,,	
,,	L
Overcast: cirro-stratus.	D
,, ,,	
,, ,, a thin rain falling.	
,, cirro-stratus and scud.	D
,, ,,	J M
,, ,,	
Clear near the horizon; otherwise overcast.	J M
Cirro-stratus and scud, with breaks in many parts of the sky, but to no numerical extent.	H B
Overcast: cirro-stratus and scud.	
Overcast: cirro-stratus and dark scud.	H B
Cirro-stratus and scud.	L
,,	
,, a few drops of rain.	L
Overcast: rain falling.	D
,, ,,	D
Overcast: rain falling heavily.	H B
Overcast: rain falling, but not so heavily as at the last observation.	H B
Cirro-stratus and scud, with rain.	L
Overcast: cirro-stratus and scud.	H B
,, ,,	H B
,, rain falling.	D
,, ,,	D
,, rain falling heavily.	J M
,, slight rain.	J M

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.	By Estimation. Direction.	Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Oct. 24. 9	29·571	49·0	48·9	0·1	..	..	N	0 to $\frac{1}{2}$	NNE	$\frac{1}{4}$	10
10	29·570	49·4	49·3	0·1	49·0	0·4	N	0 to $\frac{3}{4}$	NNW	$\frac{1}{4}$	10
Nov. 20. 18	30·185	39·4	39·4	0·0	..	..	W	..	Calm	..	0
19	30·192	39·3	39·2	0·1	..	..	WNW	..	NW	$\frac{1}{4}$—	1
20	30·202	36·7	36·7	0·0	..	..	W	..	Calm	..	1
21	30·220	34·8	35·0	–0·2	..	..	SW	..	W	$\frac{1}{4}$	3
22	30·225	37·2	37·4	–0·2	37·5	–0·3	WSW	..	Calm	..	0
23	30·241	38·8	39·0	–0·2	..	..	SW	..	Calm	..	10
Nov. 21. 0	30·247	39·6	40·1	–0·5	..	..	WSW	..	Calm	..	10
1	30·236	40·5	40·7	–0·2	..	..	SW	..	Calm	..	0
2	30·230	41·0	40·9	0·1	..	..	SW	..	Calm	..	10
3	30·223	40·8	40·7	0·1	..	..	SSW	..	Calm	..	10
4	30·212	40·0	39·9	0·1	39·5	0·5	SSW	..	Calm	..	7
5	30·205	37·8	37·7	0·1	..	..	Calm	..	WSW	$\frac{1}{4}$	6
6	30·201	35·8	35·7	0·1	..	..	Calm	..	Calm	..	3
7	30·197	35·3	35·5	–0·2	..	..	Calm	..	Calm	..	2
8	30·188	36·0	36·1	–0·1	..	..	Calm	..	Calm	..	0
9	30·194	33·5	33·7	–0·2	..	..	Calm	..	Calm	..	0
10	30·195	31·6	31·7	–0·1	31·0	0·6	Calm	..	Calm	..	0
11	30·185	31·5	31·2	0·3	..	..	Calm	..	Calm	..	10
12	30·184	33·1	32·8	0·3	..	..	Calm	..	Calm	..	10
13	30·184	33·6	33·5	0·1	..	..	Calm	..	Calm	..	10
14	30·178	33·4	33·3	0·1	..	..	Calm	..	Calm	..	10
15	30·168	33·3	33·3	0·0	..	..	Calm	..	Calm	..	10
16	30·154	33·8	33·8	0·0	34·0	–0·2	Calm	..	Calm	..	10
17	30·155	33·4	33·3	0·1	..	..	Calm	..	Calm	..	10
18	30·142	33·6	33·7	–0·1	..	..	Calm	..	Calm	..	10
19	30·140	34·2	34·1	0·1	..	..	Calm	..	Calm	..	10
20	30·148	35·5	35·5	0·0	..	..	W	..	Calm	..	10
21	30·152	35·2	35·2	0·0	..	..	Calm	..	Calm	..	10
22	30·140	36·5	36·2	0·3	35·5	1·0	Calm	..	Calm	..	10
23	30·129	38·1	37·9	0·2	..	..	Calm	..	Calm	..	10
Nov. 22. 0	30·121	38·8	37·4	1·4	..	..	Calm	..	Calm	..	10
1	30·103	40·2	39·7	0·5	..	..	Calm	..	Calm	..	10
2	30·094	41·8	41·2	0·6	..	..	Calm	..	Calm	..	10
3	30·084	43·0	42·5	0·5	..	..	NNW	..	Calm	..	10
4	30·073	43·0	42·8	0·2	43·0	0·0	NNW	..	Calm	..	10
5	30·069	42·6	42·5	0·1	..	..	NW	..	Calm	..	10
6	30·064	42·4	42·0	0·4	..	..	NNW	..	NNW	$\frac{1}{4}$	10
7	30·063	42·4	42·0	0·4	..	..	N	..	NNW	$\frac{1}{4}$	10
8	30·064	42·8	42·4	0·4	..	..	NNE	..	NNW	$\frac{1}{4}$	10
9	30·073	43·2	41·9	1·3	..	..	NE	..	NW	$\frac{1}{4}$	10
10	30·059	43·3	41·6	1·7	39·0	4·3	ENE	..	NE	$\frac{1}{4}$	10
11	30·060	42·5	41·2	1·3	..	..	ENE	..	NE	$\frac{1}{4}$	10
12	30·057	42·2	41·2	1·0	..	..	Calm	..	Calm	..	10
13	30·043	42·0	40·9	1·1	..	..	Calm	..	Calm	..	10
14	30·043	42·0	40·9	1·1	..	..	Calm	..	Calm	..	10
15	30·039	41·5	40·2	1·3	..	..	Calm	..	Calm	..	10
16	30·030	41·8	40·4	1·4	39·5	2·3	Calm	..	Calm	..	10
17	30·038	41·1	39·5	1·6	..	..	Calm	..	Calm	..	10
18	30·033	40·5	40·0	0·5	..	..	Calm	..	Calm	..	10

DRY THERMOMETER.

Nov. $20^d. 21^h$ to $21^d. 1^h$; $21^d. 7^h$ to 10^h; and $21^d. 18^h$. The readings were lower than those of the Wet Thermometer.

Nov. $20^d. 22^h$ and $21^d. 16^h$. The readings were lower than those of the Dew Point Thermometer.

REMARKS.	Observer.
Overcast: slight rain.	L
,, ,,	L
Splendidly clear.	H B
An extensive bank of cloud in the N. horizon, and light clouds in other directions.	
Cirro-stratus and haze near the horizon: foggy.	
Cirro-stratus and vapour: very foggy.	H B
Cloudless.	L
A thick fog.	
A very thick fog.	
Cloudless: the fog is not so dense, and I believe there is no cloud; the Sun is visible through the fog.	
A very dense fog.	
,,	L
The fog continues so dense that the Astronomical Observatory is invisible from the Magnetic Observatory.	H B
Cirro-stratus and vapour.	
,, the fog is not so dense as at the previous observation, and there is a corona round the Moon; its diameter	
A slight fog: light clouds towards the S.W., and cirro-stratus and scud in other parts. [is about 3°.	
Cloudless, but very hazy.	
Very foggy: there is not a star visible: a small corona around the Moon.	
The fog cleared off considerably after the last observation: a corona was visible around the Moon from $9^h. 40^m$ to $10^h. 15^m$.	
A dense fog: a corona around the Moon.	H B
,, the Moon is invisible.	D
,,	
,, moisture is falling from the trees.	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	
,, ,,	D
A thick fog: the Astronomical Observatory is invisible from the Magnetic Observatory.	L
,, ,,	
The fog is not quite so dense as at the previous observation.	
Foggy.	
,,	L
There is a very slight fog at present: breaks near the zenith and other places.	H B
Overcast: the fog has nearly disappeared.	D
,, very damp.	
,, cirro-stratus.	
,, ,, a very thin misty rain falling.	D
,, ,, no rain falling.	G
,, ,,	G
,, ,,	H B
,, ,,	H B
,, ,,	L
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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.	BY ESTIMATION. Direction.	Force 0—6.	Amount of Clouds 0—10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Nov. 22. 19	30·032	40·5	39·7	0·8	..	..	Calm	..	Calm	..	10
20	30·043	40·5	39·2	1·3	..	..	Calm	..	Calm	..	10
21	30·051	40·6	39·2	1·4	..	..	Calm	..	Calm	..	10
22	30·059	41·9	39·9	2·0	39·0	2·9	Calm	..	SSE	¼	9¾
23	30·063	42·8	40·6	2·2	..	..	Calm	..	SSE	¼	10
Nov. 23. 0	30·045	43·0	40·2	2·8	..	..	NE	..	NE	¼	10
1	30·045	42·8	40·3	2·5	..	..	NE	..	NE	¼	10
2	30·038	42·8	40·6	2·2	..	..	Calm	..	NE	¼	10
3	30·041	43·1	40·6	2·5	..	..	ENE	..	NNE	¼	10
4	30·042	42·5	40·2	2·3	39·0	3·5	E	..	Calm	..	10
5	30·041	42·0	39·9	2·1	..	..	ENE	..	Calm	..	10
6	30·044	42·0	40·2	1·8	..	..	ENE	..	Calm	..	10
7	30·044	39·0	38·4	0·6	..	..	Calm	..	Calm	..	0
8	30·041	38·2	37·7	0·5	..	..	Calm	..	Calm	..	0
9	30·049	37·5	36·9	0·6	..	..	Calm	..	Calm	..	0
10	30·049	36·4	36·1	0·3	36·0	0·4	Calm	..	Calm	..	3
11	30·041	35·7	35·7	0·0	..	..	Calm	..	E	¼	7
12	30·027	36·1	36·0	0·1	..	..	Calm	..	E	¼	9
Nov. 29. 10	29·994	39·4	37·8	1·6	35·5	3·9	NE	..	Calm	..	10
11	29·988	38·8	37·4	1·4	..	..	NE	..	Calm	..	10
12	29·988	38·8	37·9	0·9	..	..	NE	..	NNE	¼	10
13	29·995	38·7	37·6	1·1	..	..	NE	..	NNE	¼	10
14	29·994	38·5	37·2	1·3	..	..	NE	..	NE	¼	10
15	29·993	38·5	37·0	1·5	..	..	NE	..	NNE	¼	10
16	29·990	38·2	36·8	1·4	36·0	2·2	NE	..	NNE	¼	10
17	29·988	38·1	36·7	1·4	..	..	NE	..	NNE	¼	10
18	29·987	38·1	36·6	1·5	..	..	NE	..	NNE	¼	10
19	29·990	37·6	36·1	1·5	..	..	NE	..	NE	¼	10
20	29·997	37·5	35·3	2·2	..	..	NE	..	NE	¼	10
21	30·005	37·4	35·5	1·9	..	..	NNE	..	NNE	¼	10
22	30·016	37·8	35·7	2·1	32·5	5·3	N by E	..	NE	¼	10
23	30·012	38·1	36·1	2·0	..	..	N	..	Calm	..	10
Nov. 30. 0	29·998	38·0	36·1	1·9	..	..	N	..	N	¼	10
1	29·992	38·2	36·6	1·6	..	..	NNE	..	N	¼	10
2	29·992	38·8	35·7	3·1	..	..	NNE	..	NNE	¼	10
3	29·986	37·5	35·1	2·4	..	..	NNE	..	NNE	¼	10
4	29·986	37·1	34·9	2·2	34·0	3·1	NNE	..	N	¼	10
5	29·987	37·4	35·2	2·2	..	..	NNE	..	NE	¼	10
6	29·986	37·1	34·7	2·4	..	..	NNE	..	NE	¼	10
7	29·996	36·0	33·8	2·2	..	..	NNE	..	NE	¼	9
8	29·992	32·5	31·7	0·8	..	..	N	..	NE	¼	1½
9	29·990	32·9	32·7	0·2	..	..	N	..	NE	¼	0
10	29·986	34·0	32·6	1·4	30·5	3·5	N	..	NE	¼	10
Dec. 18. 10	29·734	41·0	41·0	0·0	41·0	0·0	Calm	..	Calm	..	10
11	29·754	40·8	40·7	0·1	..	..	Calm	..	Calm	..	10
12	29·770	40·5	40·5	0·0	..	..	Calm	..	Calm	..	10
13	29·786	40·4	40·4	0·0	..	..	Calm	..	Calm	..	10

REMARKS.	Observer.
Overcast: cirro-stratus.	L
,, ,,	
Cirro-stratus, fleecy clouds, and scud, with a few small breaks about the zenith.	L
Cirro-stratus, fleecy clouds, and scud.	H B
Cirro-stratus and scud.	
Cirro-stratus and scud.	
,,	
,,	
,,	H B
,,	L
,,	
Overcast: the Moon's place is visible.	
Cloudless: hazy: the Moon is shining very brightly.	
,, ,, ,,	
,, ,, ,,	
Cirro-stratus, fleecy clouds, and scud.	L
The sky is mostly covered with fleecy clouds through which the Moon is shining; a corona was visible around her at $9^h. 55^m$, which has remained to the present time.	H B
Fleecy clouds and scud: several coronæ have been visible around the Moon since the last observation.	H B
Overcast: cirro-stratus: the reflexion from the London lights is high.	G
,, a very thin rain falling.	
Cirro-stratus: no rain.	G
Overcast: cirro-stratus and scud: a few drops of rain are falling.	H B
,, ,,	
,, ,,	H B
,,	L
,,	
,,	L
,,	D
,,	
,,	D
,, cirro-stratus.	G
,,	G
Overcast: cirro-stratus and scud.	H B
,, ,,	L
,, ,,	D
,, ,,	L
Cirro-stratus and scud.	L
Overcast: cirro-stratus and scud.	H B
,, ,,	H B
A few stars have been dimly seen during the last half hour; at present α, β, and γ Ursæ Majoris are shining brightly, and a few stars are visible in the S.	G
About half an hour since the sky became nearly free from cloud, and has continued so to the present time, the only part clouded being near the horizon in the S. and W.	H B
Cloudless.	D
The sky became clouded rather suddenly at about $9^h. 20^m$; at present it is quite overcast.	D
A thick fog.	G
,,	
,, at $12^h. 5^m$ rain began falling.	G
Overcast: foggy: a slight drizzling rain is falling.	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.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Dec. 18. 14	29·800	40·7	40·7	0·0	..	..	Calm	..	Calm	..	10
15	29·817	40·8	40·7	0·1	..	..	Calm	..	Calm	..	10
16	29·834	40·9	41·0	–0·1	41·0	–0·1	Calm	..	Calm	..	10
17	29·848	41·1	41·2	–0·1	..	..	Calm	..	Calm	..	10
18	29·871	41·3	41·4	–0·1	..	..	Calm	..	Calm	..	10
19	29·889	41·0	41·1	–0·1	..	..	ENE	½ constant	ENE	¼	10
20	29·908	40·6	40·7	–0·1	..	..	ENE	..	ENE	½	10
21	29·937	40·3	40·3	0·0	..	..	NE	0 to ½	NE	½	10
22	29·964	40·2	40·2	0·0	40·0	0·2	NE	0 to 1	E	¼	10
23	29·984	40·3	40·0	0·3	..	..	NE	0 to 1	ENE	¼	10
Dec. 19. 0	29·998	40·6	40·1	0·5	..	..	ENE	0 to ½	ENE	¼ to ½	10
1	29·999	40·8	40·1	0·7	..	..	NE	0 to ½	ENE	½	10
2	29·998	40·8	39·7	1·1	..	..	NE	0 to 1	NE	½	10
3	30·018	40·6	39·5	1·1	..	..	NE	0 to ½	ENE	¼ to ½	10
4	30·032	40·2	38·9	1·3	38·5	1·7	NE	0 to ¾	ENE	¼	10
5	30·046	39·5	38·2	1·3	..	..	NE	..	ENE	¼	10
6	30·064	39·5	37·7	1·8	..	..	NE	..	E	¼	10
7	30·078	39·4	37·3	2·1	..	..	NE	..	E by N	½	10
8	30·097	38·8	36·7	2·1	..	..	NE	..	E	½	10
9	30·109	38·1	36·6	1·5	..	..	NE	..	E by N	¼	10
10	30·120	38·5	36·6	1·9	33·5	5·0	NE	..	E	¼	10
12	30·140	36·4	35·2	1·2	..	..	NNE	..	ENE	¼	10
13	30·143	36·3	35·3	1·0	..	..	NNE	..	NE	¼	10
14	30·138	35·3	34·7	0·6	..	..	NE	..	NE	¼	10
15	30·150	34·7	34·0	0·7	..	..	NE	..	NE	¼	10
16	30·152	33·8	32·6	1·2	32·6	1·2	NE	..	NE	¼	0
17	30·155	33·0	31·9	1·1	..	..	NE	..	NE	¼	0
18	30·158	32·3	31·2	1·1	..	..	NE	..	NE	¼	0
19	30·158	32·5	31·2	1·3	..	..	NE	..	NE	¼	4
20	30·159	33·4	31·4	2·0	..	..	NE	..	NE	¼	10
21	30·170	34·3	32·2	2·1	..	..	NE	0 to 1½	NE	½	10
22	30·194	35·0	31·9	3·1	28·8	6·2	NE	½ to 3½	ENE	¾	10
23	30·206	34·0	31·0	3·0	..	..	NE	½ to 3½	ENE	1½	5
Dec. 20. 0	30·206	34·6	31·4	3·2	..	..	NE	0 to 4	NE	1	3
1	30·199	34·8	30·7	4·1	..	..	NE	½ to 3½	NE	1½	1½
2	30·191	34·5	31·0	3·5	..	..	NE	1 to 4	ENE	1¼	5
3	30·191	33·8	30·4	3·4	..	..	NE	1 to 4	NE	1	¼
4	30·181	32·5	29·6	2·9	27·5	5·0	NE	1½ to 3	NE	1½	0
5	30·177	31·6	29·2	2·4	..	..	NE	½ to 2	NE	1½	0
6	30·181	30·6	28·7	1·9	..	..	NE	0 to ¾	NE	1	0
7	30·184	30·6	28·7	1·9	..	..	NE	0 to 1	NE	¾	0
8	30·184	30·6	28·7	1·9	..	..	NE	0 to 1	ENE	1½	0
9	30·185	31·0	29·0	2·0	..	..	NE	0 to 1½	E	1	½
10	30·184	31·3	29·1	2·2	27·0	4·3	ENE	0 to 2	E	1½	¾
11	30·191	31·0	28·7	2·3	..	...	NE	½ to 2½	E	1½	9
12	30·194	30·5	28·8	1·7	..	...	ENE	0 to 2	E	1	4
13	30·197	31·0	29·7	1·3	..	...	NE	½ to 1½	ENE	1¼	9
14	30·195	31·0	29·7	1·3	..	...	NE	0 to 1½	ENE	1	10
15	30·195	31·5	30·4	1·1	..	...	NE	½ to 1	ENE	1	10
16	30·194	31·7	30·8	0·9	26·5	5·2	NE	0 to 2	ENE	1½	10
17	30·195	32·3	31·2	1·1	..	...	NE	½ to 3½	ENE	1½	10
18	30·198	32·3	31·2	1·1	..	...	NE	0 to 3	ENE	2	10

DRY THERMOMETER.

Dec. $18^d.16^h$ to 20^h. The reading was less than that of the Wet Thermometer.

Dec. $18^d.16^h$. The reading was less than that of the Dew Point Thermometer.

REMARKS.	Observer.
Overcast: slight fog.	L
,, the rain has ceased: very dark.	L
,, slight rain.	H B
,, the air is very damp.	
,, a thin rain is falling.	H B
,, a drizzling rain is falling.	D
,, rain falling.	
,, a thin misty rain is falling.	D
,, ,, a very gloomy morning.	G
,, no rain falling.	G
Overcast: cirro-stratus and scud: slight rain falling.	L
,, ,, the rain has ceased.	L
Overcast, with slight rain.	H B
Overcast.	L
Cirro-stratus and scud.	L
Overcast: cirro-stratus.	G
Cirro-stratus and scud: the Moon is occasionally visible, the scud passing quickly from the E.	G
Cirro-stratus and scud, through which the Moon is visible: breaks in various places.	H B
Cirro-stratus and scud: the Moon is occasionally visible; she is at present obscured by the scud.	H B
,, the clouds in some places are less dense than at others.	D
,,	D
,, the Moon is visible at times through the clouds.	L
,,	
Cirro-stratus and scud, with a few small breaks about the zenith.	
Cirro-stratus and scud.	
Cloudless, with the exception of a few cirri and fleecy clouds near the Moon.	
Cloudless: the stars are shining very brightly.	
,, ,,	
Cirro-stratus and scud in various directions.	
Cirro-stratus and scud.	
,,	L
,,	H B
Cumuli, a few cirri, and large quantities of scud.	
Cumuli and scud.	
A few light cumuli and fragments of scud.	
Cumuli, fleecy clouds, and scud.	
Nearly cloudless: fragments of scud near the N. horizon.	H B
Cloudless.	L
Cloudless, with the exception of a cumulo-stratus extending along the N. and W. horizon, to no numerical amount.	
,,	
,, small fragments of scud in various directions.	
,,	
Small fragments of scud in various directions, and fleecy clouds about the S. horizon.	
Large masses of scud and fleecy clouds in various parts of the sky.	L
The sky is nearly covered with fleecy clouds and scud: the wind in gusts to 2.	H B
Fleecy clouds and scud.	
The sky is nearly covered with scud.	
Overcast, with scud.	
,,	
Overcast: cirro-stratus and scud.	
,, ,,	
,, ,, wind in gusts to 2 +.	

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.	WIND. By Estimation: Direction.	WIND. By Estimation: Force 0−6.	Amount of Clouds 0−10.
d h	in.	°	°	°	°	°		from lbs. to lbs.			
Dec. 20. 19	30·199	32·5	31·5	1·0	..	..	NE	½ to 3½	ENE	2	10
20	30·201	33·0	32·0	1·0	..	..	NE	½ to 2	ENE	2	10
21	30·210	32·5	32·0	0·5	..	..	NE	0 to 1½	ENE	1	8
22	30·210	31·2	29·7	1·5	27·0	4·2	NE	0 to 3	E	¾	10
23	..	32·7	30·3	2·4	..	..	ENE	1 to 4	ENE	1½	10
Dec. 21. 0	30·212	34·0	31·8	2·2	..	..	ENE	1 to 4	E	1¼	10
1	30·204	34·4	30·7	3·7	..	..	ENE	1 to 4	ENE	1½	10
2	30·205	34·5	31·7	2·8	..	..	ENE	½ to 3½	ENE	1½	10
3	30·216	34·7	32·2	2·5	..	..	ENE	½ to 3	ENE	1¼	10
4	30·204	34·8	32·0	2·8	28·5	6·3	ENE	½ to 4	E	1½	10
5	30·207	34·5	32·0	2·5	..	..	ENE	½ to 3½	ENE	1½	10
6	30·207	34·6	32·2	2·4	..	..	ENE	½ to 4½	ENE	1½	10
7	30·210	34·5	32·2	2·3	..	..	ENE	½ to 3	ENE	1¼	9
8	30·217	34·3	32·2	2·1	..	..	ENE	½ to 2½	ENE	1	9½
9	30·213	34·2	32·3	1·9	..	..	ENE	½ to 3	ENE	1	9¾
10	30·210	33·6	31·8	1·8	28·0	5·6	ENE	0 to 3	ENE	¾	9
11	30·213	33·6	31·7	1·9	..	..	ENE	½ to 2	ENE	1	10
12	30·203	33·5	31·7	1·8	..	..	ENE	0 to 2	ENE	1	9

Dec. 20^d. 23^h. The reading of the Barometer was inadvertently omitted.

REMARKS.	Observer.
Overcast: cirro-stratus and scud.	H B
,, ,,	
Cumuli and scud.	H B
Cirro-stratus and scud.	L
,,	
Cirro-stratus and scud.	
,,	
,,	
,,	L
,,	H B
,,	
,,	
,,	
Cirro-stratus and scud, with breaks near the zenith and about the Moon's place.	
Cirro-stratus and scud: at $8^h. 40^m$ the greater portion of the S. sky was clear.	H B
Large masses of scud are passing over from the E.: clear breaks in various directions.	D
Cirro-stratus and scud.	
Heavy masses of scud.	

ROYAL OBSERVATORY, GREENWICH.

EXTRAORDINARY

METEOROLOGICAL OBSERVATIONS.

1844.

Observations on February 22, 23, 24, 25, 26.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry Therm.	Dew Point.	Dew Point below Dry Therm.	Wind, from Osler's Anemometer: Direction.	Wind, from Osler's Anemometer: Pressure in pounds per square foot.	Wind, by Estimation: Direction.	Wind, by Estimation: Force 0–6.	Amount of Clouds 0–10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.			
Feb. 22. 23. 20	29·687	36·5	32·5	4·0	25·0	11·5	SSW	..	WSW	¾	2
Feb. 23. 0. 20	29·658	37·0	32·9	4·1	..	..	S by W	0 to ½	WSW	¾	7
1. 20	29·610	38·7	34·7	4·0	33·5	5·2	S by W	0 to 1	WSW	¾	10
2. 20	29·589	38·3	34·8	3·5	..	..	S	0 to ¼	WSW	¾	10
3. 20	29·509	37·6	35·0	2·6	31·0	6·6	S	½ to 2½	SSW	1	10
3. 50	29·478	..	..	..	..	..	S	½ to 2	..	..	..
4. 20	29·443	34·4	33·8	0·6	..	..	S	0 to 1	S	¼ +	10
4. 50	29·401	..	..	..	..	..	S	½ to 1	..	..	..
5. 20	29·360	34·5	34·1	0·4	33·0	1·5	S	½ to 1½	S	¾	10
5. 50	29·319	..	..	..	..	..	S by E	½ to 2	..	..	..
6. 20	29·281	34·4	34·1	0·3	..	..	S	1 to 3½	S	1	10
6. 50	29·239	..	..	..	..	..	S	2½ to 4	..	..	..
7. 5	29·209	..	..	..	..	..	S	3 to 5	..	..	..
7. 20	29·170	34·7	34·4	0·3	33·5	1·2	S	3½ to 5	S	1½	10
7. 30	29·156	..	..	..	..	..	S	2½ to 4	..	..	..
7. 45	29·132	..	..	..	..	..	S	2 to 3	..	..	..
8. 0	29·113	..	..	..	..	..	S	2 steady	..	..	..
8. 20	29·078	36·0	35·5	0·5	..	..	S	1 to 3	S	1 +	10
8. 50	29·044	39·3	38·7	0·6	..	..	S	1½ to 3	S	1½	10
9. 5	29·022	41·0	40·8	0·2	..	..	S by W	1 to 2	SSW	2	10
9. 20	29·012	41·4	41·1	0·3	40·0	1·4	SSW	1 to 3½	S	2	10
9. 35	28·998	42·4	42·1	0·3	..	..	SSW	3 to 5	SSW	2	10
9. 50	28·972	44·0	43·9	0·1	..	..	SSW	2½ to 4	SSW	2	10
10. 5	28·958	45·0	44·4	0·6	..	..	SW	4 to 4½	SSW	2½	10
10. 20	28·946	45·0	44·6	0·4	..	..	SW	4 to 7	SSW	3	10
10. 35	28·930	45·8	45·1	0·7	..	..	SW	4 to 6	SSW	3	10
10. 50	28·921	45·8	45·2	0·6	..	..	SW	4½ to 8	SSW	3	10
11. 5	28·918	45·9	45·4	0·5	..	..	SW	4 to 4¾	SSW	3	10
11. 20	28·905	46·5	45·7	0·8	..	..	SW	4 to 6	SSW	3	10
11. 35	28·895	46·6	45·8	0·8	..	..	SW	5 to 7½	SSW	2½	10
11. 50	28·869	46·9	46·2	0·7	..	..	SW	6 constant	SSW	2½	10
12. 5	28·858	47·1	46·4	0·7	..	..	SW	4 to 6	SSW	3	10
12. 20	28·847	47·0	46·7	0·3	..	..	SW	4 to 7	SSW	2½	10
12. 35	28·829	47·5	46·8	0·7	..	..	SW	6 to 7	SSW	2½	10
12. 50	28·823	47·7	47·0	0·7	..	..	SW	6 to 8	SSW	2½	10
13. 20	28·796	48·3	47·4	0·9	..	..	SW	5 to 7	SSW	2½	10
13. 35	28·783	48·5	47·4	1·1	..	..	SW	7 to 12	SSW	2	10
13. 50	28·776	48·6	47·7	0·9	..	..	SW	5½ to 6½	SSW	2	10
14. 5	28·763	48·7	47·7	1·0	..	..	SW	5 to 6½	SSW	2	10
14. 20	28·755	48·6	47·7	0·9	..	..	SSW	5 to 7	SSW	2½	10
14. 35	28·740	48·4	47·7	0·7	..	..	SW	5 to 6	SSW	2½	10
14. 50	28·722	48·5	47·8	0·7	..	..	SW	5 to 7½	SSW	2½	10
15. 5	28·704	48·5	48·1	0·4	..	..	SW	7 to 9	SSW	2½	10
15. 20	28·689	48·3	48·2	0·1	47·5	0·8	SW	5 to 8	SSW	2½	10
15. 35	28·677	48·5	48·2	0·3	..	..	SW	7½ to 8½	SSW	2½ +	10
15. 50	28·663	48·5	48·2	0·3	..	..	SW	6½ to 7½	SSW	2½ +	10
16. 5	28·669	49·1	48·4	0·7	..	..	SW	6 constant	SSW	2½	10
16. 20	28·691	49·0	48·5	0·5	..	..	SW	1 constant	SSW	2½	10
16. 35	28·706	47·2	47·1	0·1	..	..	W	1½ to 3¼	SSW	2½	10
16. 50	28·727	45·0	45·2	−0·2	..	..	WNW	½ constant	SSW	2	10
17. 5	28·744	40·8	40·9	−0·1	..	..	NW	½ constant	SSW	2	10
17. 20	28·756	39·5	39·7	−0·2	..	..	NW	½ to 1½	SSW	2	10
17. 35	28·783	39·1	39·2	−0·1	..	..	NW	½ to 1½	SSW	2	10

Feb. 23d. 16h. 50m. to 17h. 35m. The reading of the Wet Bulb Thermometer was higher than that of the Dry Bulb Thermometer.

REMARKS.	Observer.
Hazy: light clouds principally S. of the zenith.	J H
Scud and vapour.	J H
Overcast: cirro-stratus.	D
,, ,, sleet falling.	
,, ,, a thin rain and sleet falling: the wind is in gusts to 1+.	
,, ,, rain falling.	
,, ,, ,, gusts of wind to 2+.	D
	G
,, ,, strong gusts of wind.	
,, ,, heavy rain in squalls: gusts of wind to 3.	
Rain in squalls: the gale of wind is increasing in strength: gusts of wind to 4.	
,, the gale continues: no rain falling: gusts of wind to 4.	G
	P
Overcast: rain falling: gusts of wind to $3\frac{1}{2}$: a partial lull seems to have taken place.	
,, ,, gusts of wind to $3\frac{1}{2}$.	
,, ,, gusts of wind to 3.	
,, rain and violent gusts of wind.	P
	J H
Overcast: rain falling.	
,, the wind has somewhat abated.	
,, rain falling.	

Observations on February 22, 23, 24, 25, and 26.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry Therm.	Dew Point.	Dew Point below Dry Therm.	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in pounds per square foot.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.			
Feb. 23. 17. 50	28·792	38·3	38·2	0·1	..	..	NW	1 to 2	SSW	2	10
18. 5	28·811	38·3	37·8	0·5	..	..	NW	1 to 2	NW	1½	10
18. 20	28·832	38·1	37·3	0·8	..	..	NW	1 to 2½	NW	1 +	10
18. 35	28·848	38·1	37·1	1·0	..	..	WNW	1 to 3	NW	¾	10
18. 50	28·862	37·8	36·7	1·1	..	..	WNW	1 to 3	WNW	1	10
19. 5	28·869	37·6	36·6	1·0	..	..	WNW	1 to 1½	WNW	¾	10
19. 20	28·879	37·2	36·2	1·0	..	..	WNW	½ to 1½	W	¾	6
19. 35	28·895	37·2	36·2	1·0	..	..	WNW	1 to 3	WNW	¾	2
19. 50	28·914	37·1	36·0	1·1	..	..	WNW	½ to 1½	W	¾	0
20. 5	28·930	37·2	36·1	1·1	..	..	W by N	½ to 1½	W	1	0
20. 20	28·932	37·4	36·2	1·2	..	..	W	½ to 1½	W	½+	0
20. 35	28·938	37·6	36·4	1·2	..	..	W	½ constant	W	¾	0
20. 50	28·949	38·1	37·8	0·3	..	..	W	½ to 1+	W by S	½	4
21. 5	28·961	38·2	37·0	1·2	..	..	W	¾ to 1+	W	¾	4
21. 20	28·988	38·5	37·4	1·1	34·0	4·5	W	½ to 1½	WNW	1	4
21. 35	28·994	39·8	38·0	1·8	..	..	W	1 constant	WNW	½	4
21. 50	29·013	41·0	38·7	2·3	..	..	W	1 to 2	W	¾	4
22. 20	29·028	42·2	39·9	2·3	..	..	W	1 to 4	W	1	7
22. 50	29·041	43·7	40·0	3·[illegible]	..	..	WNW	1½ to 3	W by N	¾	10
23. 20	29·061	43·3	39·4	3·9	..	..	WNW	½ to 3	W by N	¾	10
23. 50	29·077	43·5	39·5	4·0	..	..	NW	1 to 3	WNW	¾	10
Feb. 24. 0. 20	29·098	43·5	39·6	3·9	..	..	NW	½ to 1	WNW	½	10
0. 50	29·111	43·2	39·1	4·1	..	..	NW	½ constant	NW	½	10
1. 5	29·118	43·0	39·0	4·0	..	..	NW	½ constant	NW	¾	9
1. 20	29·125	43·2	39·2	4·0	..	..	NW	½ constant	NW	¾	9
1. 50	29·148	40·6	37·9	2·7	..	..	N by W	½ to 1	N	½	10
2. 20	29·178	40·7	37·5	3·2	..	..	N by W	½ constant	NNE	¼	10
2. 50	29·196	40·4	37·4	3·0	..	..	N by W	..	NNE	¼	10
3. 20	29·215	40·1	37·2	2·9	35·0	5·1	N by W	..	N by W	¼	10
3. 50	29·239	39·6	36·6	3·0	..	..	N	..	NNW	¼	10
4. 20	29·272	38·9	36·6	2·3	..	..	N	..	NNW	¼	6
4. 50	29·302	38·4	36·3	2·1	..	..	N	..	NNW	¼	6
5. 20	29·325	37·6	35·7	1·9	..	..	N	..	N by W	¼	6
5. 50	29·370	36·8	35·2	1·6	..	..	N by E	..	N	¼	8
6. 20	29·381	36·0	34·7	1·3	..	..	Calm	..	N	¼	10
6. 50	29·364	36·3	34·9	1·4	..	..	Calm	..	N	¼	10
7. 20	29·438	35·8	34·4	1·4	..	..	Calm	..	N	¼	10
7. 50	29·463	34·5	33·3	1·2	..	..	Calm	..	N	¼	10
8. 20	29·468	34·0	32·9	1·1	..	..	Calm	..	Calm	..	4
8. 50	29·488	34·1	33·9	0·2	..	..	Calm	..	Calm	..	4
9. 20	29·503	33·1	32·2	0·9	31·0	2·1	Calm	..	Calm	..	4
10. 20	29·522	33·0	32·2	0·8	..	..	Calm	..	Calm	..	3
11. 20	29·537	33·3	32·5	0·8	..	..	SW	..	S	¼	7
21. 20	29·359	43·2	43·1	0·1	..	..	SSW	..	SSW	¼	10
22. 20	29·315	45·6	45·3	0·3	..	..	SSW	½ to 2	SSW	½+	10
Feb. 25. 3. 20	29·104	48·2	47·3	0·9	..	..	SW	4 constant	SW	1½	10
5. 20	29·065	48·4	47·4	1·0	..	..	SW	3 to 5	SW	1	10
13. 20	28·789	44·0	43·2	0·8	..	..	SSW	..	W	½	10
14. 0	28·753	..	..	..	..	..	SSW	½ constant	..	..	..
14. 30	28·744	..	..	..	..	..	SW	3 constant	..	..	..
15. 20	28·708	42·8	41·9	0·9	39·0	3·8	SW	2 to 3½	WSW	¾	9
16. 0	28·697	..	..	..	..	..	SW by W	1 to 2	..	..	..

Feb. 24^{d}. 6^{h}. 50^{m}. The reading of the Barometer at this time seems to be too small by 0$^{in.}$·05; if so, the reading should be 29$^{in.}$·414.

REMARKS.	Observer.
Overcast: rain falling.	J H
	D
,, cirro-stratus and scud: gusts of wind to $1\frac{1}{2}$.	
A large portion of the sky N. of the zenith is now clear; the rest of the sky is covered principally with scud.	
Cloudless.	
	D
Thin fleecy clouds begin to appear in all parts of the sky, but more particularly in the N.W.	G
Thin fleecy clouds scattered all over the sky: hazy: the Sun is shining dimly.	G
	P
Cirro-stratus and scud: wind in gusts to 1.	
Wind in gusts to 1.	
Cirro-stratus and scud: wind in gusts to 1.	
	P
	J H
	G
,, a great haze.	
	G
	D
Clear to the N. and E. of the zenith: fleecy clouds and scud in the remaining portion of the sky.	
	D
Scud in every direction, but chiefly N. of the zenith.	P
Cirro-stratus and scud.	
,,	P
,,	J H
,,	
,,	
Light fleecy clouds and scud; the clouds are principally N. of the zenith.	
Cirro-stratus and scud.	J H
Overcast: cirro-stratus and scud: rain falling.	D
,, ,, no rain falling.	
,, strong gusts of wind: rain has been falling in frequent and heavy showers the whole day.	
,, rain falling.	D
Cirro-stratus: very dark.	J H
Scud and cirro-stratus.	

Observations on February 22, 23, 24, 25, 26; and on March 11 and 12.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry Therm.	Dew Point.	Dew Point below Dry Therm.	WIND. From Osler's Anemometer. Direction.	Pressure in pounds per square foot.	By Estimation. Direction.	Force 0–6.	Amount of Clouds 0–10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.			
Feb. 25. 16 ·40	28 ·693	..	..	..	..	..	SW by W	½ to 1	..	..	..
17. 20	28 ·698	40 ·0	39 ·0	1 ·0	..	..	SW	½ constant	WSW	¾	8
17. 40	28 ·696	..	..	..	..	..	SW	½ constant	..	..	..
18. 40	28 ·675	..	..	..	..	..	SW	½ to 1	..	..	..
19. 20	28 ·667	41 ·2	39 ·9	1 ·3	..	..	SSW	½ to 3	SW	¾	5
20. 25	28 ·638	..	..	..	..	..	SSW	½ constant	..	..	..
20. 40	28 ·622	..	..	..	..	..	SSW	½ to 4½	..	..	..
21. 0	28 ·621	..	..	..	..	..	SW	0 to 1	..	..	..
21. 20	28 ·627	44 ·0	42 ·0	2 ·0	39 ·5	4 ·5	SW	½ to 3	SW	½	10
21. 40	28 ·616	..	..	..	..	..	SW	½ to 3	..	..	..
22. 10	28 ·605	..	..	..	..	..	SW	1 to 2	..	..	..
22. 40	28 ·589	..	..	..	..	..	SW	1½ to 3½	..	..	..
23. 0	28 ·567	..	..	..	..	..	SW	1 to 3½	..	..	..
23. 20	28 ·562	46 ·5	43 ·7	2 ·8	..	..	SW	1½ to 3½	SW	½	5
23. 42	28 ·555	..	..	..	..	..	WSW	½ to 1½	..	..	..
Feb. 26. 0. 2	28 ·544	..	..	..	..	..	WSW	1 to 2	..	..	..
0. 20	28 ·539	..	..	..	..	..	WSW	1½ to 2	..	..	..
0. 42	28 ·538	..	..	..	..	..	WSW	3 to 4	..	..	..
0. 57	28 ·530	..	..	..	..	..	WSW	1 to 3	..	..	..
1. 20	28 ·525	44 ·0	42 ·5	1 ·5	..	..	SW	1 to 4	SW	¾	10
3. 20	28 ·527	44 ·7	41 ·2	3 ·5	38 ·2	6 ·5	WSW	2 to 4½	SW	1½	9
3. 40	28 ·534	..	..	..	..	..	W by S	1 to 3½	..	..	..
5. 20	28 ·588	41 ·0	38 ·9	2 ·1	..	..	WNW	½ to 2½	SW	1	9
7. 20	28 ·668	37 ·5	37 ·5	0 ·0	..	..	WNW	0 to 1	WSW	¾	10
9. 20	28 ·773	34 ·2	33 ·5	0 ·7	32 ·0	2 ·2	N	2 to 3½	N	1	10
11. 20	28 ·898	32 ·5	32 ·0	0 ·5	..	..	N	2½ to 4	N	¾	10
12. 28	28 ·935	..	..	..	..	..	N	¼ to 2+	..	..	..
12. 47	28 ·947	..	..	..	..	..	N	0 to 1	..	..	..
13. 4	28 ·961	..	..	..	..	..	N	1 to 2	..	..	..
13. 20	29 ·010	32 ·0	30 ·2	1 ·8	..	..	N	1 to 2½	N	¾	10
15. 20	29 ·100	30 ·0	29 ·2	0 ·8	25 ·0	5 ·0	N	½ to 1	N	¾	8
Mar. 11. 21. 20	29 ·412	39 ·7	36 ·0	3 ·7	32 ·3	7 ·4	W	4 to 5	W by N	1½	2
23. 20	29 ·381	44 ·5	39 ·0	5 ·5	..	..	W by N	8 to 13	W	2	9
23. 35	..	34 ·8	34 ·9	−0 ·1	..	..	W by N	2 to 4	..	..	10
23. 40	..	34 ·9	34 ·9	0 ·0	..	..	W by N	2 to 3	..	..	10
23. 45	..	35 ·2	35 ·2	0 ·0	..	..	WNW	2 to 3	..	..	0
23. 55	..	37 ·0	36 ·8	0 ·2	..	..	WNW	3 constant	..	..	..
Mar. 12. 0. 0	..	37 ·5	37 ·4	0 ·1	..	..	WNW	3 to 4½	..	..	..
0. 5	..	38 ·0	37 ·8	0 ·2	..	..	WNW	3 to 4	..	..	..
0. 10	..	38 ·8	38 ·5	0 ·3	..	..	WNW	3 to 9	..	..	..
0. 15	..	39 ·6	38 ·7	0 ·9	..	..	WNW	5 to 12	..	..	0
0. 25	..	40 ·7	39 ·0	1 ·7	..	..	WNW	3 to 5	..	..	10
0. 30	..	40 ·5	38 ·4	2 ·1	..	..	WNW	3 to 5	..	..	..
0. 35	..	36 ·5	36 ·7	−0 ·2	..	..	WNW	3 to 5	..	..	..
0. 40	..	36 ·0	36 ·2	−0 ·2	..	..	WNW	4 to 7	..	..	..
0. 45	..	35 ·8	35 ·8	0 ·0	..	..	WNW	4 to 7	..	..	..
0. 50	..	37 ·5	37 ·5	0 ·0	..	..	WNW	4 to 7	..	..	0
0. 55	..	39 ·5	37 ·7	1 ·8	..	..	WNW	7 constant	..	..	..
1. 0	..	39 ·8	37 ·9	1 ·9	..	..	NW	5 to 7	..	..	..
1. 5	..	40 ·4	37 ·6	2 ·8	..	..	NW	4½ to 7	..	..	..
1. 20	29 ·366	40 ·3	37 ·2	3 ·1	..	..	NW	4½ to 8	WNW	2	3

Feb. 26ᵈ. 1ʰ. 20ᵐ. This was the lowest reading of the Barometer during the year.

REMARKS.	Observer.
	J H
Scud and vapour: the appearance of the sky is frequently changing, from the prevalence of vapour.	
Scud and large cumuli.	
	J H
	G
	G
Cirro-stratus and scud.	P
Scud and fleecy clouds, dark and lowering in the S., and of a white cumulo-stratus character in the N. N. E.: wind in moderate gusts to $\frac{3}{4}$.	
Overcast: a heavy squall of rain commenced at $1^h. 55^m$, and ended at $2^h. 5^m$: the wind in gusts to 1+: squally.	P
Cirro-stratus, cumulo-stratus, and scud.	J H
,, the wind in gusts.	
,, heavy rain.	
,, strong gusts of wind.	
,, the wind in gusts to 1.	J H
	P
Cirro-stratus. [covered with a thin layer of snow: at present no snow is falling.	
,, the stars are shining faintly in and around the zenith; the rest of the sky being still overcast: the ground is	P
Cumuli and light scud.	H B
Nearly overcast with cirro-stratus and dense scud: gusts of wind frequently to $2\frac{1}{2}$ and 3.	
A squall: snow and sleet falling: the reading of a thermometer placed on grass is 31°: gusts of wind to $3\frac{1}{2}$, and nearly constant.	
A great gloom prevails.	
The squall has ceased: every part of the sky is now cloudless.	
The thermometer on grass now reads 50°·0.	
Cloudless.	
Overcast.	
Another squall, but the gloom is not so great as before: the thermometer on grass now reads 44°.	
Sleet falling: wind in gusts to 3.	
The squall has now ceased.	
Cloudless.	
,,	
,,	
,,	
Cumuli, cirri, and light scud: frequent gusts of wind to $2\frac{1}{2}$.	

Observations on March 11 and 12; on October 14 and 15; and on December 21 and 22.

Greenwich Mean Solar Time, Astronomical Reckoning.	Barometer Corrected.	Dry Therm.	Wet Therm.	Wet Therm. below Dry. Therm.	Dew Point.	Dew Point below Dry Therm.	WIND. From Osler's Anemometer. Direction.	WIND. From Osler's Anemometer. Pressure in pounds per square foot.	WIND. By Estimation. Direction.	WIND. By Estimation. Force 0–6.	Amount of Clouds 0–10.
d h m	in.	°	°	°	°	°		from lbs. to lbs.			
Mar. 12. 1. 25	..	40 ·8	37 ·5	3 ·3	..	..	NW	6 to 8	..	..	..
1. 30	..	42 ·3	38 ·2	4 ·1	..	..	NW	5 to 8	..	..	..
1. 50	..	41 ·5	38 ·2	3 ·3	..	..	NW	5 to 11	..	..	..
1. 55	..	41 ·4	37 ·7	3 ·7	..	..	NW	5 to 11	..	..	..
3. 20	29 ·352	42 ·5	38 ·3	4 ·2	32 ·0	10 ·5	NW	4½ to 8	WNW	2½	8
Oct. 14. 11. 20	28 ·912	49 ·6	49 ·1	0 ·5	..	..	SW	0 to ½	SW	¾	0
13. 20	28 ·924	47 ·9	46 ·8	1 ·1	..	..	SW	0 to ½	SW	¾	0
15. 20	28 ·928	47 ·0	46 ·4	0 ·6	45 ·5	1 ·5	SW	..	SW	½	0
17. 20	28 ·908	46 ·9	45 ·8	1 ·1	..	..	SW	..	SW	½	0
19. 20	28 ·906	48 ·6	47 ·7	0 ·9	..	..	SSW	..	SSW	¼	6
21. 20	28 ·906	53 ·9	51 ·9	2 ·0	..	..	SW	0 to ½	WSW	½	2
22. 58	28 ·904	59 ·0	53 ·9	5 ·1	..	..	SSW	1½ to 3	..	..	..
23. 20	28 ·905	59 ·8	54 ·2	5 ·6	..	..	SSW	1 to 4	SW	¾	8
23. 50	28 ·901	60 ·1	54 ·4	5 ·7	..	..	SSW	1½ to 3½	..	..	..
Oct. 15. 0. 9	28 ·898	58 ·8	53 ·5	5 ·3	..	..	SSW	1½ to 4½	..	..	..
0. 31	28 ·900	57 ·2	53 ·4	3 ·8	..	..	SSW	½ to 2½	..	..	..
0. 38	28 ·901	58 ·6	54 ·4	4 ·2	..	..	SSW	¾ to 1½	..	..	..
0. 53	28 ·897	58 ·9	53 ·9	5 ·0	..	..	SSW	½ to 1	..	..	..
1. 20	28 ·895	58 ·0	53 ·5	4 ·5	..	..	SSW	½ to 2	SW	1	8
1. 57	28 ·888	58 ·2	54 ·3	3 ·9	..	..	SSW	½ to 3½	..	..	..
Dec. 21. 22. 10	30 ·137	31 ·8	31 ·4	0 ·4	..	..	ENE	½ to 1½	ENE	2	7
22. 20	30 ·132	32 ·0	31 ·6	0 ·4	..	..	ENE	½ to 3½	E	1	6
23. 20	30 ·127	32 ·0	31 ·1	0 ·9	..	..	ENE	0 to 3	E	1	7
Dec. 22. 0. 20	30 ·117	32 ·0	30 ·7	1 ·3	..	..	ENE	0 to 2	E	1	5
1. 20	30 ·097	32 ·0	30 ·3	1 ·7	..	..	ENE	0 to 1½	E	1	3
2. 40	30 ·083	31 ·8	30 ·4	1 ·4	..	..	ENE	0 to ½	E by N	¾	2
3. 20	30 ·069	32 ·0	31 ·1	0 ·9	..	..	NE	0 to ½	E by N	1	1
3. 55	30 ·070	32 ·3	31 ·0	1 ·3	..	..	NE	0 to ¾	NE	1	9¾
8. 30	30 ·076	30 ·8	30 ·6	0 ·2	..	..	NE	0 to ½	E by N	¼	8

Oct. 14ᵈ. and 15ᵈ. The extra observations were taken on account of the Barometer reading being so low.

REMARKS.	Observer.
	H B
	H B
Scud and vapour: the wind is blowing in strong gusts.	J H
Cloudless: the sky became clear at 10^h.	D
,,	
,,	
,,	
Cirro-stratus and scud: a few drops of rain are falling.	D
Cirri, scud, and fleecy clouds.	L
	H B
Cumuli, cumulo-strati, cirro-strati, and scud: gusts of wind to 1+.	L
	L
	H B
	H B
Cirro-stratus and scud.	L
	L
Cirro-stratus and scud.	L
Detached cumuli.	G
,,	
Detached cumuli.	
Detached cumuli and loose scud near the horizon all around: the zenith and the remainder of the sky is of a clear blue.	G
Cumuli and fragments of scud near the N. and S. horizon.	H B
Cirri about the zenith: cumuli and scud near the horizon.	L
Nearly overcast, with scud and cirro-stratus.	H B
Cumuli and scud: an extensive break near the zenith.	H B

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1844.	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	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. 1	0. 40. 0	Sun	30 ·0	30 ·5	+ 0 ·5					The Sun is in haze.	P
	41. 30	Shade	30 ·4	30 ·3	− 0 ·1	3 ·5				,, ,,	
	43. 0	Sun	30 ·6	36 ·8	+ 6 ·2	5 ·7				,, ,,	
	44. 30	Shade	39 ·2	40 ·2	+ 1 ·0	5 ·0				,, ,,	
	46. 0	Sun	40 ·5	46 ·4	+ 5 ·9	3 ·4	4 ·57	0. 46. 30	21	,, ,,	
	47. 30	Shade	46 ·9	51 ·0	+ 4 ·1	3 ·4				,, ,,	
	49. 0	Sun	52 ·0	61 ·2	+ 9 ·2	6 ·9				,, ,,	
	50. 30	Shade	62 ·0	62 ·2	+ 0 ·2					,, ,,	
	52. 0	Sun	63 ·0							The column of liquid broken.	
Feb. 1	0. 55. 0	Sun	52 ·4	59 ·8	+ 7 ·4					The haze is less dense.	
	56. 30	Shade	60 ·8	59 ·5	− 1 ·3	7 ·90	7 ·90	0. 57. 0	20		
	58. 0	Sun	60 ·0	65 ·8	+ 5 ·8						
Apr. 3	21. 59. 41	Sun	0 ·0	20 ·0	+20 ·0					The front glass on the instrument: a strong S.W. wind	G
	22. 1. 11	Shade	+10 ·2	−13 ·0	−23 ·2	44 ·2				is blowing.	
	2. 41	Sun	9 ·2	31 ·2	+22 ·0	44 ·7	44 ·10	22. 3. 11	38		
	4. 11	Shade	40 ·0	17 ·8	−22 ·2	43 ·4					
	5. 41	Sun	9 ·8	30 ·2	+20 ·4						
Apr. 3	22. 7. 41	Sun	26 ·5	24 ·0	− 2 ·5					The glass off.	
	9. 11	Shade	+24 ·0	−23 ·0	−47 ·0	42 ·3					
	10. 41	Sun	40 ·0	33 ·0	− 7 ·0	43 ·4	42 ·87	22. 11. 11	39		
	12. 11	Shade	80 ·5	27 ·5	−53 ·0	42 ·6					
	13. 41	Sun	21 ·0	7 ·2	−13 ·8						
Apr. 3	22. 28. 41	Sun	7 ·5	44 ·5	+37 ·0					The glass on: the sky clear and the air very nearly calm.	
	30. 11	Shade	49 ·0	54 ·5	+ 5 ·5	30 ·35	30 ·35	22. 30. 41	40		
	31. 41	Sun	56 ·8	91 ·5	+34 ·7						
Apr. 3	22. 34. 41	Sun	5 ·0	39 ·5	+34 ·5					The glass off.	
	36. 11	Shade	40 ·2	35 ·5	− 4 ·7	36 ·35	36 ·35	22. 36. 41	40		
	37. 41	Sun	35 ·2	64 ·0	+28 ·8						
Apr. 3	22. 39. 41	Sun	0 ·0	39 ·0	+39 ·0					The glass on.	
	41. 11	Shade	46 ·1	53 ·0	+ 6 ·9	30 ·65	30 ·65	22. 41. 41	41		
	42. 41	Sun	55 ·0	91 ·0	+36 ·0						
Apr. 3	22. 44. 41	Sun	0 ·0	29 ·0	+29 ·0					The glass off.	
	46. 11	Shade	30 ·0	23 ·2	− 6 ·8	35 ·70	35 ·70	22. 46. 41	41		
	47. 41	Sun	20 ·0	48 ·8	+28 ·8						
Apr. 3	22. 58. 41	Sun	0 ·0	35 ·0	+35 ·0						
	23. 0. 11	Shade	35 ·8	35 ·2	− 0 ·6	34 ·10	34 ·10	23. 0. 41	42½	The glass on.	
	1. 41	Sun	35 ·0	67 ·0	+32 ·0						
Apr. 3	23. 5. 41	Sun	0 ·7	25 ·2	+24 ·5						
	7. 11	Shade	25 ·0	12 ·5	−12 ·5	38 ·55	38 ·55	23. 7. 41	43	The glass off.	
	8. 41	Sun	7 ·5	35 ·2	+27 ·7						
Apr. 3	23. 9. 41	Sun	0 ·7	35 ·8	+35 ·1						
	11. 11	Shade	39 ·3	42 ·2	+ 2 ·9	32 ·55	32 ·55	23. 11. 41	43	The glass on.	
	12. 41	Sun	42 ·9	78 ·7	+35 ·8						

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	h m s		div.	div.	div.	div.	div.	h m s	°		
Apr. 3	23. 14. 41	Sun	0 ·0	24 ·0	+24 ·0						
	16. 11	Shade	31 ·8	17 ·0	−14 ·8	39 ·05	39 ·05	23. 16. 41	43	The glass off.	G
	17. 41	Sun	11 ·0	35 ·5	+24 ·5						
Apr. 3	23. 20. 41	Sun	27 ·5	63 ·0	+35 ·5						
	22. 11	Shade	65 ·5	65 ·5	0 ·0	33 ·90	33 ·90	23. 22. 41	43	The glass on.	
	23. 41	Sun	65 ·2	97 ·5	+32 ·3						
Apr. 3	23. 25. 41	Sun	0 ·0	18 ·0	+18 ·0						
	27. 11	Shade	25 ·0	4 ·5	−20 ·5	39 ·40	39 ·40	23. 27. 41	43	The glass off.	
	28. 41	Sun	0 ·2	20 ·0	+19 ·8						
Apr. 3	23. 30. 41	Sun	0 ·5	33 ·8	+33 ·3						
	32. 11	Shade	34 ·3	33 ·0	− 1 ·3	34 ·50	34 ·50	23. 32. 41	44	The glass on.	
	33. 41	Sun	30 ·9	64 ·0	+33 ·1						
Apr. 3	23. 35. 41	Sun	6 ·0	24 ·0	+18 ·0						
	37. 11	Shade	16 ·0	−6 ·0	−22 ·0	41 ·40	41 ·40	23. 37. 41	44	The glass off.	
	38. 41	Sun	9 ·0	29 ·8	+20 ·8						
Apr. 3	23. 40. 41	Sun	0 ·5	33 ·8	+33 ·3					The glass on.	
	42. 11	Shade	34 ·0	33 ·0	− 1 ·0	33 ·90	33 ·90	23. 42. 41	44		
	43. 41	Sun	30 ·3	62 ·8	+32 ·5						
Apr. 3	23. 46. 41	Sun	2 ·1	20 ·0	+17 ·9					The glass off.	
	48. 11	Shade	26 ·5	1 ·5	−25 ·0	41 ·70	41 ·70	23. 48. 41	44		
	49. 41	Sun	5 ·0	20 ·5	+15 ·5						
Apr. 3	23. 56. 41	Sun	0 ·0	29 ·2	+29 ·2					The glass on.	
	58. 11	Shade	29 ·2	25 ·0	− 4 ·2	33 ·80	33 ·80	23. 58. 41	44		
	59. 41	Sun	22 ·5	52 ·5	+30 ·0						
Apr. 4	0. 1. 41	Sun	56 ·5	78 ·8	+22 ·3					The glass off.	
	3. 11	Shade	72 ·0	50 ·0	−22 ·0	42 ·15	42 ·15	0. 3. 41	44		G
	4. 41	Sun	36 ·5	54 ·5	+18 ·0						
Apr. 4	0. 13. 41	Sun	3 ·2	36 ·2	+33 ·0					The glass on.	JH
	15. 11	Shade	35 ·8	32 ·0	− 3 ·8	35 ·55	35 ·55	0. 15. 41	44		
	16. 41	Sun	30 ·0	60 ·5	+30 ·5						
Apr. 4	0. 21. 41	Sun	21 ·3	43 ·0	+21 ·7					The glass off.	
	23. 11	Shade	34 ·8	15 ·7	−19 ·1	37 ·65	37 ·65	0. 23. 41	44		
	24. 41	Sun	6 ·6	22 ·0	+15 ·4						
Apr. 4	0. 26. 41	Sun	16 ·3	49 ·3	+33 ·0						
	28. 11	Shade	50 ·0	47 ·8	− 2 ·2	29 ·40	29 ·40	0. 28. 41	44	The glass on: currents of air passing.	
	29. 41	Sun	47 ·0	68 ·4	+21 ·4						
Apr. 4	0. 41. 41	Sun	50 ·0	76 ·0	+26 ·0						
	43. 11	Shade	55 ·8	8 ·0	−47 ·8	61 ·30	61 ·30	0. 43. 41	43	The glass off: currents of air passing: the wind blows occasionally, with a pressure of 1lb. on the square foot.	
	44. 41	Sun	−4 ·0	−3 ·0	+ 1 ·0						JH
Apr. 5	21. 55. 41	Sun	0 ·2	36 ·0	+35 ·8					The glass on.	D
	57. 11	Shade	41 ·7	52 ·8	+11 ·1	24 ·40	24 ·40	21. 57. 41	37½	,,	
	58. 41	Sun	58 ·0	93 ·2	+35 ·2					,,	

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	h m s		div.	div.	div.	div.	div.	h m s	°		
Apr. 5	22. 0. 41	Sun	0 ·3	37 ·5	+37 ·2					The glass off.	D
	2. 11	Shade	41 ·2	46 ·3	+ 5 ·1	31 ·70	31 ·70	22. 2. 41	38		
	3. 41	Sun	49 ·0	85 ·4	+36 ·4						
Apr. 5	22. 5. 41	Sun	0 ·0	38 ·5	+38 ·5					The glass on.	
	7. 11	Shade	45 ·2	55 ·2	+10 ·0	28 ·25	28 ·25	22. 7. 41	39		
	8. 41	Sun	60 ·0	98 ·0	+38 ·0						
Apr. 5	22. 13. 41	Sun	0 ·0	33 ·2	+33 ·2					The glass off.	
	15. 11	Shade	32 ·5	30 ·1	− 2 ·4	35 ·60	35 ·60	22. 15. 41	40		
	16. 41	Sun	(27 ·8	49·0)						,, clouds passing over.	D
Apr. 9	21. 57. 0	Sun	1 ·0	37 ·8	+36 ·8					The glass on.	G
	58. 30	Shade	46 ·5	58 ·0	+11 ·5	24 ·25	24 ·25	21. 59. 0	40		
	22. 0. 0	Sun	62 ·8	97 ·5	+34 ·7						
Apr. 9	22. 1. 0	Sun	1 ·0	40 ·0	+39 ·0					The glass off.	
	2. 30	Shade	45 ·2	52 ·2	+ 7 ·0	29 ·45	29 ·45	22. 3. 0	40		
	4. 0	Sun	56 ·0	89 ·9	+33 ·9						
Apr. 9	22. 8. 0	Sun	0 ·8	35 ·5	+34 ·7					The glass on.	
	9. 30	Shade	42 ·5	52 ·8	+10 ·3	25 ·55	25 ·55	22. 10. 0	41		
	11. 0	Sun	57 ·0	94 ·0	+37 ·0						
Apr. 9	22. 21. 0	Sun	3 ·5	37 ·0	+33 ·5					The glass on.	
	22. 30	Shade	44 ·2	50 ·5	+ 6 ·3	26 ·70	26 ·70	22. 23. 0	42		
	24. 0	Sun	53 ·5	86 ·0	+32 ·5						
Apr. 9	22. 26. 0	Sun	−0 ·2	+32 ·0	+32 ·2					The glass off.	
	27. 30	Shade	32 ·5	28 ·9	− 3 ·6	33 ·65	33 ·65	22. 28. 0	43		
	29. 0	Sun	27 ·8	55 ·7	+27 ·9						
Apr. 9	22. 31. 0	Sun	0 ·0	36 ·2	+36 ·2					The glass on.	
	32. 30	Shade	41 ·0	47 ·0	+ 6 ·0	28 ·60	28 ·60	22. 33. 0	43		
	34. 0	Sun	49 ·0	82 ·0	+33 ·0						
Apr. 9	22. 45. 0	Sun	−1 ·5	+29 ·0	+30 ·5					The glass off.	
	46. 30	Shade	26 ·2	19 ·0	− 7 ·2	36 ·00	36 ·00	22. 47. 0	44		
	48. 0	Sun	14 ·9	42 ·0	+27 ·1						
Apr. 9	22. 50. 0	Sun	35 ·8	69 ·8	+34 ·0					The glass on.	
	51. 30	Shade	73 ·3	76 ·0	+ 2 ·7	32 ·25	32 ·25	22. 52. 0	44		
	53. 0	Sun	1 ·1	37 ·0	+35 ·9					The compressing screw withdrawn.	
Apr. 9	22. 57. 0	Sun	1 ·5	22 ·5	+21 ·0					The glass off.	
	58. 30	Shade	17 ·5	5 ·5	−12 ·0	34 ·55	34 ·55	22. 59. 0	44		
	23. 0. 0	Sun	0 ·1	24 ·2	+24 ·1						
Apr. 9	23. 2. 0	Sun	0 ·0	34 ·0	+34 ·0					The glass on.	
	3. 30	Shade	37 ·0	38 ·5	+ 1 ·5	32 ·10	32 ·10	23. 4. 0	45		
	5. 0	Sun	38 ·8	72 ·0	+33 ·2						
Apr. 9	23. 7. 0	Sun	1 ·0	24 ·2	+23 ·2					The glass off.	G
	8. 30	Shade	19 ·0	5 ·2	−13 ·8	36 ·65	36 ·65	23. 9. 0	45		
	10. 0	Sun	−0 ·3	+22 ·2	+22 ·5						

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	h m s		div.	div.	div.	div.	div.	h m s	°		
Apr. 9	23. 20. 0	Sun	0 ·0	31 ·0	+31 ·0					The glass on.	D
	21. 30	Shade	31 ·5	30 ·6	− 0 ·9	31 ·45	31 ·45	23. 22. 0	46		
	23. 0	Sun	29 ·7	59 ·8	+30 ·1						
Apr. 9	23. 26. 0	Sun	0 ·0	21 ·4	+21 ·4					The glass off.	
	27. 30	Shade	16 ·8	2 ·5	−14 ·3	36 ·00	36 ·00	23. 28. 0	46		
	29. 0	Sun	0 ·0	22 ·0	+22 ·0						
Apr. 9	23. 31. 0	Sun	17 ·0	50 ·0	+33 ·0					The glass on.	
	32. 30	Shade	51 ·8	51 ·0	− 0 ·8	32 ·90	32 ·90	23. 33. 0	46		
	34. 0	Sun	50 ·3	81 ·5	+31 ·2						
Apr. 9	23. 36. 0	Sun	75 ·2	98 ·0	+22 ·8					The glass off.	
	37. 30	Shade	88 ·0	68 ·1	−19 ·9	39 ·80	39 ·80	23. 38. 0	46		
	39. 0	Sun	59 ·0	76 ·0	+17 ·0						
Apr. 9	23. 41. 0	Sun	0 ·0	31 ·1	+31 ·1					The glass on.	
	42. 30	Shade	31 ·9	30 ·4	− 1 ·5	32 ·75	32 ·75	23. 43. 0	46		
	44. 0	Sun	29 ·7	61 ·1	+31 ·4						
Apr. 9	23. 46. 0	Sun	57 ·0	73 ·8	+16 ·8					The glass off.	
	47. 30	Shade	60 ·0	41 ·9	−18 ·1	34 ·60	34 ·60	23. 48. 0	46		
	49. 0	Sun	32 ·8	49 ·0	+16 ·2						
Apr. 9	23. 51. 0	Sun	36 ·7	67 ·5	+30 ·8					The glass on.	
	52. 30	Shade	67 ·9	65 ·3	− 2 ·6	33 ·35	33 ·35	23. 53. 0	46		
	54. 0	Sun	64 ·0	94 ·7	+30 ·7						
Apr. 9	23. 56. 0	Sun	72 ·0	92 ·8	+20 ·8					The glass off.	D
	57. 30	Shade	84 ·1	66 ·3	−17 ·8	38 ·10	38 ·10	23. 58. 0	46		
	59. 0	Sun	57 ·4	77 ·2	+19 ·8						
Apr. 10	0. 3. 0	Sun	1 ·0	29 ·0	+28 ·0					The glass on.	G
	4. 30	Shade	29 ·8	26 ·8	− 3 ·0	31 ·50	31 ·50	0. 5. 0	46		
	6. 0	Sun	25 ·0	54 ·0	+29 ·0						
Apr. 10	0. 8. 0	Sun	19 ·2	38 ·0	+18 ·8					The glass off.	
	9. 30	Shade	29 ·8	11 ·9	−17 ·9	36 ·75	36 ·75	0. 10. 0	46		
	11. 0	Sun	2 ·9	21 ·8	+18 ·9						
Apr. 10	0. 13. 0	Sun	8 ·9	38 ·0	+29 ·1					The glass on.	
	14. 30	Shade	33 ·1	30 ·0	− 3 ·1	32 ·80	32 ·80	0. 15. 0	46		
	16. 0	Sun	28 ·2	58 ·5	+30 ·3						
Apr. 10	0. 18. 0	Sun	7 ·5	25 ·2	+17 ·7					The glass off.	
	19. 30	Shade	19 ·0	2 ·2	−16 ·8	34 ·15	34 ·15	0. 20. 0	46		
	21. 0	Sun	1 ·0	18 ·0	+17 ·0						
Apr. 10	0. 23. 0	Sun	4 ·8	29 ·5	+24 ·7					The glass on.	
	24. 30	Shade	37 ·5	37 ·7	+ 0 ·2	26 ·80	26 ·80	0. 25. 0	46		
	26. 0	Sun	37 ·2	66 ·5	+29 ·3						
Apr. 10	0. 46. 0	Sun	4 ·0	32 ·0	+28 ·0					The glass on.	
	47. 30	Shade	31 ·1	25 ·2	− 5 ·9	33 ·15	33 ·15	0. 48. 0	45		G
	49. 0	Sun	20 ·0	46 ·5	+26 ·5						

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	h m s		div	div.	div.	div.	div.	h m s	°		
Apr. 10	1. 8. 0	Sun	0·2	27·8	+27·6					The glass on..	D
	9. 30	Shade	25·2	17·9	− 7·3	34·20	34·20	1. 10. 0	44		
	11. 0	Sun	13·9	40·1	+26·2						
Apr. 10	1. 13. 0	Sun	39·7	48·8	+ 9·1					The glass off.	
	14. 30	Shade	34·9	2·8	−32·1	45·10	45·10	1. 15. 0	44		
	16. 0	Sun	6·1	23·0	+16·9						
Apr. 10	1. 18. 0	Sun	6·6	34·0	+27·4					The glass on.	
	19. 30	Shade	32·2	27·2	− 5·0	32·45	32·45	1. 20. 0	43		
	21. 0	Sun	24·8	52·3	+27·5						
Apr. 10	1. 23. 0	Sun	41·0	58·8	+17·8					The glass off: slights currents of air.	D
	24. 30	Shade	49·0	22·2	−26·8	41·60	41·60	1. 25. 0	43		
	26. 0	Sun	7·0	18·8	+11·8						
Apr. 10	1. 44. 0	Sun	10·0	44·0	+34·0					The glass on: currents of air.	G
	45. 30	Shade	45·2	41·5	− 3·7	37·70	37·70	1. 46. 0	41		
	47. 0	Sun	41·0	75·0	+34·0						
Apr. 10	3. 28. 0	Sun	1·2	32·8	+31·6					The glass on: currents of air.	JH
	29. 30	Shade	34·2	34·3	+ 0·1	29·0					
	31. 0	Sun	34·8	61·3	+26·5	26·3	27·40	3. 32. 15	29		
	32. 30	Shade	62·8	63·2	+ 0·4	26·9					
	34. 0	Sun	63·5	91·6	+28·1						
	35. 30	Shade	93·2	93·3							
Apr. 10	3. 40. 0	Sun	0·0	21·1	+21·1						
	41. 30	Shade	21·5	20·5	− 1·0	23·3					
	43. 0	Sun	19·3	42·7	+23·4	24·2					
	44. 30	Shade	43·6	43·0	− 0·6	24·5					
	46. 0	Sun	42·8	67·2	+24·4	25·2					
	47. 30	Shade	68·2	67·2	− 1·0	24·8				The compressing screw withdrawn.	
	49. 0	Sun	1·0	24·2	+23·2	24·1	22·78	3. 49. 30	26		
	50. 30	Shade	24·7	24·0	− 0·7	22·2					
	52. 0	Sun	23·4	43·2	+19·8	22·0					
	53. 30	Shade	43·5	41·9	− 1·6	20·4					
	55. 0	Sun	41·1	58·8	+17·7	20·0					
	56. 30	Shade	58·1	55·2	− 2·9	19·9					
	58. 0	Sun	53·8	70·0	+16·2						
Apr. 10	4. 3. 0	Sun	0·0	15·8	+15·8						
	4. 30	Shade	15·0	12·8	− 2·2	16·6					
	6. 0	Sun	11·0	24·0	+13·0	15·8					
	7. 30	Shade	22·8	19·4	− 3·4	18·1					
	9. 0	Sun	17·5	33·8	+16·3	20·0					
	10. 30	Shade	32·7	28·8	− 3·9	21·3	20·03	4. 10. 15	23		
	12. 0	Sun	26·3	44·8	+18·5	22·8					
	13. 30	Shade	43·9	39·2	− 4·7	23·0					
	15. 0	Sun	37·3	55·4	+18·1	22·6					
	16. 30	Shade	54·7	50·5	− 4·2	17·5					
	18. 0	Sun	48·5	57·0	+ 8·5	13·0	11·04	4. 20. 0	22		
	19. 30	Shade	55·8	51·0	− 4·8	12·1					

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	h m s		div.	div.	div.	div.	div.	h m s	°		
Apr. 10	4.21. 0	Sun	48·2	54·2	+ 6·0	8·4					J H
	22. 30	Shade	47·2	47·2	0·0	4·2					
	24. 0	Sun	44·3	46·8	+ 2·5					The Sun is shining through haze.	
Apr. 10	4. 30. 0	Sun	0·0	18·1	+18·1						
	31. 30	Shade	16·4	12·2	− 4·2	22·8					
	33. 0	Sun	10·2	29·2	+19·0	22·7					
	34. 30	Shade	28·2	25·0	− 3·2	22·5					
	36. 0	Sun	23·2	42·8	+19·6	22·7					
	37. 30	Shade	42·0	39·1	− 2·9	21·9					
	39. 0	Sun	37·2	55·5	+18·3	21·3					
	40. 30	Shade	54·8	51·8	− 3·0	21·3					
	42. 0	Sun	49·7	68·0	+18·3	21·0					
	43. 30	Shade	67·2	64·8	− 2·4	20·2	21·25	4. 44. 0	18		
	45. 0	Sun	63·8	81·0	+17·2	20·0					
	46. 30	Shade	80·3	77·2	− 3·1	21·2					
	48. 0	Sun	1·5	20·4	+18·9	21·9				The compressing screw withdrawn.	
	49. 30	Shade	19·0	16·2	− 2·8	21·5					
	51. 0	Sun	14·6	33·0	+18·4	21·7					
	52. 30	Shade	33·0	29·2	− 3·8	20·4					
	54. 0	Sun	27·2	42·0	+14·8	18·7					
	55. 30	Shade	40·8	36·8	− 4·0	19·5					
	57. 0	Sun	34·7	50·8	+16·1						
Apr. 10	5. 25. 0	Sun	1·9	14·2	+12·3						
	26. 30	Shade	12·3	8·8	− 3·5	15·1					
	28. 0	Sun	6·1	17·0	+10·9	14·8					
	29. 30	Shade	15·2	10·9	− 4·3	14·2	13·94	5. 30. 0	11		
	31. 0	Sun	8·6	17·4	+ 8·8	13·3					
	32. 30	Shade	15·7	11·1	− 4·6	12·3					
	34. 0	Sun	9·4	16·0	+ 6·6						
May 6	21. 49. 0	Sun	15·2	62·5	+47·3						
	50. 30	Shade	70·2	82·0	+11·8	33·6					
	52. 0	Sun	3·8	47·3	+43·5	32·1				The screw withdrawn.	
	53. 30	Shade	52·0	63·0	+11·0	27·1				Cirrus.	
	55. 0	Sun	0·0	32·8	+32·8	22·9					
	56. 30	Shade	38·3	47·1	+ 8·8	25·7	30·16	21. 57. 45	48		
	58. 0	Sun	51·2	87·3	+36·1	28·1					
	21. 59. 30	Shade	1·5	8·8	+ 7·3	30·9				The screw withdrawn.	
	22. 1. 0	Sun	12·8	53·0	+40·2	32·9					
	2. 30	Shade	58·8	66·2	+ 7·4	32·8				The screw withdrawn.	
	4. 0	Sun	0·0	40·2	+40·2	35·5					
	5. 30	Shade	45·2	47·2	+ 2·0	39·8					
	7. 0	Sun	55·1	98·5	+43·4	39·4				The screw withdrawn.	
	8. 30	Shade	0·1	6·2	+ 6·1	36·1					
	10. 0	Sun	9·2	50·1	+40·9	35·8	37·30	22. 11. 15	49		
	11. 30	Shade	54·0	58·1	+ 4·1	37·5					
	13. 0	Sun	1·0	43·2	+42·2	38·6				The screw withdrawn.	
	14. 30	Shade	47·0	50·2	+ 3·2	36·7					
	16. 0	Sun	52·8	90·4	+37·6	34·5					
	17. 30	Shade	1·3	4·4	+ 3·1	36·5				The screw withdrawn.	
	19. 0	Sun	6·2	47·8	+41·6	38·9					
	20. 30	Shade	50·8	53·2	+ 2·4	34·9					

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.

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1844.	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	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	°		
May 6	22. 22. 0	Sun	55 ·0	88 ·0	+33 ·0	30 ·7					JH
	23. 30	Shade	90 ·5	92 ·8	+ 2 ·3	33 ·3	35 ·13	22. 24. 0	51		
	25. 0	Sun	1 ·1	39 ·3	+38 ·2	35 ·9				The compressing screw withdrawn.	
	26. 30	Shade	41 ·8	44 ·2	+ 2 ·4	35 ·2					
	28. 0	Sun	45 ·0	82 ·0	+37 ·0	35 ·1					
	29. 30	Shade	82 ·8	84 ·2	+ 1 ·4	35 ·7				The compressing screw withdrawn.	
	31. 0	Sun	0 ·8	38 ·0	+37 ·2						
May 6	23. 20. 0	Sun	4 ·0	42 ·8	+38 ·8						
	21. 30	Shade	45 ·0	46 ·2	+ 1 ·2	35 ·8				Fleecy clouds around the Sun.	
	23. 0	Sun	46 ·5	81 ·8	+35 ·3	32 ·9					
	24. 30	Shade	83 ·4	87 ·0	+ 3 ·6	43 ·6				Clear.	
	26. 0	Sun	1 ·8	40 ·8	+39 ·0	36 ·2				,, the compressing screw withdrawn.	
	27. 30	Shade	43 ·0	45 ·0	+ 2 ·0	36 ·9	36 ·61	23. 27. 15	55		
	29. 0	Sun	45 ·4	84 ·3	+38 ·9	37 ·3					
	30. 30	Shade	86 ·0	87 ·3	+ 1 ·3	36 ·0					
	32. 0	Sun	1 ·1	36 ·8	+35 ·7	34 ·2				,, the compressing screw withdrawn.	
	33. 30	Shade	39 ·0	40 ·8	+ 1 ·8	21 ·2					
	35. 0	Sun	40 ·5	50 ·8	+10 ·3	9 ·9	16 ·00	23. 35. 30	55	Light clouds about the Sun.	
	36. 30	Shade	50 ·0	49 ·0	− 1 ·0	16 ·9				Sun again clear.	
	38. 0	Sun	47 ·4	68 ·8	+21 ·4					Light fleecy clouds again around the Sun.	
May 8	23. 37. 22	Sun	0 ·2	48 ·2	+48 ·0						
	38. 52	Shade	57 ·2	71 ·5	+14 ·3	32 ·70	32 ·70	23. 39. 22	56		
	40. 22	Sun	1 ·9	48 ·8	+46 ·9						
May 9	0. 0. 22	Sun	3 ·8	41 ·5	+37 ·7						
	1. 52	Shade	45 ·9	52 ·8	+ 6 ·9	33 ·6					
	3. 22	Sun	2 ·0	45 ·2	+43 ·2	36 ·1					
	4. 52	Shade	50 ·1	57 ·4	+ 7 ·3	35 ·3					
	6. 22	Sun	1 ·7	43 ·6	+41 ·9	34 ·9					
	7. 52	Shade	48 ·3	55 ·1	+ 6 ·8	35 ·3					
	9. 22	Sun	1 ·0	43 ·2	+42 ·2	35 ·7	35 ·15	0. 9. 52	56		
	10. 52	Shade	47 ·9	54 ·1	+ 6 ·2	35 ·7					
	12. 22	Sun	1 ·6	43 ·2	+41 ·6	36 ·0					
	13. 52	Shade	47 ·2	52 ·2	+ 5 ·0	35 ·1					
	15. 22	Sun	54 ·2	92 ·8	+38 ·6	33 ·9				Light vapour.	
	16 ·52	Shade	0 ·8	5 ·2	+ 4 ·4	35 ·1				The compressing screw withdrawn.	
	18. 22	Sun	7 ·8	48 ·2	+40 ·4						JH
June 23	23. 40. 0	Sun	0 ·0	51 ·4	+51 ·4					The wind was strong, but the instrument was well sheltered.	D
	41. 30	Shade	56 ·0	62 ·2	+ 6 ·2	43 ·7					
	43. 0	Sun	0 ·8	49 ·1	+48 ·3	43 ·2					
	44. 30	Shade	52 ·3	56 ·4	+ 4 ·1	40 ·6					
	46. 0	Sun	1 ·0	42 ·0	+41 ·0	38 ·0	40 ·98	23. 45. 45	62	The Sun in a cumulus for seven seconds.	
	47. 30	Shade	44 ·0	46 ·0	+ 2 ·0	39 ·6				A cumulus passing over.	
	49. 0	Sun	47 ·0	89 ·2	+42 ·2	41 ·0					
	50. 30	Shade	90 ·3	90 ·7	+ 0 ·4	42 ·7					
	52. 0	Sun	0 ·3	44 ·2	+43 ·9	44 ·0	43 ·68	23. 52. 30	62		
	53. 30	Shade	45 ·7	45 ·2	− 0 ·5	44 ·5					
	55. 0	Sun	44 ·8	88 ·8	+44 ·0	44 ·7					
	56. 30	Shade	89 ·7	88 ·9	− 0 ·8	44 ·7				The Sun was in a cumulus at $56^m. 53^s$.	
	58. 0	Sun	0 ·0	43 ·8	+43 ·8	40 ·2					
	59. 30	Shade	43 ·8	41 ·9	− 1 ·9	44 ·8	42 ·77	0. 0. 45	62		

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, 1844.	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	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 24	0. 1. 0	Sun	40·7	82·7	+42·0	44·3					D
	2. 30	Shade	82·6	79·9	− 2·7	44·5					
	4. 0	Sun	1·0	42·6	+41·6	44·9					
	5. 30	Shade	42·1	38·3	− 3·8	34·2				The Sun was in a cumulus at 6^{m}. 10^{s}.	
	7. 0	Sun	36·0	55·2	+19·2	24·0				The Sun is partially covered, it emerged from the clouds	
	8. 30	Shade	53·8	48·0	− 5·8	35·4				at 8^{m}. 10^{s}.	
	10. 0	Sun	45·1	85·0	+39·9	45·6					
	11. 30	Shade	84·0	78·4	− 5·6	39·6					
	13. 0	Sun	−0·2	27·7	+27·9	34·1					
	14. 30	Shade	25·0	18·4	− 6·6	40·2	39·41	0. 14. 15	62	The Sun was partially obscured during 25 seconds.	
	16. 0	Sun	15·2	54·5	+39·3	46·0					
	17. 30	Shade	52·1	45·3	− 6·8	46·1					
	19. 0	Sun	41·8	81·1	+39·3	46·1					
	20. 30	Shade	79·0	72·3	− 6·7	37·3				The Sun is partially obscured.	
	22. 0	Sun	68·7	90·5	+21·8					Large clouds generally collecting.	
July 21	23. 48. 0	Sun	0·0	47·8	+47·8					Cloudless.	
	49. 30	Shade	51·8	56·8	+ 5·0	41·9					
	51. 0	Sun	59·0	105·0	+46·0	42·2					
	52. 30	Shade	0·0	2·6	+ 2·6	42·8				The compressing screw withdrawn.	
	54. 0	Sun	3·8	48·6	+44·8	43·5					
	55. 30	Shade	49·8	49·8	0·0	43·9					
	57. 0	Sun	49·4	92·3	+42·9	43·7					
	58. 30	Shade	0·0	−1·5	− 1·5	44·2				The compressing screw withdrawn.	
July 22	0. 0. 0	Sun	0·0	42·4	+42·4	44·6	43·72	0. 0. 30	58		
	1. 30	Shade	41·8	39·0	− 2·8	44·4					
	3. 0	Sun	37·2	78·1	+40·9	44·2					
	4. 30	Shade	76·9	73·1	− 3·8	43·9					
	6. 0	Sun	−0·5	+38·8	+39·3	43·7				The compressing screw withdrawn.	
	7. 30	Shade	37·7	32·8	− 4·9	43·9					
	9. 0	Sun	30·2	68·8	+38·6	44·1					
	10. 30	Shade	66·8	60·7	− 6·1	44·8					
	12. 0	Sun	57·8	96·5	+38·7						
July 22	0. 17. 0	Sun	26·3	62·9	+36·6					Cloudless.	
	18. 30	Shade	60·2	52·8	− 7·4	44·2					
	20. 0	Sun	48·8	85·7	+36·9	44·5					
	21. 30	Shade	82·8	75·0	− 7·8	45·2					
	23. 0	Sun	0·0	38·0	+38·0	46·3				The compressing screw withdrawn.	
	24. 30	Shade	35·0	26·3	− 8·7	46·6					
	26. 0	Sun	22·2	60·0	+37·8	46·1					
	27. 30	Shade	55·8	47·9	− 7·9	45·1					
	29. 0	Sun	42·2	78·8	+36·6	45·2					
	30. 30	Shade	75·2	65·9	− 9·3	46·1	46·30	0. 30. 15	58		
	32. 0	Sun	61·2	98·2	+37·0	46·4					
	33. 30	Shade	93·8	84·3	− 9·5	46·9					
	35. 0	Sun	0·0	37·8	+37·8	47·5				The compressing screw withdrawn.	
	36. 30	Shade	33·7	23·7	−10·0	47·7					
	38. 0	Sun	18·0	55·5	+37·5	47·8					
	39. 30	Shade	51·5	40·9	−10·6	47·9					
	41. 0	Sun	35·7	72·8	+37·1	47·3					
	42. 30	Shade	68·6	58·8	− 9·8						D

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, 1844.	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	°		
July 22	3. 52. 0	Sun	0 ·0	35 ·2	+35 ·2					Cloudless.	P
	53. 30	Shade	42 ·8	44 ·0	+ 1 ·2	34 ·1					
	55. 0	Sun	60 ·0	95 ·3	+35 ·3	34 ·5					
	56. 30	Shade	96 ·8	97 ·2	+ 0 ·4	33 ·7					
	58. 0	Sun	15 ·0	47 ·8	+32 ·8	32 ·2				The compressing screw withdrawn.	
	59. 30	Shade	56 ·0	56 ·9	+ 0 ·9	33 ·4				Currents of air.	
	4. 1. 0	Sun	15 ·5	51 ·3	+35 ·8	35 ·1				The compressing screw withdrawn.	
	2. 30	Shade	53 ·0	53 ·6	+ 0 ·6	35 ·2					
	4. 0	Sun	15 ·7	51 ·5	+35 ·8	35 ·0	34 ·56	4. 4. 30	34	The compressing screw withdrawn.	
	5. 30	Shade	52 ·0	53 ·0	+ 1 ·0	35 ·1					
	7. 0	Sun	14 ·9	51 ·3	+36 ·4	35 ·6				The compressing screw withdrawn.	
	8. 30	Shade	52 ·6	53 ·2	+ 0 ·6	35 ·1					
	10. 0	Sun	16 ·5	51 ·5	+35 ·0	34 ·8				The compressing screw withdrawn.	
	11. 30	Shade	52 ·2	52 ·0	− 0 ·2	35 ·8					
	13. 0	Sun	16 ·2	52 ·3	+36 ·1	36 ·6				The compressing screw withdrawn.	
	14. 30	Shade	53 ·2	52 ·5	− 0 ·7	32 ·5					
	16. 0	Sun	16 ·5	44 ·0	+27 ·5					The column of liquid broken: the compressing screw withdrawn.	
July 22	4. 20. 0	Sun	0 ·0	32 ·3	+32 ·3						
	21. 30	Shade	32 ·0	29 ·5	− 2 ·5	34 ·8					
	23. 0	Sun	44 ·0	76 ·2	+32 ·2	34 ·7					
	24. 30	Shade	75 ·5	73 ·1	− 2 ·4	34 ·8	34 ·93	4. 25. 0	30		
	26. 0	Sun	14 ·5	47 ·1	+32 ·6	35 ·3				The compressing screw withdrawn.	
	27. 30	Shade	46 ·3	43 ·3	− 3 ·0	35 ·2					
	29. 0	Sun	58 ·5	90 ·2	+31 ·7					The compressing screw withdrawn.	

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.

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1844.	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 Occurrence of Sparks.	Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	° °	° °	° °	sec.	h m	h m	in.	sp. sec.
Jan. 6. 3. 25 to 6. 11. 0	Pos.	1 to 15	. .	. .	. .	. .	15	8. 0	. .	. .	. . .
10. 5. 25 to 10. 11. 50	Pos.	7 to 40	. .	. .	. .	. .	Instantly	8. 25	. .	. .	. . .
10. 21. 20 to 11. 13. 20	Pos.	7 to 40	. .	. .	. .	. .	Instantly	13. 20	. .	. .	. . .
12. 0. 47 to 12. 1. 5	Pos.	10 to 40	. .	. .	. .	. .	. .	0. 52	. .	. .	. . .
12. 11. 0 to 12. 17. 4	Neg.	40	. .	. .	. .	. .	Instantly	12. 20	. .	. .	. . .
12. 17. 30 to 12. 18. 7	Neg.	5 to 30	. .	. .	. .	. .	. .	17. 30	. .	. .	. . .
15. 7. 25 to 15. 11. 30	Pos.	10 to 40	. .	. .	. .	. .	5^s to 20^s	9. 0	. .	. .	. . .
15. 13. 15 to 15. 19. 30	Pos.	15 to 30	. .	. .	. .	. .	90 to 120	19. 30	. .	. .	. . .
15. 21. 20 to 15. 21. 25	Neg.	15 to 25	. .	. .	. .	. .	. .	21. 25	. .	. .	. . .
15. 21. 55 to 15. 22. 5	Pos.	3 to 7	. .	. .	. .	. .	. .	21. 59	. .	. .	. . .
15. 23. 50 to 16. 1. 30	Pos.	10 to 40	. .	. .	. .	. .	5 to 10	0. 20	. .	. .	. . .
16. 5. 5 to 16. 7. 10	Pos.	20 to 35	. .	. .	. .	. .	20 to 40	7. 10	. .	. .	. . .
16. 9. 12 to 16. 17. 25	Pos.	20 to 30	. .	. .	. .	. .	15 to 40	11. 10	. .	. .	. . .
16. 19. 3 to 16. 21. 10	Pos.	10 to 40	. .	. .	. .	. .	10 to 35	19. 40	. .	. .	. . .
17. 9. 24	Pos.	40	. .	. .	. .	. .	Instantly	. .	. .	. .	Strong sparks
17. 11. 0 to 17. 16. 0	Pos.	15 to 30	. .	. .	. .	. .	Instantly	13. 0	11. 0	. .	A weak spark
17. 17. 0 to 17. 18. 0	Pos.	2 to 8	. .	. .	. .	. .	. .	17. 0	. .	. .	. . .
18. 5. 0 to 18. 9. 0	Pos.	2 to 5	. .	. .	. .	. .	. .	6. 0	. .	. .	. . .
22. 0. 0 to 22. 11. 0	Pos.	15 to 35	. .	. .	. .	. .	. .	8. 15	. .	. .	. . .
22. 21. 0 to 23. 9. 0	Pos.	10 to 35	. .	. .	. .	. .	Variable	21. 50	. .	. .	. . .
24. 6. 30 to 24. 11. 30	Pos.	5 to 30	. .	. .	. .	. .	30 to 35	7. 10	. .	. .	. . .
30. 19. 0 to 30. 21. 0	Neg.	Very weak	. .	. .	. .	. .	. .	. .	. .	. .	. . .
30. 23. 30	. .	. .	. .	. .	. .	. .	. .	. .	23. 30	0·05 to 0·13	2 in 1
											1 in 1
31. 6. 0 to 31. 9. 0	Neg.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .
Feb. 1. 7. 0 to 1. 9. 10	Pos.	15 to 20	. .	30 to 60	25 to 50	. .	10^m	9. 10	. .	. .	. . .
1. 11. 25 to 1. 17. 20	Neg.	Very weak	. .	. .	. .	. .	. .	. .	. .	. .	. . .
8. 11. 30 to 8. 11. 45	Pos.	5	. .	12 to 15	4	. .	1^m	11. 30	. .	. .	. . .
9. 10. 55 to 9. 11. 35	Neg.	20 to 35	. .	30 to 50	25 to 50	. .	10^s to 20^s	11. 20	11. 5	0·10	A spark
									11. 20	0·10	,,
									11. 30	0·10	,,
9. 11. 40 to 9. 11. 54	Neg.	3 to 40	. .	0 to 50	. .	. .	. .	11. 48	. .	. .	. . .
9. 16. 10 to 9. 16. 26	Neg.	10 to 40	. .	0 to 50	. .	. .	. .	16. 21	16. 23	0·10	A spark
									16. 24	0·10	,,
18. 23. 0 to 18. 23. 46	Neg.	2 to 40	. .	0 to 50	0 to 40	. .	5	23. 5	. .	. .	. . .
19. 7. 24 to 19. 7. 31	Neg. & Pos.	0 to 25	. .	0 to 35	10 to 30	. .	. .	7. 27	. .	. .	. . .
20. 21. 38	Pos.	10	. .	10	10	. .	. .	. .	. .	. .	. . .
22. 11. 20 to 22. 14. 0	Pos.	10 to 35	. .	5 to 20	15 to 40	. .	. .	12. 0	11. 20	0·05	A faint spark
									11. 45	0·05	,,
									12. 0	0·05	,,
23. 4. 50 to 23. 6. 12	Neg.	10 to 40	. .	5 to 25	5 to 45	. .	. .	5. 33	5. 5	0·05	A spark
									5. 23	0·10	,,
									5. 25	0·10	,,
									5. 33	0·10	,,
									5. 38	0·05	,,
									5. 45	0·04	,,
									5. 56	0·03	,,
26. 1. 12 to 26. 1. 55	Neg.	25 to 40	. .	30 to 50	40 to 100	. .	1 to 15	1. 26	1. 12	0·03	1 in 1
									1. 21	0·12	1 in 3
									1. 22	0·15	1 in 10
									1. 28	0·08	A spark

During every series of observations the ball at one end of the Galvanometer wire was placed frequently in connexion with the vertical rods of the electrical apparatus described in the Introduction; the other end of the wire being constantly in communication with the ground. The instances recorded above are the only ones in which a galvanic current has been shewn, and it may be considered that no current existed at any other times.

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.	REMARKS.	Observer.
°	°		from lbs. to lbs.		
		SW	0 to 1	The sky is clear, with the exception of a few cumuli and detached fragments of scud.	J H
		SW		A thin cirro-stratus generally covers the sky.	J H & G
		Calm		Overcast: cirro-stratus.	G
		S		,, ,,	G
		SSE		Rain is falling.	D
		Calm		,,	D
		NE		Scud and vapour: the amount of cloud is constantly changing.	P & J H
		NNE		Cloudless.	P
		Calm		The morning is clear and frosty.	G
		N by E		Cloudless.	
		N		,,	G
		Calm		The sky is nearly covered with scud and stratus.	J H
		Calm		Generally overcast.	D
		N by E		Hazy.	D & G
		WSW		Overcast.	G
		Calm		,,	
		W		,,	
		W		,,	G
		Calm		Foggy: the zenith is generally clear.	D
		N by W		Overcast: at 9h lightning was seen in the S. E.	J H
		Calm		The sky was cloudless at 6h. 30m, but nearly overcast afterwards.	P
		NW	¼ to 7	Rain falling occasionally.	J H
		NW	12	At this time a sudden squall of hail, wind, and rain occurred; in an instant the gold leaf of the Dry Pile apparatus was destroyed, and in removing it the observer received a severe shock.	G
		WNW	0 to 2	Sleet is occasionally falling in small quantities: strong gusts of wind.	J H
		SW		Cloudless.	G
		S by E		Overcast: snow is falling.	P
		SSW		Cloudless.	P
		NW		Snow is falling.	G
		NW		Rain is falling.	
		N by W		Snow is falling slightly.	
		SW	¾ to 3	Rain is falling heavily at intervals; it ceased at 23h. 45m.	G
		NW	½ to 4½	At 7h. 24m rain was falling.	D
		SSW		Snow has just begun to fall.	
		Calm		The sky is cloudless.	
		S	¼ to 2	A thin rain and sleet is falling.	D
	25	SW	1½ to 3	Before 1h. 12m a large cumulo-stratus approached the zenith, and all the instruments became at once affected: at 1h. 12m a few heavy drops of rain fell.	G

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1844.	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 Occurrence of Spark.	Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	° °	° °	° °	m m	h m	h m	in.	sp. sec.
Feb. 26. 1.12 to 26. 1.55	Neg.	25 to 40	..	30 to 50	40 to 100	..	1 to 15	1.26	1.33	0·06	A spark
									1.35	0·05	A spark
29. 9.55 to 29. 10.20	Neg.	..	..	0 to 23	..	..	..	10. 0	..	..	...
Mar. 3. 18.25 to 3. 20. 0	Neg.	..	..	3 to 30	150	..	..	18.25	..	..	...
3. 23.20 to 4. 1. 0	Neg.	5 to 10	..	15 to 50	15 to 50	..	3 to 20	0.15	..	..	...
5. 22. 1 to 5. 22. 7	Pos.	3 to 4	..	10 to 21	10 to 25	..	..	22. 7	..	..	...
12. 3.44 to 12. 3.48	Neg.	..	..	5 to 60	5 to 10	..	30^s	3.46	..	..	...
13. 22. 0 to 13. 23.44	Neg.	0 to 20	..	0 to 40	0 to 50	0 to 0·5	$1^m.40^s$	23.30	..	..	...
13. 23.44 to 14. 0.26	Neg.	0 to 30	..	0 to 50	0 to 150	0 to 2	Variable	23.52	23.50	0·07	A spark
									23.52	0·07	1 in 25
									23.57	0·07	2 in 101
14. 0.28 to 14. 1. 5	Pos.	0 to 3	..	0 to 20	0 to 20	..	..	1. 0	..	..	...
20. 0.48 to 20. 0.50	Neg.	2	..	3 to 15	0 to 15	..	..	..	..	..	...
20. 1.23 to 20. 1.58	Neg. & Pos.	0 to 40	..	0 to 100	0 to 100	0 to 3	..	1.40	1.30	0·13	1 in 1
									1.51	0·16	A purple spark
									1.52	0·16	A white spark
21. 4.50 to 21. 6. 0	Pos.	0 to 5	..	3 to 10	0 to 10	..	..	5.10	..	..	...
23. 3.15 to 23. 3.29	Pos.	1 to 2	..	3 to 6	..	..	..	3.15	..	..	...
24. 21.50 to 24. 22.21	Neg.	15 to 30	..	10 to 50	10 to 80	..	..	22. 1	22. 2	0·05	A spark
28. 22. 0 to 29. 9.15	Pos.	0 to 2	..	0 to 20	0 to 20	..	Variable	1.30	..	..	...
30. 23. 0 to 31. 6. 0	Pos.	..	..	1 to 6	..	..	..	4. 0	..	..	...
Apr. 1. 1.30 to 1. 4.55	Pos.	..	..	2 to 3	0 to 2	..	..	4.55	..	..	...
1. 18. 0 to 1. 19.40	Pos.	1 to 7	..	5 to 70	10 to 110	0 to 1	35^s	18.28	..	..	...
2. 2.45 to 3. 7.30	Pos.	0 to 1	..	2 to 8	0 to 5	..	2^m to 15^m	8.30	..	..	...
3. 21. 0 to 4. 9.20	Pos.	0 to 3	..	2 to 8	0 to 10	..	..	3.30 to 5. 0	..	..	...
7. 21. 0 to 8. 1.45	Pos.	0 to 1	..	0 to 7	0 to 10	..	..	22. 0	..	..	...
8. 7. 0 to 8. 7.30	Pos.	..	..	5 constant	3 to 5	..	15^m to 20^m	7.30	..	..	...
8. 8.25 to 8. 11.30	Pos.	0 to 40	..	5 to 30	0 to 100	..	30^s	8.30	..	..	...
9. 7.30 to 9. 9.20	Pos.	0 to 10	..	2 to 20	0 to 20	..	..	8. 0	..	..	...
10. 6.30 to 10. 9.15	Pos.	5	..	2 to 5	..	..	..	7. 0	..	..	...
11. 7.30 to 11. 12.10	Pos.	1 to 2	..	3 to 10	0 to 5	..	..	7.40 to 8.45	..	..	...
11. 19. 0	Pos.	½	..	2	2	..	..	..	..	..	...
15. 21. 0 to 15. 22. 0	Pos.	½	..	2	..	..	..	..	..	..	...
18. 5. 0 to 18. 19.40	Pos.	½ to 1	..	1 to 3	..	..	..	8. 0	..	..	...
22. 3. 0 to 22. 7. 0	Pos.	1 to 4	..	2 to 8	10	..	..	5. 0	..	..	...
23. 21. 0 to 24. 6.20	Pos.	1 to 15	..	1 to 18	..	..	7^m	6. 0	..	..	...
29. 21.30 to 30. 9.30	Pos.	2 to 25	..	1 to 12	10	..	..	5. 0	..	..	...
30. 22 to May 1. 12. 0	Pos.	3 to 30	..	0 to 10	..	..	..	7.30	..	..	...
May 2. 3. 0 to 2. 8.45	Pos.	3 to 10	..	0 to 7	..	..	..	7. 0	..	..	...
3. 3.40 to 3. 9. 0	Pos.	3 to 10	..	3 to 10	..	..	..	4.56	..	..	...
6. 4.15 to 6. 7.10	Pos.	3 to 15	..	0 to 5	..	..	..	5. 5	..	..	...
6. 21. 0 to 7. 7.45	Pos.	7 to 20	..	1 to 15	..	..	..	7. 0	..	..	...
9. 0.25 to 9. 1.43	Pos.	3 to 5	..	3 to 5	..	..	..	1.43	..	..	...
10. 5. 0 to 10. 12.15	Pos.	5 to 8	..	5	..	..	..	11. 5	..	..	...
10. 13. 0 to 10. 16. 0	Neg.	0 to 5	..	0 to 3	..	..	..	13. 0	..	..	...
14. 23.30 to 15. 0. 7	Neg.	3 to 30	..	3 to 5	2	..	..	0. 7	..	..	...
16. 3.30 to 16. 9.15	Pos.	5 to 15	..	4 to 8	5 to 10	..	..	4.20	..	..	...
17. 22.50 to 18. 4.30	Pos. & Neg.	0 to 40	..	0 to 100	0 to 200	1 to 5	..	23.55	23.50	0·12	...
									to	0·14	...
									0.10	0·07	...

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	½ to 4	Rain is falling: during the continuance of previous heavy rain no effect was noticed.	H B
		S by E	½ to 2	Rain is falling heavily.	H B
		SSW		,,	G
		NE		Cloudless.	G
		NW	3	A squall of wind and rain.	J H
		Calm		Rain is falling slightly.	G
		Calm		,,	
		Calm		Occasional thin rain: misty.	
		W by N	3½	A squall.	
		NW	1 to 4	At $1^h.23^m$ dark clouds came up from the W.: at $1^h.32^m$ heavy rain commenced falling, after which a squall occurred.	
		WSW		Large cumulo-strati are generally prevalent: the zenith is free from cloud.	
		W		Cirro-strati and cumulo-strati are prevalent.	G
		S		Rain falling.	D
		E & Calm		Cloudless: at $8^h.20^m$ a thin mist arose.	G
		E	0 to 2	,,	
		Calm		Clear around the zenith.	
		Calm		Cloudless.	
		SW	0 to 2	,,	G
		SW		Cirri and cirro-cumuli are prevalent.	G & D
		ENE		Cloudless: a thick mist.	G
		Calm		,,	P
		Calm & SW		,, foggy.	P & D
		SW		,,	D
		S		,,	J H
		W by S		A dense cirro-stratus was distributed over the sky from $7^h.30^m$ to $7^h.40^m$: from $8^h.40^m$ to $9^h.30^m$ the sky was cloudless; after this time it was overcast.	H B & G
		W by S		Cloudless.	G
		SW		The sky was generally cloudless between these times.	
		N		Cloudless: vapour prevalent.	G
		WNW		Light clouds are prevalent: at 6^h the sky was cloudless.	D
		NW & N		The sky is covered with a thin cirro-stratus: at 6^h the sky was cloudless.	G & H B
		E	0 to 1¼	Cloudless.	G & D
		E & Calm	0 to 1¾	,,	J H & G
		Calm		Cloudless.	G
		ENE	0 to 1½	Cumuli and scud are generally prevalent: at 9^h the sky became overcast.	H B
		Calm		Clear in the zenith.	J H
		NNW		Cloudless from 21^h to 2^h; and the sky was about one-half covered from 3^h to 7^h.	G & H B
		WSW		Cumuli near the zenith.	H B
		N by W		Scud and fleecy clouds: at $12^h.15^m$ the sky became overcast.	
		Calm		Rain is falling.	H B
		N	0 to 3	Three-fourths of the sky are covered with cumulo-strati, cumuli, and scud.	G & P
		NNW & Calm		Overcast: hazy.	G & P
		NNE	½ to 6	At $22^h.50^m$ there were a few fleecy clouds in the zenith; the remainder of the sky was covered with cirro-stratus: small quantities of sleet fell shortly before noon, after which it was generally clear.	G

From March 5^d to March 12^d the Electrical apparatus was under repair.

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1844.	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 Occurrence of Spark.	Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	° °	° °	° °	s s	h m	h m	in.	sp. sec.
May 17. 22. 50 to 18. 4. 30	Pos. & Neg.	0 to 40	..	0 to 100	0 to 200	1 to 5	..	23. 55	23. 50	0·28	A spark
									to	0·20	5 in 20
									0. 10	0·07	23 in 20
										0·08	6 in 13
										0·05	5 in 12
										0·05	5 in 8
										0·08	6 in 22
										0·08	6 in 22
										0·04	A spark
26. 23. 0 to 27. 4. 5	Pos. & Neg.	0 to 40	0 to 40	0 to 100	0 to 100	½ to 5	1s to 10s	1. 53	1. 57	At contact	...
30. 2. 22 to 30. 11. 30	Pos.	1 to 8	3 to 30	0 to 3	0 to 10	..	17m	6. 0	..	..	...
June 3. 4. 45 to 3. 8. 0	Pos.	3 to 5	10 to 20	..	..	..	..	5. 10	..	..	...
4. 5. 0 to 4. 13. 0	Pos.	3 to 8	2 to 18	3 to 10	0 to 15	..	..	7. 26	..	..	...
5. 1. 3 to 5. 1. 39	Pos.	3 to 5	6 to 8	4	2 to 5	..	..	1. 39	..	..	...
7. 5. 0	Neg.	2	10	..	..	..	..	..	..	..	...
8. 0. 40 to 8. 7. 30	Pos.	3 to 7	8 to 12	2 to 5	0 to 5	..	..	4. 0	..	..	...
10. 1. 16 to 10. 1. 44	Neg.	0 to 40	0 to 50	0 to 45	0 to 20	0 to 3	..	1. 28	..	..	...
10. 3. 45 to 10. 5. 15	Pos.	12 to 20	6 to 10	2 to 4	..	..	..	5. 15	..	..	...
11. 5. 0 to 11. 9. 20	Pos.	0 to 10	5 to 12	0 to 2	..	..	..	8. 0	..	..	...
11. 22. 7 to 12. 16. 0	Pos.	2 to 4	5 to 10	2	..	..	..	4. 0	..	..	...
13. 0. 0 to 13. 2. 0	Neg.	5 to 20	4 to 12	2 to 4	..	..	..	0. 30	..	..	...
13. 21. 45 to 14. 9. 0	Pos.	2 to 20	5 to 30	0 to 6	..	..	..	7. 0	..	..	...
15. 5. 20 to 15. 23. 5	Pos.	2 to 4	5 to 10	0 to 2	..	..	..	6. 20	..	..	...
16. 21. 0 to 17. 9. 5	Pos.	2 to 10	5 to 30	2 to 5	..	..	..	9. 50	..	..	...
17. 13. 20 to 17. 14. 0	Neg.	2 to 40	8 to 45	0 to 20	0 to 40	..	..	13. 20	..	..	...
17. 23. 10 to 18. 1. 0	Pos.	1 to 4	8 to 15	1 to 2	..	..	..	0. 0	..	..	...
18. 18. 43 to 19. 5. 15	Neg.	0 to 40	0 to 20	0 to 10	0 to 10	..	..	18. 44	..	..	...
21. 3. 50 to 21. 13. 0	Pos.	0 to 5	0 to 15	0 to 3	..	..	..	7. 0	..	..	...
22. 4. 0 to 22. 9. 0	Pos.	5 to 35	6 to 30	2 to 12	..	..	..	8. 20	..	..	...
22. 11. 10 to 22. 11. 25	Pos.	20	7	2	..	..	..	..	..	..	...
23. 1. 20	Pos.	15	12	6	..	..	..	..	..	..	...
24. 3. 40 to 24. 10. 30	Pos.	0 to 22½	5 to 15	0 to 4	..	..	..	..	..	..	...
24. 21. 10 to 24. 23. 25	Pos. & Neg.	0 to 40	..	0 to 60	0 to 120	0 to 20	..	23. 15	21. 45	0·02	20 in 10
									to	0·10	1 in 120
									23. 19	0·10	1 in 90
										0·10	1 in 1
										0·05	A volley
										0·07	15 in 8
										0·10	1 in 30
										0·10	19 in 10
										0·10	25 in 10
										0·10	7 in 5
25. 4. 15 to 25. 6. 45	Neg.	1 to 10	..	0 to 10	0 to 3	..	..	..	..	..	...
25. 15. 0 to 25. 20. 0	Neg.	3	10	2	..	..	..	..	..	..	...
26. 22. 25	Neg.	..	20	8	..	..	..	..	..	..	...
27. 11. 15 to 27. 11. 25	Neg.	10 to 40	8 to 20	2 to 8	..	..	..	..	..	..	...
July 1. 5. 49 to 1. 7. 6	Pos. & Neg.	0 to 40	..	4 to out of range	0 to 200	0 to 30	..	6. 32	6. 8	0·05	A spark
									to	0·14	A volley of sparks
									6. 35	0·15	2 in 1
										0·18	4 in 1
										0·23	1 in 1

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.	REMARKS.	Observer
°	°		from lbs. to lbs.		
		NNE	0 to 5	Hail and rain falling.	G & H B
		N		Generally cloudy.	G
		NNE & Calm		Fleecy clouds and scud.	J H
		WSW & Calm	$\frac{1}{2}$	Clear in the zenith.	H B & D
		SW	0 to $\frac{1}{2}$	Light clouds about the zenith.	P
		Calm		Cloudless.	J H
		Calm		Cirro-strati, cumuli, and haze.	D & H B
		W	0 to 1	Rain is falling.	J H
		W by S	0 to $\frac{3}{4}$	Cloudless.	D
		W & Calm		The sky is clear around the zenith; scud and cirri elsewhere.	P
		W by S & Calm	0 to 1	Cloudless from 22^{h} till 8^{h}; after that time a thin cirro-stratus covered the sky.	P & G
		WSW	$\frac{1}{2}$ to $4\frac{1}{2}$	At 0^{h} the sky was cloudless; after that time cumuli were continually passing over.	D
		W	0 to $4\frac{1}{2}$	The sky generally free from cloud.	J H & D
		NNW, Calm, & N	0 to 1	,,	G B A
		Calm		Cumuli, cirro-strati, and light scud in every direction.	J H
		SE		Rain falling.	D
		E		Thin clouds prevalent: breaks in various directions.	G
		NNE		Rain was falling between $18^{h}.43^{m}$ and $18^{h}.55^{m}$: hail fell at $5^{h}.15$.	P
		WNW		Light clouds and scud.	G
		SW by W, and Calm		Generally clear.	D
		Calm		Cloudless.	P
		S	$\frac{1}{2}$ to $\frac{3}{4}$	,, very hot.	D
		WSW	$\frac{1}{4}$ to $1\frac{1}{2}$	Generally cloudless.	P
		W, Calm, & N	0 to $\frac{1}{2}$	Rain falling: the electricity was positive till $21^{h}.23^{m}$, when it suddenly changed to negative: at $21^{h}.36^{m}$ a rumbling of thunder was heard in the S.W.: at $21^{h}.55^{m}$ there was a slight galvanic current, the point of the needle moving towards B.	P & G
		N by E		Rain falling.	G
		N		,,	P
		NNE		,,	
		Calm		Overcast.	
		E & Calm		A thunder-storm. (This storm first rose in the N.W.; it then passed round to the North, and afterwards to the East, as also did the wind: at $5^{h}.50^{m}$ there was a vivid flash of lightning, followed by thunder at the interval of seven seconds: at $5^{h}.55^{m}$ there was another very bright flash, and thunder followed at an interval of two seconds; this was a long peal, the crackling continuing from 45^{s} to 59^{s}.	P

ELECTROMETER OBSERVATIONS.

	Greenwich Mean Solar Time, or Limits of Time, 1844.	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 Occurrence of Spark.	Length of Spark.	Corresponding Frequency.
	d h m d h m		° °	° °	° °	° °	° °	s s	h m	h m	in.	sp. sec.
July	1. 5. 49 to 1. 7. 6	Pos. & Neg.	0 to 40	. .	4 to out of range	0 to 200	0 to 30	. .	6. 32	6. 8 to 6. 35	0·05	A stream of sparks
											0·23	2 in 1
	4. 23. 18 to 5. 1. 15	Pos. & Neg.	0 to 40	10 to out of range	0 to 35	0 to 100	0 to 10	0·5 to 6	0. 14	0. 6 to 0. 20	0·10	4 in 1
											0·13	3 in 1
											0·08	A volley
	5. 4. 0 to 5. 4. 46	Neg. & Pos.	0 to 40	. .	0 to 50	0 to 120	. .	10ˢ	4. 20	. .	. .	. . .
	11. 23. 12 to 12. 1. 4	Neg.	0 to 40	. .	0 to 30	0 to 50	. .	. .	0. 3	0. 24	0·05	20 in 20
										0. 26	0·10	12 in 9
										0. 29	0·11	10 in 5
										0. 30	0·08	Sparks
										0. 33	0·04	A spark
										0. 34	0·04	1 in 3
										0. 35	0·05	1 in 3
										0. 36	0·03	1 in 2
	12. 5. 20 to 12. 5. 25	Neg.	20	. .	10 to 12	. .	. .	. .	. .	. .	. .	. . .
	19. 0. 5 to 19. 0. 50	Neg.	10 to 40	. .	7 to 60	0 to 80	2 to 12	0ˢ·1	0. 27	. .	. .	. . .
	19. 1. 28 to 19. 1. 33	Pos.	20	. .	5 to 50	0 to 50	4	0 ·1	1. 33	. .	. .	. . .
	19. 1. 59 to 19. 5. 24	Neg.	0 to 40	. .	0 to 60	0 to 200	0 to 4	2ˢ to 4ˢ	3. 26	1. 59 to 3. 33	0·05	19 in 20
											0·08	2 in 1
											0·10	No sparks
											0·08	10 in 5
											0·10	1 in 1
											0·03	8 in 1
											0·05	2 in 6
											0·08	4 in 5
	29. 21. 51 to 29. 21. 58	Pos.	10 to 30	20 to 35	5 to 50	0 to 50	. .	. .	21. 55	. .	. .	. . .
Aug.	2. 3. 20	Pos. & Neg.	. .	. .	. .	. .	. .	. .	. .	3. 20	0·13	Frequent sparks
	2. 23. 0 to 2. 23. 5	Neg.	. .	As far as possible	50	50	3	. .	. .	23. 0	0·10	Sparks
	2. 23. 14	Neg.	30	. .	40	40	1	. .	. .	. .	. .	. . .
	3. 1. 53 to 3. 2. 0	Neg.	0 to 40	. .	0 to 50	0 to 100	0 to 7	0ˢ·1 to 25ˢ	1. 55	1ʰ.53ᵐ.15ˢ	0·07	20 in 20
										1ʰ.54ᵐ	0·10	None
										1. 55	0·10	20 in 20
										1. 56	0·08	40 in 20
										1. 58	0·05	None
	6. 23. 8 to 7. 0. 47	Neg.	0 to 30	. .	0 to 50	0 to 150	0 to 12	0ˢ·1 to 0ˢ·2	0. 38	23. 9	0·14	Sparks
										23. 10	0·14	4 in 1
										23. 12	0·05	Frequent sparks
										23. 15	0·10	12 in 8
										23. 45	0·15	A spark
										0. 35	0·15	3 in 1
										0. 37	0·18	1 in 150
										0. 40	0·15	None
										0. 44	0·15	5 in 2
	8. 1. 35 to 8. 1. 42	Neg.	. .	. .	0 to 60	0 to 100	. .	. .	1. 37	. .	. .	. . .
	11. 23. 30	Neg.	20	. .	10	10	. .	0ˢ·1	. .	. .	. .	. . .
	13. 23. 30 to 13. 23. 50	Neg. & Pos	0 to 40	. .	0 to 40	2 to 50	0 to 7	0 ·1	23. 44	23. 41	0·10	Sparks abundant
										23. 42	0·10	None
	14. 2. 25 to 14. 2. 45	Pos.	3 to 5	. .	2 to 5	2 to 3	. .	. .	2. 45	. .	. .	. . .

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.		
				Several flashes of lightning took place between 6^h and $6^h.15^m$, followed by thunder at intervals of one, two, and three seconds; after this time the flashes were less frequent, and the thunder followed at intervals of five, seven, and twelve seconds. Between 6^h and $6^h.20^m$, $0^{in}.78$ of rain fell at Mr. Glaisher's residence: after this time the lightning ceased; the rain, however, continued, but not so heavily.) G.	P
8 to 10	3 to 5	ENE		Heavy cumulo-strati covered the sky till $23^h.55^m$, when heavy rain began to fall: thunder was heard in the N.W.	J H & G
		ENE		Rain falling: the electricity was negative till $4^h.12^m$, when it became suddenly positive.	D
	2	WNW & NW	½ to 8	Heavy rain falling.	P
		WNW & NW	0 to ¾	Rain falling.	D
		NNW	0 to ¾	,, heavy cumulo-strati. [$1^h.32^m$.	G
		NW	0 to ½	A large dark cloud in the North: appearances of a squall: rain commenced falling at	
		NNW & NW		Rain generally falling during the time: thunder occasionally heard: at $3^h.34^m$ the rain ceased.	
		SW		Scud and heavy clouds moving quickly: a few drops of rain fell.	G
17		Calm		Rain falling.	H I B
5		SW	½ to 6	A sudden charge of electricity.	G
5		SW	2½ to 5½	,,	
5		SW	1½ to 4	A dark cloud in the zenith: slight rain falling occasionally.	G
15	10 to 20	WSW	¾ to 6	Heavy clouds passing over the zenith: occasional heavy rain.	D
		WSW	0 to 1½	,, ,,	P
		WSW		Rain falling.	G
7		NW	½ to 4½	Heavy rain falling: the electricity changed suddenly from positive to negative at $23^h.45^m$.	G
		WNW	1 to 4	Rain falling.	H B

ELECTROMETER OBSERVATIONS.

Greenwich Mean Solar Time, or Limits of Time, 1844.	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 Occurrence of Sparks.	Length of Spark.	Corresponding Frequency.
d h m d h m		° °	° °	° °	° °	° °	sec.	h m	h m	in.	sp. sec.
Aug. 15. 3. 50 to 15. 4. 35	Neg. & Pos.	0 to 35	..	0 to 25	0 to 40	..	0·1	3. 57	..	..	...
19. 7. 55 to 19. 9. 0	Pos.	0 to 8	..	0 to 7	0 to 5	..	..	8. 46	..	..	...
27. 3. 15 to 27. 5. 30	Pos.	2 to 3	..	3 to 5	..	..	..	5. 0	..	..	...
29. 6. 0 to 29. 6. 47	Pos.	2 to 3	..	4 to 5	5	..	..	6. 10	..	..	...
Sep. 19. 7. 8 to 19. 7. 40	Pos.	20 to 30	15	10 to 22	12 to 35	..	..	7. 8	..	..	...
25. 14. 29 to 25. 15. 30	Pos.	8 to 25	..	2 to 7	0 to 10	..	..	15. 30	..	..	...
Oct. 4. 21. 58 to 4. 22. 0	Neg.	3 to 30	0 to 20	2 to 7	0 to 5	..	..	21. 59	..	..	...
7. 3. 45 to 7. 3. 55	Pos.	0 to 15	..	0 to 5	0 to 10	..	..	3. 45	..	..	...
13. 23. 43 to 13. 23. 46	Neg. & Pos.	20 to 30	..	10 to 20	20 to 40	..	..	23. 43	..	..	...
14. 8. 47 to 14. 8. 52	Neg.	5 to 20	..	3 to 8	5 to 10	..	..	8. 47	..	..	...
15. 0. 9 to 15. 0. 28	Neg.	0 to 43	0 to 20	0 to 10	0 to 20	..	..	0. 23	..	..	...
21. 5. 42 to 21. 6. 50	Neg.	0 to 40	..	3 to 30	5 to 80	..	2^s to 4^s	5. 53	..	..	...
23. 1. 0 to 23. 1. 53	Pos.	5 to 30	..	0 to 10	..	..	..	1. 26	..	..	...
23. 22. 33 to 23. 22. 49	Neg.	5 to 40	..	0 to 20	0 to 15	..	..	22. 42	..	..	...
Nov. 1. 23. 30 to 1. 23. 35	Neg.	3 to 8	..	2	..	..	..	23. 35	..	..	...
6. 21. 33 to 6. 23. 5	Neg.	0 to 40	..	0 to 15	0 to 50	..	$0^s{\cdot}5$	21. 23	..	..	...
8. 21. 30 to 8. 22. 30	Neg.	5 to 17	..	..	..	..	..	22. 0	..	..	...
Dec. 4. 7. 0 to 4. 8. 0	Pos.	10 to 15	..	2 to 4	..	..	..	7. 30	..	..	...
5. 1. 55 to 5. 20. 13	Pos.	2 to 30	..	2 to 15	0 to 20	..	..	20. 11	..	..	...
5. 21. 40 to 6. 11. 20	Pos.	0 to 40	0 to 30	0 to 35	0 to 40	..	1^s to 15^m	1. 3	..	..	...
11. 5. 30 to 11. 8. 30	Pos.	5	..	0 to 1	..	..	20^m to 30^m	..	..	..	...
16. 21. 20 to 16. 22. 30	Pos.	1 to 40	0 to 20	1 to 20	0 to 20	..	..	21. 40	..	..	...
30. 21. 15 to 30. 21. 38	Pos.	3 to 15	..	2 to 12	0 to 10	..	..	21. 15	..	..	...

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.		
		NW	½ to 4	A large cloud in the zenith: rain falling: gloomy: there were several changes from negative to positive.	G
		W	0 to 1	Slight rain falling.	H B
		NW		Clear in the zenith: hazy.	G
		ESE		Cloudless.	H B
		Calm		Cloudless: at $7^h.50^m$ no electricity was shewn.	H B
		Calm		,,	G
		SW		Rain falling.	G
		NNW		A large cumulus near the zenith.	H B
	3	SSW	0 to ½	Heavy rain falling: there was a sudden change from negative to positive at $23^h.44^m$.	D
		SW		,,	H B
		SSW	½ to 4½	Rain falling.	
		N		Heavy rain falling.	H B
		NE		Nearly cloudless: a few fleecy clouds about the zenith.	D
		NNE		Rain falling.	D
		E	½ to 2	Rain falling.	H B
		Calm		,,	H B
		S		,,	D
		NE		Heavy vapour and thin cirro-stratus were prevalent.	D
		E, ESE, & Calm		Cloudless.	H B
		NE		,, the electricity was constant between $5^d.21^h.40^m$ and $6^d.11^h.20^m$, except at $0^h.27^m$ and $6^h.45^m$, when all the instruments were found at zero; but most probably it had been discharged by some cause.	G & H B
		NE & SE		Overcast: cirro-stratus.	G
		NE & Calm		,, thick fog.	G
		Calm		A thin fog.	H B

ROYAL OBSERVATORY, GREENWICH.

ABSTRACTS

OF THE

RESULTS

OF THE

MAGNETICAL OBSERVATIONS.

1844.

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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	23. 20. 4	23. 19. 24	23. 19. 1	23. 19. 3	23. 19. 21	23. 19. 29	23. 19. 22	23. 13. 15	*S*	23. 15. 58	23. 12. 4	*S*
2	20. 36	18. 27	19. 17	19. 16	19. 42	*S*	19. 8	14. 43	23. 14. 13	13. 2	11. 18	22. 64. 20
3	19. 53	17. 53	*S*	18. 11	20. 9	19. 45	19. 4	13. 35	13. 5	15. 30	*S*	59. 37
4	19. 37	*S*	17. 27	19. 9	19. 9	19. 39	18. 30	*S*	13. 38	14. 37	11. 56	61. 14
5	19. 7	20. 3	17. 51	Good Friday	*S*	20. 0	18. 46	13. 43	13. 30	12. 11	11. 13	59. 59
6	20. 17	18. 39	18. 53	18. 5	19. 40	19. 29	17. 43	13. 13	12. 44	*S*	12. 5	60. 50
7	*S*	17. 23	18. 9	*S*	19. 23	19. 29	*S*	13. 2	13. 15	12. 1	11. 44	59. 39
8	19. 17	18. 44	20. 14	18. 11	19. 24	18. 54	20. 51	14. 25	*S*	12. 18	11. 59	*S*
9	18. 52	19. 25	18. 42	18. 35	19. 50	*S*	19. 22	15. 35	12. 46	12. 22	11. 40	59. 22
10	19. 21	18. 29	*S*	19. 18	19. 24	19. 5	17. 51	13. 37	12. 24	12. 27	*S*	59. 27
11	19. 39	*S*	18. 38	18. 35	19. 15	19. 21	20. 14	*S*	12. 23	12. 52	12. 3	60. 15
12	18. 24	18. 33	19. 37	18. 26	*S*	19. 44	18. 36	13. 20	12. 26	12. 51	12. 25	59. 22
13	19. 13	18. 56	18. 19	18. 20	19. 42	19. 44	19. 14	12. 55	13. 14	*S*	11. 52	59. 25
14	*S*	18. 2	18. 59	*S*	18. 50	19. 42	*S*	12. 27	12. 42	12. 11	11. 49	59. 57
15	19. 23	18. 54	19. 14	18. 25	19. 0	19. 6	19. 5	10. 50	*S*	13. 9	11. 56	*S*
16	19. 13	18. 38	19. 12	17. 48	19. 41	*S*	18. 36	12. 35	14. 4	12. 38	13. 42	59. 29
17	19. 28	17. 52	*S*	19. 2	19. 48	18. 28	18. 36	13. 12	12. 57	12. 34	*S*	59. 25
18	19. 16	*S*	18. 57	17. 8	19. 6	20. 9	18. 57	*S*	12. 10	13. 31	11. 9	58. 52
19	18. 50	18. 25	18. 40	18. 48	*S*	19. 19	18. 23	13. 24	13. 45	12. 17	12. 45	59. 31
20	18. 34	18. 38	18. 31	18. 31	19. 46	18. 10	18. 59	13. 25	12. 46	*S*	11. 58	58. 51
21	*S*	19. 20	19. 2	*S*	18. 46	19. 7	*S*	13. 8	12. 56	14. 56	12. 2	59. 56
22	19. 27	18. 55	18. 58	17. 28	19. 23	18. 56	17. 31	12. 17	*S*	12. 15	9. 45	*S*
23	19. 48	19. 16	18. 50	17. 14	19. 9	*S*	19. 7	14. 53	12. 49	12. 40	11. 27	59. 35
24	18. 38	19. 4	*S*	18. 43	18. 53	18. 15	18. 24	13. 19	12. 38	11. 54	*S*	59. 10
25	20. 41	*S*	19. 22	19. 18	19. 30	18. 11	19. 48	*S*	12. 27	11. 4	12. 29	Christ. Day.
26	19. 8	19. 24	18. 54	19. 35	*S*	18. 24	18. 40	13. 36	13. 17	10. 39	11. 12	60. 8
27	19. 19	18. 44	17. 54	20. 30	18. 23	18. 33	18. 41	13. 16	12. 32	*S*	11. 34	60. 18
28	*S*	17. 47	19. 14	*S*	19. 36	18. 38	*S*	13. 38	12. 56	12. 17	12. 18	57. 36
29	19. 26	19. 12	17. 5	19. 42	19. 16	18. 57	19. 32	13. 24	*S*	12. 37	12. 6	*S*
30	18. 48		17. 10	19. 40	18. 59	*S*	17. 52	13. 32	15. 45	14. 10	11. 26	58. 0
31	18. 39		*S*		19. 57		17. 6	13. 48		12. 54		58. 26

The letter *S* denotes that the day was Sunday.

TABLE II.—Table exhibiting the Times at which Differences greater than 2′ took place between the Mean Positions of the Declination Magnet on two consecutive Days, with the Amount of the Difference, estimated positive when the Westerly Declination is greater on the Second Day.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		March.		July.		August.	
	′ ″		′ ″		′ ″		′ ″
24 & 25	+ 2. 3	7 & 8	+ 2. 5	10 & 11	+ 2. 23	22 & 23	+ 2. 36
		28 & 29	− 2. 9	31 & 32	− 3. 51		
October.		November.		December.			
1 & 2	− 2. 56	21 & 22	− 2. 17	2 & 3	− 4. 43		
2 & 3	+ 2. 28			27 & 28	− 2. 42		
4 & 5	− 2. 26						
21 & 22	− 2. 41						

In addition to the instances contained in this table, a difference between November 30^d and December 2^d (Sunday intervening), amounting to − 7′. 6″, took place. Assuming that the difference on each of those days amounted to more than 3′, we have that:—

During the year there were 11 instances of a change of more than 2′ and less than 3′,
3 instances of a change of more than 3′ and less than 4′,
1 instance of a change of more than 4′ and less than 5′,

being in all only 15 instances out of 365 (including those cases in which Sunday intervened) in which the difference of mean positions of the magnet on two consecutive days has amounted to 2′ or more: this number is very much less than that deduced from the observations of previous years.

TABLE III.—Table Exhibiting the Greatest and Least Differences in the Mean Positions of the Declination Magnet between any two consecutive Civil Days in each Month, estimated positive when the Westerly Declination was greater on the Second Day.

1844, Month.	Differences in the Mean Daily Positions of the Declination Magnet, from one Day to the next. Greatest.	Least.	Days between which the Greatest Difference took place.	Days between which the Least Difference took place.
January	+ 2′. 3″	− 0′. 9″	24d & 25d	30d & 31d
February	+ 1.25	− 0.12	28 & 29	23 & 24
March	− 2. 9	− 0. 2	28 & 29	15 & 16
April	− 1.54	− 0. 2	17 & 18	29 & 30
May	+ 1.13	+ 0. 1	27 & 28	7 & 8
June	+ 1.41	0. 0	17 & 18	{6 & 7, 12 & 13}
July	+ 2.23	0. 0	10 & 11	16 & 17
August	+ 2.36	+ 0. 1	22 & 23	19 & 20
September	+ 1.35	− 0. 1	18 & 19	10 & 11
October	− 2.56	− 0. 1	1 & 2	11 & 12
November	− 2.17	− 0. 3	21 & 22	13 & 14
December	− 4.43	+ 0. 3	2 & 3	12 & 13

So that during the months of February, April, May, June, and September, there was no instance of a difference so large as 2′ taking place between the mean positions of the Declination Magnet on two consecutive days, unless such a difference took place between the 3rd and the 5th of February, the whole difference between those days amounting to 2′. 10″; as between the 28th and 30th of September, the difference amounting to 2′. 49″; Sunday intervening in each case. During the months of January, March, July, August, October, and November, there was no instance of a difference so large as 3′. In December there was one instance of a difference of more than 4′, and it was the largest in the year; there was no other instance in December of a difference so large as 3′, unless such took place between December 1d and 2d the difference between November 30d and December 2d being 7′. 6″. The agreement from day to day in the mean positions of the Declination Magnet, as compared with preceding years, is remarkable, and particularly so in the summer months.

TABLE IV.—Mean of all the Two-hourly Westerly Declinations for those Days in each Month, on which (as shewn by the Mean of the Two-hourly Readings) the marked end of the Magnet was most drawn towards the East, or was most drawn towards the West.

1844, Month.	Mean Westerly Declination for that Day in the Month, when the marked end of the Magnet throughout the Day was most drawn towards the West.	East.	Greatest Difference in the Mean Positions of the Magnet, between any Two Days in the Month.	Day when the marked end was most drawn towards the West.	East.
January	23°. 20′. 41″	23°. 18′. 24″	2′. 17″	25d	12d
February	23. 20. 3	23. 17. 23	2. 40	5	7
March	23. 20. 14	23. 17. 5	3. 9	8	29
April	23. 20. 30	23. 17. 8	3. 22	27	18

TABLE IV.—*continued.*

1844, Month.	Mean Westerly Declination for that Day in the Month, when the marked end of the Magnet throughout the Day was most drawn towards the West.	East.	Greatest Difference in the Mean Positions of the Magnet, between any Two Days in the Month.	Day when the marked end of the Magnet was most drawn towards the West.	East.
	° ′ ″	° ′ ″	′ ″	d	d
May	23. 20. 9	23. 18. 23	1. 46	3	27
June	23. 20. 9	23. 18. 10	1. 59	18	20
July	23. 20. 51	23. 17. 6	3. 45	8	31
August	23. 15. 35	23. 10. 50	4. 45	9	15
September	23. 15. 45	23. 12. 10	3. 35	30	18
October	23. 15. 58	23. 10. 39	5. 19	1	26
November	23. 13. 42	23. 9. 45	3. 57	16	22
December	23. 4. 20	22. 57. 36	6. 44	2	28

This table shews that the mean position of the magnet was subject to less variation in the months of May and June than in any other months, and the variations in these months were less than in any other months since the establishment of the Magnetic Observatory. The variations in the months of January, February, March, April, July, September, and November, were remarkably small. In December the mean position of the magnet was subject to the greatest change in its mean daily position, and the next in order of magnitude was October. The mean monthly range (thus estimated from the mean of all the observations on each day) was 3′. 36″·5; in 1841, this value was found to be 16′. 23″; in 1842, it was 9′. 44″; and in 1843, it was 7′. 19″. The yearly range for 1844 (similarly estimated) was 23′. 15″, being the difference between the mean westerly declination on July 8, when the marked end of the magnet was in its extreme westerly position, and the mean westerly declination on December 28, when the marked end was in its extreme easterly position. In 1841, this value was found to be 31′. 21″; in 1842, it was 17′. 54″; and in 1843, it was 32′. 54″.

TABLE V.—Extreme Positions of the Declination Magnet in each Month, in Single Observations, for Daily, Term-Day, and Extraordinary Observations.

1844, Month.	The Western Declination when the marked end of the Magnet was most drawn towards the West. Daily Observations.	East. Daily Observations.	West. Term-Day Observations.	East. Term-Day Observations.	West. Extraordinary Observations	East. Extraordinary Observations	Range in the Month.	Day and Hour when the marked end of the Magnet was most drawn towards the West. Daily Observations.	East. Daily Observations.	West. Term-Day Observations.	East. Term-Day Observations.	West. Extraordinary Observations.	East. Extraordinary Observations.
	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	′ ″	d h m	d h m	d h m	d h m	d h m	d h m s
January	23. 27. 57	23. 11. 51	23. 29. 47	23. 12. 52	....	....	17. 56	25. 1. 50	5. 10. 0	25. 1. 15 25. 1. 20	24. 17. 0	....	.....
February	23. 27. 11	23. 2. 34	23. 23. 19	23. 15. 59	23. 12. 31	23. 2. 16	24. 55	1. 2. 10	7. 10. 0	24. 0. 10	23. 10. 50	7. 10. 29	7. 10. 3. 0
March	23. 32. 59	22. 58. 49	23. 25. 23	23. 12. 35	23. 32. 59	22. 56. 45	36. 14	30. 1. 50	30. 6. 0	21. 2. 0	20. 10. 15	30. 1. 50	30. 8. 37. 0
April	23. 31. 42	23. 6. 41	23. 33. 34	22. 56. 48	23. 41. 53	23. 8. 43	45. 5	25. 2. 10	17. 12. 0	25. 2. 40	25. 7. 15	17. 1. 9	17. 10. 0. 0
May	23. 29. 6	23. 5. 28	23. 24. 45	23. 10. 17	23. 19. 57	23. 5. 30	23. 38	14. 1. 50	22. 14. 0	25. 1. 5	25. 9. 5	21. 10. 0	21. 12. 18. 0
June	23. 30. 37	23. 9. 11	23. 24. 41	23. 14. 7	....	....	21. 26	21. 1. 50	16. 14. 0	20. 2. 35	19. 18. 20	....	.....
July	23. 29. 46	23. 9. 29	23. 30. 22	23. 10. 36	....	....	20. 53	18. 2. 10	2. 18. 0	25. 1. 15	24. 17. 55	....	.....
August	23. 25. 23	23. 4. 6	23. 25. 3	23. 4. 16	23. 19. 7	22. 59. 28	25. 55	30. 1. 50	1. 10. 0	31. 2. 10	30. 14. 25	22. 14. 0	16. 10. 30. 0
September	23. 23. 26	22. 56. 9	23. 21. 42	23. 1. 36	23. 21. 47	22. 44. 58	38. 28	26. 2. 0 26. 20. 0	26. 8. 0	19. 1. 20	19. 8. 50	25. 13. 49	26. 8. 15. 0
October	23. 31. 19	22. 49. 41	23. 18. 16	23. 6. 50	23. 38. 10	22. 57. 30	48. 29	0. 18. 0	25. 12. 0	24. 0. 30	23. 11. 45	20. 16. 34	1. 8. 18. 0
November	23. 30. 9	22. 49. 35	23. 14. 40	23. 8. 39	23. 32. 52	22. 48. 28	44. 24	16. 1. 50	22. 8. 0	30. 1. 10	29. 10. 45	16. 0. 45	22. 8. 22. 15
December	23. 12. 23	22. 50. 14	23. 6. 17	22. 53. 17	23. 4. 31	22. 50. 14	22. 9	1. 20. 0	21. 4. 0	18. 21. 45	18. 12. 25	21. 4. 49	21. 4. 0. 0

The largest westerly declination in the year was in April, as observed in Extraordinary Observations, on the 17th day, at $1^{h}.\ 9^{m}$; and the smallest was in September, as observed in Extraordinary Observations, on the 26th day, at $8^{h}.\ 15^{m}$: the yearly range was 56′. 55″. The monthly range was large in April, October, and November, and remarkably small in January, May, June, July, August, and December: that of January is the smallest of all, and, with the exception of November, 1842, it is less than in any other month since the establishment of the Magnetic Observatory.

TABLE VI.—Determination of the Mean Monthly Westerly Declination from the Means of the Two-hourly Observations.

Mean rejecting days of great disturbance

1844, Month.	Mean Monthly Westerly Declination of Magnet.	1844, Month.	Mean Monthly Westerly Declination of Magnet.
	° ′ ″		° ′ ″
January	23. 19. 22	July	23. 18. 49
February	23. 18. 43	August	23. 13. 25
23. 18. 50 March	23. 18. 42	September	23. 13. 6
April	23. 18. 42	October	23. 12. 52 23. 12. 46
May	23. 19. 23	November	23. 11. 50
June	23. 19. 8	December	22. 59. 41

The mean westerly declination for the year is 23°. 15′. 19″, being larger by 3′. 36″ than that deduced from the observations in the preceding year.

The mean for each month is greater than the mean for the same month in the preceding year, from January to August, both inclusive, the largest difference being in April, and amounting to 13′. 54″. From September to the end of the year the mean for each month is less than the mean for the same month in the preceding year, the largest difference being in December, and amounting to 17′. 22″.

TABLE VII.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
1	9. 9	17. 50	7. 58	12. 12	13. 57	12. 4	10. 8	20. 44	*S*	37. 53	6. 41	*S*
2	10. 57	8. 45	19. 43	13. 23	12. 29	*S*	12. 31	16. 15	12. 6	7. 18	19. 17	18. 55
3	6. 17	9. 59	*S*	12. 14	9. 37	9. 41	15. 7	15. 53	10. 34	16. 42	*S*	4. 30
4	5. 32	*S*	23. 48	13. 4	9. 39	8. 21	12. 36	*S*	10. 36	10. 35	9. 19	12. 28
5	11. 58	10. 5	19. 55	Good Fri.	*S*	12. 1	11. 20	8. 36	8. 44	12. 43	5. 2	6. 37
6	9. 22	10. 37	20. 58	14. 0	11. 52	12. 21	11. 35	6. 55	8. 26	*S*	6. 24	4. 44
7	*S*	21. 21	17. 31	*S*	10. 8	12. 46	*S*	10. 36	10. 1	7. 39	7. 55	4. 1
8	9. 15	14. 41	18. 35	12. 35	10. 45	10. 47	14. 9	11. 45	*S*	10. 19	8. 25	*S*
9	5. 17	6. 50	11. 32	11. 38	14. 43	*S*	5. 7	13. 27	9. 32	8. 25	6. 16	3. 52
10	8. 33	9. 7	*S*	15. 26	8. 21	12. 25	10. 9	11. 16	8. 16	7. 12	*S*	6. 51
11	8. 22	*S*	9. 26	9. 53	10. 38	10. 42	7. 43	*S*	11. 9	7. 27	12. 37	4. 32
12	10. 13	5. 53	12. 41	9. 54	*S*	12. 14	7. 25	10. 12	10. 25	8. 49	11. 35	4. 19
13	5. 35	5. 36	9. 31	10. 26	10. 28	12. 21	12. 12	13. 33	12. 6	*S*	6. 39	4. 3
14	*S*	4. 54	7. 19	*S*	18. 49	11. 33	*S*	9. 53	15. 43	10. 11	5. 42	7. 27
15	7. 52	6. 39	9. 39	11. 25	9. 16	11. 53	13. 47	9. 13	*S*	9. 27	4. 35	*S*
16	7. 35	7. 26	9. 39	9. 30	10. 38	*S*	14. 27	22. 7	10. 53	7. 54	40. 13	7. 30
17	8. 46	10. 28	*S*	35. 12	8. 50	15. 13	13. 41	13. 44	11. 42	10. 2	*S*	4. 12
18	7. 53	*S*	14. 58	16. 2	8. 42	11. 57	17. 6	*S*	12. 58	11. 38	15. 24	7. 38
19	5. 56	5. 49	10. 46	8. 4	*S*	11. 48	12. 30	11. 29	20. 6	7. 59	7. 23	13. 0
20	6. 24	4. 34	11. 43	10. 55	8. 40	11. 2	12. 32	9. 40	24. 3	*S*	6. 24	12 ·29
21	*S*	5. 36	10. 52	*S*	16. 18	18. 38	*S*	11. 13	10. 22	33. 9	5. 10	14. 19
22	6. 27	7. 9	10. 19	11. 25	22. 55	8. 43	9. 29	17. 40	*S*	7. 58	31. 59	*S*
23	4. 36	7. 31	9. 47	12. 27	22. 25	*S*	11. 20	11. 26	9. 30	12. 40	24. 46	5. 47
24	4. 37	6. 57	*S*	12. 40	11. 2	10. 37	10. 39	11. 5	11. 36	11. 16	*S*	4. 2
25	16. 55	*S*	9. 12	36. 46	14. 28	9. 44	19. 46	*S*	20. 21	32. 37	5. 49	Ch. Day.
26	5. 18	9. 14	9. 13	14. 59	*S*	11. 2	8. 53	11. 37	38. 28	15. 50	4. 6	6. 54
27	4. 31	7. 40	7. 55	9. 53	8. 31	9. 24	14. 18	12. 12	17. 39	*S*	9. 26	7. 21
28	*S*	11. 44	11. 47	*S*	11. 11	10. 20	*S*	12. 39	16. 20	11. 26	15. 26	9. 0
29	6. 14	8. 37	26. 19	16. 2	9. 42	16. 5	12. 16	12. 11	*S*	13. 19	6. 1	*S*
30	7. 4		36. 14	10. 50	10. 21	*S*	8. 57	18. 24	12. 2	8. 55	5. 43	9. 58
31	6. 30		*S*		10. 32		13. 39	20. 44		9. 20		14. 16

The letter *S* denotes that the day was Sunday.

TABLE VIII.—Mean Daily Range of the Declination Magnet in each Month.

1844, Month.	Mean of all the Daily Ranges in each Month.	1844, Month.	Mean of all the Daily Ranges in each Month.
January	7′. 40″	July	11′. 59″
February	9. 0	August	13. 7
March	14. 8	September	13. 45
April	14. 2	October	12. 55
May	12. 2	November	10. 42
June	11. 45	December	7. 57

The mean daily range of the magnet appears smallest in January, February, and December, and largest in March, April, and 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 daily range in Summer was 12′. 47″

The daily range in Winter was 10. 24

The mean daily range for the year was 11′. 35″, being identical with that deduced from the observations of the preceding year.

TABLE IX.—Greatest and Least Daily Ranges of the Declination Magnet in each Month.

1844, Month.	Daily Range of the Declination Magnet.		Day on which the Range of the Magnet was	
	Greatest.	Least.	Greatest.	Least.
January	16′. 55″	4′. 31″	25d	27d
February	21. 21	4. 34	7	20
March	36. 14	7. 19	30	14
April	36. 46	8. 4	25	19
May	22. 55	8. 21	22	10
June	18. 38	8. 21	21	4
July	19. 46	5. 7	25	9
August	22. 7	6. 55	16	6
September	38. 28	8. 16	26	10
October	37. 53	7. 12	1	10
November	40. 13	4. 6	16	26
December	18. 55	3. 52	2	9

TABLE X.—Table shewing how often in each Month the Daily Range of the Declination Magnet has been included between consecutive Minutes or other limits.

The Daily Range was	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Whole Number of Cases in the Year.
	Number of Cases in												
Greater than 3′ and less than 4′												1	1
,, 4 ,, 5	3	2									2	8	15
,, 5 ,, 6	5	4					1				5	1	16
,, 6 ,, 7	5	3						1			6	3	18
,, 7 ,, 8	4	4	3				2			7	2	4	26
,, 8 ,, 9	3	2		1	5	2	2	1	3	3	1		23
,, 9 ,, 10	3	3	7	4	4	3	1	3	2	2	2	2	36
,, 10 ,, 11	2	3	3	3	7	4	3	2	6	4			37
,, 11 ,, 12	1	1	3	3	3	6	3	7	3	3	1		34
,, 12 ,, 13			1	5	1	7	6	3	4	2	1	2	32
,, 13 ,, 14				2	1		3	3		1		1	11
,, 14 ,, 15		1	1	2	2		3					2	11
,, 15 ,, 16				1		1	1	1	1	1	2		8
,, 16 ,, 17	1			2	1	1		1	1	1			8
,, 17 ,, 18		1	1				1	1	1				5
,, 18 ,, 19			1		1	1		1				1	5
,, 19 ,, 20			2				1				1		4
,, 20 ,, 21			1					2	2				5
,, 21 ,, 22		1											1
,, 22 ,, 23					2			1					3
,, 23 ,, 24			1										1
,, 24 ,, 25									1		1		2
,, 25 ,, 26													
,, 26 ,, 27			1										1
,, 27 ,, 28													
,, 28 ,, 29													
,, 29 ,, 30													
,, 30 ,, 35										2	1		3
,, 35 ,, 41			1	2					1	1	1		6

From the last column of this table we collect the following particulars :—

That on 16 days out of 312 the daily arc described by the magnet was greater than 3′ and less than 5′,
260 ,, ,, 5 ,, 17,
26 ,, ,, 17 ,, 26,
10 ,, ,, 26 ,, 41.

These limits are the same as those in the year 1843; and they have been taken in this year, to render the results comparable with those of preceding years. The arc most frequently described is between 9′ and 13′.

TABLE XI.—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.

1844, *Hour*, Göttingen Mean Time.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sep.	Oct.	Nov.	Dec.
h	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	23° ′ ″	22° ′ ″
14	17. 54	17. 7	16. 58	16. 1	16. 55	17. 22	16. 57	11. 28	11. 19	10. 30	10. 15	59. 17
16	18. 35	17. 23	16. 29	16. 17	17. 45	16. 26	16. 30	11. 5	10. 48	12. 10	11. 36	59. 33
18	18. 22	17. 14	17. 8	16. 17	16. 47	15. 8	15. 3	10. 37	11. 42	12. 31	11. 19	59. 32
20	18. 52	17. 44	17. 26	15. 35	15. 25	14. 54	15. 21	9. 37	11. 7	12. 4	11. 58	59. 40
22	20. 12	19. 14	18. 22	17. 25	17. 52	17. 32	17. 51	13. 50	13. 5	12. 48	12. 41	60. 8
0	22. 22	22. 38	23. 8	23. 1	23. 38	23. 52	23. 6	18. 45	18. 58	17. 44	15. 42	61. 46
2	22. 50	22. 50	25. 46	26. 12	25. 14	25. 33	25. 9	20. 21	19. 16	18. 31	16. 3	62. 35
4	21. 0	20. 40	22. 16	23. 34	23. 26	23. 30	22. 55	16. 41	15. 41	15. 15	13. 30	60. 28
6	19. 16	19. 21	17. 58	19. 55	21. 5	20. 21	20. 16	13. 50	12. 39	12. 34	11. 55	59. 15
8	18. 25	17. 48	16. 56	17. 22	19. 30	19. 17	18. 29	12. 18	10. 18	11. 7	9. 21	58. 29
10	17. 8	15. 57	16. 41	16. 47	18. 7	18. 18	17. 22	11. 3	11. 0	9. 38	8. 46	57. 55
12	17. 27	16. 42	15. 13	16. 8	16. 49	17. 28	16. 47	11. 21	11. 5	9. 32	8. 57	57. 32

The westerly declination is, without exception, greater at 2^h than at any other hour; the excess in the winter months over that at 0^h being small. A double maximum and minimum is generally shewn in each month. The next table is formed so as to exhibit the times, and the amounts of the changes.

TABLE XII.—Hours of Göttingen Mean Solar Time (Astronomical Reckoning) at which the Greatest and Least Declinations occur in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the Values of the Declinations and the Amounts of the Changes.

1844, Month.	For Extreme Positions of the Magnet. First Extreme West.		First Extreme East.		Second Extreme West.		Second Extreme East.		Third Extreme West.		Third Extreme East.	
	Hour.	West Declination.	Hour.	West Declination.	Hour.	West Declination.	Hour.	West Declination.	Hour.	West Declination.	Hour.	West Declination.
	h	° ' "	h	° ' "	h	° ' "	h	° ' "	h	° ' "	h	° ' "
January	2	23. 22. 50	10	23. 17. 8	16	23. 18. 35	18	23. 18. 22				
February	2	23. 22. 49	10	23. 15. 57	16	23. 17. 23	18	23. 17. 14				
March	2	23. 25. 46	12	23. 15. 13	14	23. 16. 58	16	23. 16. 29				
April	2	23. 26. 12	14	23. 16. 1	16 & 18	23. 16. 17	20	23. 15. 35				
May	2	23. 25. 14	12	23. 16. 49	16	23. 17. 45	20	23. 15. 25				
June	2	23. 25. 33	20	23. 14. 54								
July	2	23. 25. 9	12	23. 16. 47	14	23. 16. 57	18	23. 15. 3				
August	2	23. 20. 21	10	23. 11. 3	14	23. 11. 28	20	23. 9. 37				
September	2	23. 19. 16	8	23. 10. 18	14	23. 11. 19	16	23. 10. 48	18	23. 11. 42	20	23. 11. 7
October	2	23. 18. 31	12	23. 9. 32	18	23. 12. 31	20	23. 12. 4				
November	2	23. 16. 3	10	23. 8. 46	16	23. 11. 36	18	23. 11. 19				
December	2	23. 2. 35	12	22. 57. 32	16	22. 59. 33	18	22. 59. 32				

TABLE XII.—*continued.*

1844, Month.	Interval from First West to First East Position.		Interval from First East to Second West Position.		Interval from Second West to Second East Position.		Interval from Second East to Third West Position.		Interval from Third West to Third East Position.		Interval from Last East to First West Position.		Sums of the Arcs Described.	Difference between the Greatest and Least West Declination, or Mean Daily Range.
	Time Elapsed.	Arc Described.	Time Elapsed.	Arc Described.	Time Elapsed.	Arc Described.	Time Elapsed.	Arc Described.	Time Elapsed.	Arc Described.	Time Elapsed.	Arc Described.		
	h	' "	h	' "	h	' "	h	' "	h	' "	h	' "	' "	' "
January	8	5. 42	6	1. 27	2	0. 13					8	4. 28	11. 50	5. 42
February	8	6. 52	6	1. 26	2	0. 9					8	5. 35	14. 2	6. 52
March	10	10. 33	2	1. 45	2	0. 29					10	9. 17	22. 4	10. 33
April	12	10. 11	2 & 4	0. 16	4 & 2	0. 42					6	10. 37	21. 46	10. 37
May	10	8. 25	4	0. 56	4	2. 20					6	9. 49	21. 30	9. 49
June	18	10. 39									6	10. 39	21. 18	10. 39
July	10	8. 22	2	0. 10	4	1. 54					8	10. 6	20. 32	10. 6
August	8	9. 18	4	0. 25	6	1. 51					6	10. 44	22. 18	10. 44
September	6	8. 58	6	1. 1	2	0. 31	2	0. 54	2	0. 35	6	8. 9	20. 8	8. 58
October	10	8. 59	6	2. 59	2	0. 27					6	6. 27	18. 52	8. 59
November	8	7. 17	6	2. 50	2	0. 17					8	4. 44	15. 8	7. 17
December	10	5. 3	4	2. 1	2	0. 1					8	3. 3	10. 8	5. 3

The following particulars may be collected from this table:—At 2^h the marked end of the magnet has been, in every month, more westerly than at any other observation hour: from that time to 10^h or 12^h generally, it moved towards the East, or towards the astronomical meridian, describing a mean arc of 9′. 3″ in the months from April to September (except in June, the motion of the magnet being different in this month from that in all the other months), and one of 7′. 24″ in the remaining months; and it attained its most easterly position in those months at 10^h or 12^h: from 10^h or 12^h to 14^h or 16^h, the marked end of the magnet was moving from the astronomical meridian, the western declination at the latter times being greater than they were at the former by less than 1′ in summer, whilst in winter the mean increase was 2′. 5″.

From 14^h or 16^h to 16^h, 18^h, or 20^h, the marked end of the magnet again approached the astronomical meridian, and at the latter times the western declination was less than at the former, in summer from 1′ to 2′ (the mean of the values in the months from April to September, excepting June, being 1′. 28″), and in winter by only a few seconds, the mean of the values for these months being 0′. 16″; at 16^h, 18^h, or 20^h in summer, except in September, the marked end of the magnet was more easterly than at any other observation-hours; in September the most easterly position was reached at 8^h. At the last-mentioned times, the motion of the magnet was changed, so that the marked end moved from the astronomical meridian, and this motion continued uninterruptedly till 2^h; the arc described in summer was 10′. 1″, and in winter it was 5′. 36″, the westerly declination at 2^h being, as before observed, greater than at any other observation-hour.

Therefore, the diurnal movement has consisted of a triple maximum and minimum in September, of a double maximum and minimum in ten of the remaining months, and of a single maximum and minimum in the month of June: during the latter month the magnet has apparently moved at once from one extreme position to the other. By examining Table XI. for the month of June, this appears to have been decidedly the case at all hours except between 12^h and 14^h, the mean declination at the latter time being only 6″ less than at the former time: yet, by examining the motion of the magnet for each day in June, we find one instance in which the declination was the same at 0^h and 2^h, viz., on the 24th day, and three instances in which the declination at 0^h was greater than that at 2^h, viz., on the 10th, 11th, and 12th days; there was one instance of the declination at 2^h being the same as that at 4^h, viz., on the 4th day; there were five instances of the declination at 8^h being greater than at 6^h, viz., on the 1st, 11th, 19th, 20th, and 24th days; there were five instances of the declination at 10^h being greater than at 8^h, viz., on the 10th, 12th, 17th, 25th, and 27th days; there were five instances in which the declination at 12^h was greater than at 10^h, viz., on the 4th, 5th, 15th, 26th, and the 29th days; there were six instances in which the declination at 16^h was greater than at 14^h, viz., on the 2nd, 9th, 11th, 16th, 18th, and 19th days, and one in which the declinations were the same at those hours, viz., on the 4th day; there were three instances in which the declination at 18^h was greater than at 16^h, viz., on the 13th, 16th, and 21st days; there were eleven instances of the declination at 20^h being greater than at 18^h, viz., on the 0^d, 3rd, 9th, 12th, 19th, 20th, 23rd, 24th, 25th, 27th, and 28th days; and, finally, it appears that there were only four days in the month in which the motion agreed with the mean motion for the month, viz., on the 6th, 7th, 8th, and 18th days. The circumstance of a single maximum and minimum being shown in the mean of June must, therefore, be attributed to accident.

The last column but one represents the sums of all the backward and forward motions of the magnet, as found by adding, without regard to sign, all the differences between successive extremes; and it represents nearly the mean arc described by the magnet each day. The numbers in the last column shew the mean daily changes in the position of the magnet. The numbers contained in the two last columns in the summer months are about the double of those in the winter months: the increase in those numbers between February and March is remarkable.

There is one instance in which the marked end of the magnet obtained its first extreme position at 8^h. In the year 1843, there was no instance of the same position being reached before 10^h.

The next table is formed by taking the means of the numbers in Table XI., corresponding to the same hour for several months: January, February, March, October, November, and December are grouped together for winter, the remaining months from April to September inclusive for summer.

TABLE XIII.—Mean Westerly Declination at every Even Hour of Göttingen Mean Solar Time, in the Summer, in the Winter, and for the Year.

1844, Hour Göttingen Mean Time.	Mean Westerly Declination. Summer.	Winter.	Mean for the Year.	1844, Hour Göttingen Mean Time.	Mean Westerly Declination. Summer.	Winter.	Mean for the Year.
h	° ′ ″	° ′ ″	° ′ ″	h	° ′ ″	° ′ ″	° ′ ″
14	23. 15. 0	23. 12. 0	23. 13. 30	2	23. 23. 38	23. 18. 6	23. 20. 52
16	14. 49	12. 38	13. 44	4	20. 58	15. 32	18. 15
18	14. 16	12. 41	13. 29	6	18. 1	13. 23	15. 42
20	13. 40	12. 57	13. 19	8	16. 12	12. 1	14. 7
22	16. 16	13. 54	15. 5	10	15. 26	11. 1	13. 14
0	21. 53	17. 13	19. 33	12	14. 56	10. 54	12. 55

The greatest westerly declination occurred both in the summer and in the winter at 2^h; the least occurred in the summer at 20^h, in the winter at 12^h. In summer there were two maxima and two minima; in winter there was one maximum and one minimum. The times are:—

In Summer.	h	In Winter.	h
The maximum at	2	The maximum at	2
A minimum at	12	The minimum at	12
A maximum at	14		
The minimum at	20		

The last column shews the mean at each hour for the year, and it exhibits a double maximum and minimum, viz.:—

	h
The maximum at	2
The minimum at	12
A maximum at	16
A minimum at	20

The mean westerly declination for summer was 23°. 17′. 5″, and for winter it was 23°. 13′. 32″. In the year 1843 it was 23°. 10′. 27″ in summer, and in winter 23°. 12′. 59″; so that the western declination in the summer half year of 1844 was greater by 6′. 38″, and in the winter half year by 0′. 33″ than it was in the same periods of the preceding year. Comparing the results of 1844 with those of 1843, hour by hour, the greatest difference occurred in summer at 10^h, being 7′. 11″, and the least difference at 2^h, being 5′. 52″; in winter, the greatest difference was at 22^h, being 1′. 27″, and the least at 6^h and 8^h, being 0′. 4″; and for the whole year, the greatest difference occurred at 22^h, being 4′. 8″, and the least difference at 4^h, being 3′. 0″: the results of 1844 are in all cases greater than those of 1843, except at 4^h and 6^h in winter, whose results were respectively 0′. 5″ and 0′. 4″ less than the corresponding ones of 1843.

In 1844, the mean for the whole year was 23°. 15′. 19″; in 1843, it was 23°. 11′. 43″; therefore, the mean western declination of 1844 was larger than that for 1843, by 3′. 36″.

Comparing the numbers of the last column with the westerly declination for the year, or 23°. 15′. 19″, the following results are obtained:—

	h		′ ″
The mean position at	14	is more easterly than the mean position for the year by	1. 49
,,	16	,, ,,	1. 35
,,	18	,, ,,	1. 50
,,	20	,, ,,	2. 0
,,	22	,, ,,	0. 14
,,	0	is more westerly than the mean position for the year by	4. 14
,,	2	,, ,,	5. 33
,,	4	,, ,,	2. 56
,,	6	,, ,,	0. 23
,,	8	is more easterly than the mean position for the year by	1. 12
,,	10	,, ,,	2. 5
,,	12	,, ,,	2. 24

TABLE XIV.—Excess of the 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).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
14	−1. 28	−1. 36	−1. 44	−2. 41	−2. 28	−1. 46	−1. 52	−1. 57	−1. 47	−2. 22	−1. 35	−0. 24
16	−0. 47	−1. 20	−2. 13	−2. 25	−1. 38	−2. 42	−2. 19	−2. 20	−2. 18	−0. 42	−0. 14	−0. 8
18	−1. 0	−1. 29	−1. 34	−2. 25	−2. 36	−4. 0	−3. 46	−2. 48	−1. 24	−0. 21	−0. 31	−0. 9
20	−0. 30	−0. 59	−1. 16	−3. 7	−3. 58	−4. 14	−3. 28	−3. 48	−1. 59	−0. 48	+0. 8	−0. 1
22	+0. 50	+0. 31	−0. 20	−1. 17	−1. 31	−1. 36	−0. 58	+0. 25	−0. 1	−0. 4	+0. 51	+0. 27
0	+3. 0	+3. 55	+4. 26	+4. 19	+4. 15	+4. 44	+4. 17	+5. 20	+5. 52	+4. 52	+3. 52	+2. 5
2	+3. 28	+4. 6	+7. 4	+7. 30	+5. 51	+6. 25	+6. 20	+6. 56	+6. 10	+5. 39	+4. 13	+2. 54
4	+1. 38	+1. 57	+3. 34	+4. 52	+4. 3	+4. 22	+4. 6	+3. 16	+2. 35	+2. 23	+1. 40	+0. 47
6	−0. 6	+0. 38	−0. 44	+1. 13	+1. 42	+1. 13	+1. 27	+0. 25	−0. 27	−0. 18	+0. 5	−0. 26
8	−0. 57	−0. 55	−1. 46	−1. 20	+0. 7	+0. 9	−0. 20	−1. 7	−2. 48	−1. 45	−2. 29	−1. 12
10	−2. 15	−2. 46	−2. 1	−1. 55	−1. 16	−0. 50	−1. 27	−2. 22	−2. 6	−3. 14	−3. 8	−1. 46
12	−1. 55	−2. 1	−3. 29	−2. 34	−2. 34	−1. 40	−2. 2	−2. 4	−2. 1	−3. 20	−2. 53	−2. 9

TABLE XV.—Number of Hours for each Day of every Month, deduced from the Monthly Means, during which the Declination Magnet was on each side of the Mean Position for that Month.

1844, Month.	The marked end of the Magnet was East of the Magnetic Meridian from	The marked end of the Magnet was West of the Magnetic Meridian from	The Length of Time the marked end of Magnet was East of the Meridian.	The Length of Time the marked end of Magnet was West of the Meridian.
	h h	h h	h	h
January	Before 6 to after 20	Before 22 to after 4	14 +	6 +
February	Before 8 to after 20	Before 22 to after 6	12 +	8 +
March	Before 6 to after 22	Before 0 to after 4	16 +	4 +
April	Before 8 to after 22	Before 0 to after 6	14 +	6 +
May	Before 10 to after 22	Before 0 to after 8	12 +	8 +
June	Before 10 to after 22	Before 0 to after 8	12 +	8 +
July	Before 8 to after 22	Before 0 to after 6	14 +	6 +
August	Before 8 to after 20	Before 22 to after 6	12 +	8 +
September	Before 6 to after 22	Before 0 to after 4	16 +	4 +
October	Before 6 to after 22	Before 0 to after 4	16 +	4 +
November	Before 8 to after 18	Before 20 to after 6	10 +	10 +
December	Before 6 to after 20	Before 22 to after 4	14 +	6 +

This table shews that the magnet has been twice every day in its mean position for the month: in the months of May and June, before 10^h; in the months of February, April, July, August, and November, before 8^h; and in the remaining months before 6^h; and it was in its mean position again in November before 20^h; in January, February, August, and December before 22^h; and in the remaining months after 22^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 greater to the West.

TABLE XVI.—Table exhibiting the Differences in the Mean Positions of the Declination Magnet between every Pair of Consecutive Observation-hours in every Month, estimated positive when the Western Declination was greater at the latter Hour (obtained by taking the Differences between the consecutive Numbers in each Month, contained in Table XI. or XIV.).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
Between 14 & 16	+0. 41	+0. 16	−0. 29	+0. 16	+0. 50	−0. 56	−0. 27	−0. 23	−0. 31	+1. 40	+1. 21	+0. 16
,, 16 & 18	−0. 13	−0. 9	+0. 39	0. 0	−0. 58	−1. 18	−1. 27	−0. 28	+0. 54	+0. 21	−0. 17	−0. 1
,, 18 & 20	+0. 30	+0. 30	+0. 18	−0. 42	−1. 22	−0. 14	+0. 18	−1. 0	−0. 35	−0. 27	+0. 39	+0. 8
,, 20 & 22	+1. 20	+1. 30	+0. 56	+1. 50	+2. 27	+2. 38	+2. 30	+4. 13	+1. 58	+0. 44	+0. 43	+0. 28
,, 22 & 0	+2. 10	+3. 24	+4. 46	+5. 36	+5. 46	+6. 20	+5. 15	+4. 55	+5. 53	+4. 56	+3. 1	+1. 38
,, 0 & 2	+0. 28	+0. 11	+2. 38	+3. 11	+1. 36	+1. 41	+2. 3	+1. 36	+0. 18	+0. 47	+0. 21	+0. 49
,, 2 & 4	−1. 50	−2. 9	−3. 30	−2. 38	−1. 48	−2. 3	−2. 14	−3. 40	−3. 35	−3. 16	−2. 33	−2. 7
,, 4 & 6	−1. 44	−1. 19	−4. 18	−3. 39	−2. 21	−3. 9	−2. 39	−2. 51	−3. 2	−2. 41	−1. 35	−1. 13
,, 6 & 8	−0. 51	−1. 33	−1. 2	−2. 33	−1. 35	−1. 4	−1. 47	−1. 32	−2. 21	−1. 27	−2. 34	−0. 46
,, 8 & 10	−1. 17	−1. 51	−0. 15	−0. 35	−1. 23	−0. 59	−1. 7	−1. 15	+0. 42	−1. 29	−0. 35	−0. 34
,, 10 & 12	+0. 19	+0. 45	−1. 28	−0. 39	−1. 18	−0. 50	−0. 35	+0. 18	+0. 5	−0. 6	+0. 11	−0. 23
,, 12 & 14	+0. 27	+0. 25	+1. 45	−0. 7	+0. 6	−0. 6	+0. 10	+0. 7	+0. 14	+0. 58	+1. 18	+1. 45

The following table is formed by taking the means of the numbers contained in the preceding (without regard to their signs), which correspond to the same pair of hours. January, February, March, October, November, December are grouped together for winter; the remaining months from April to September, are grouped together for summer.

TABLE XVII.—Amounts of the Differences in the Mean Positions of the Declination Magnet, between every Pair of Consecutive Observation-Hours, with the character of the Changes for the Summer, the Winter, and the Year.

Between what Hours.	Amount of Difference of Mean Position of the Declination Magnet during the Period of			CHARACTER OF THE CHANGES. The Western Declination was, at the latter Hour,		
	Summer.	Winter.	Year.	Summer Period.	Winter Period.	For the Year.
h h	′ ″	′ ″	′ ″			
14 to 16	0. 34	0. 47	0. 41	Always smaller, except in April and May.	Larger, except in March.	Generally larger.
16 to 18	0. 51	0. 17	0. 34	Always smaller, except in Sep.	Smaller, except in March and October.	Generally smaller.
18 to 20	0. 42	0. 25	0. 34	Always smaller, except in July.	Larger, except in October.	Sometimes smaller, sometimes larger.
20 to 22	2. 36	0. 57	1. 46	Always larger.	Always larger.	Always larger.
22 to 0	5. 38	3. 19	4. 28	,,	,,	,,
0 to 2	1. 44	0. 52	1. 18	,,	,,	,,
2 to 4	2. 40	2. 34	2. 37	Always smaller.	Always smaller.	Always smaller.
4 to 6	2. 57	2. 8	2. 33	,,	,,	,,
6 to 8	1. 49	1. 22	1. 35	,,	,,	,,
8 to 10	1. 0	1. 0	1. 0	Always smaller, except in Sep.	,,	Generally smaller.
10 to 12	0. 38	0. 32	0. 35	Smaller, except in August and September.	Larger in Jan., Feb., and Nov.; and smaller in March, Oct., and Dec.	Sometimes smaller, sometimes larger.
12 to 14	0. 8	1. 6	0. 37	Larger in May, July, August, and September; smaller in April and June.	Always larger.	Generally larger.

Comparing the quantities and the direction of the changes contained in this table with the similar results obtained in 1841, 1842, and 1843, we find that, in the summer period of 1841, the declination was generally larger at 16ʰ than at 14ʰ; in 1842 it was generally smaller; in 1843 it was always smaller; and in 1844 it was generally smaller, and the amount of change in 1844 was exactly the same as the mean of the changes in the three preceding years. In 1841 and 1842, the declination was generally larger at 18ʰ than at 16ʰ; in 1843 it was always smaller; in 1844 it was generally smaller; and the amount of change in 1844 was only 2″ less than the mean deduced from the three preceding years. Between 18ʰ and 20ʰ the only difference in 1844 from the results of the other years is in the amount of the change, it being 11″ greater than in 1843, and more than half a minute less than it was in either 1841 or 1842. Between 20ʰ and 10ʰ, the results from each of the four years are identical in direction; the principal difference in the amounts of the changes was between 0ʰ and 2ʰ, that from 1844 being 1′. 44″, and that from the mean of the other years being 2′. 26″. In 1841 and 1842, the declination at 12ʰ was generally smaller than it was at 10ʰ, and it was generally larger at 14ʰ than at 12ʰ; in 1843 there were as many instances in each case of the declination being larger at the preceding hour, as there were of its being smaller; in 1844 the declination at 12ʰ was generally smaller than it was at 10ʰ, agreeing in this respect with the years 1841 and 1842; in 1844 there were as many cases of the declination being larger at 14ʰ than it was at 12ʰ, as there were of its being smaller, agreeing in this respect with the results of 1843.

With respect to the winter half-year, there is very little difference between the results of each year, the principal difference consisting in the amount of the changes; that between 0ʰ and 2ʰ of 1844 is smaller than those of the other years, and the amount of change in the night hours of 1843 and 1844 is much smaller than in those of 1841 and 1842.

TABLE XVIII.—Mean Westerly Declination of the Magnet at each Even Hour during the Month (obtained by taking the Mean of all the Declinations at the same Hour during each Month, Table XI.), diminished by the Mean Declination for the Month (Table VI.), and by the Mean Diurnal Change at each Hour (Table XIII. and following numbers).

1844, Hour. Göttingen Mean Time,	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
14	+0. 21	+0. 13	+0. 5	−0. 52	−0. 39	+0. 3	−0. 3	−0. 8	+0. 2	−0. 33	+0. 14	+1. 25
16	+0. 48	+0. 15	−0. 38	−0. 50	−0. 3	−1. 7	−0. 44	−0. 45	−0. 43	+0. 53	+1. 21	+1. 27
18	+0. 50	+0. 21	+0. 16	−0. 35	−0. 46	−2. 10	−1. 56	−0. 58	+0. 26	+1. 29	+1. 19	+1. 41
20	+1. 30	+1. 1	+0. 44	−1. 7	−1. 58	−2. 14	−1. 28	−1. 48	+0. 1	+1. 12	+2. 8	+1. 59
22	+1. 4	+0. 45	−0. 6	−1. 3	−1. 17	−1. 22	−0. 44	+0. 39	+0. 13	+0. 10	+1. 5	+0. 41
0	−1. 14	−0. 19	+0. 12	+0. 5	+0. 1	+0. 30	+0. 3	+1. 6	+1. 38	+0. 38	−0. 22	−2. 9
2	−2. 5	−1. 27	+1. 31	+1. 57	+0. 18	+0. 52	+0. 47	+1. 23	+0. 37	+0. 6	−1. 20	−2. 39
4	−1. 18	−0. 59	+0. 38	+1. 56	+1. 7	+1. 26	+1. 10	+0. 20	−0. 21	−0. 33	−1. 16	−2. 9
6	−0 29	+0. 15	−1. 7	+0. 50	+1. 19	+0. 50	+1. 4	+0. 2	−0. 50	−0. 41	−0. 18	−0. 49
8	+0. 15	+0. 17	−0. 34	−0. 8	+1. 19	+1. 21	+0. 52	+0. 5	−1. 36	−0. 33	−1. 17	0. 0
10	−0. 10	−0. 41	+0. 4	+0. 10	+0. 49	+1. 15	+0. 38	−0. 17	−0. 1	−1. 9	−1. 3	+0. 19
12	+0. 29	+0. 23	−1. 5	−0. 10	−0. 10	+0. 44	+2. 22	+0. 20	+0. 23	−0. 56	−0. 29	+0. 15

TABLE XIX.—Monthly Sums of the Changes of Diurnal Inequality for Different Hours.

1844, Month.	Sums of the Differences.	1844, Month.	Sums of the Differences.
	′ ″		′ ″
January	10. 33	July	11. 51
February	6. 56	August	7. 51
March	7. 0	September	6. 51
April	9. 43	October	8. 53
May	9. 46	November	12. 12
June	13. 54	December	15. 33

From this it appears that the diurnal motion of the declination magnet agrees most nearly with its mean diurnal motion, as found from the mean determination throughout the year, in February, March, September, and October; and departs the most from the mean in the months of June and December.

TABLE XX.—Hourly Sums of the Changes of the Diurnal Inequality for Different Months.

1844, Hour.	Sums of the Differences.	1844, Hour.	Sums of the Differences.
h	′ ″	h	′ ″
14	4. 38	2	15. 2
16	9. 34	4	13. 13
18	12. 47	6	8. 34
20	17. 10	8	8. 17
22	9. 9	10	6. 36
0	8. 17	12	7. 46

From this it appears that 14^h, 10^h, and 12^h are the most uniform hours, and 20^h and 2^h the hours subject to the greatest irregularity.

TABLE XXI.—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.

Month.	$1^h.50^m$.	$2^h.0^m$.	$2^h.10^m$.	Month.	$1^h.50^m$.	$2^h.0^m$.	$2^h.10^m$.
	° ′ ″	° ′ ″	° ′ ″		° ′ ″	° ′ ″	° ′ ″
January	23. 23. 2	23. 22. 50	23. 22. 42	July	23. 25. 6	23. 25. 10	23. 25. 4
February	23. 23. 0	23. 22. 50	23. 22. 44	August	23. 20. 28	23. 20. 21	23. 20. 5
March	23. 25. 49	23. 25. 46	23. 25. 55	September	23. 19. 24	23. 19. 16	23. 19. 12
April	23. 26. 14	23. 26. 12	23. 26. 8	October	23. 18. 46	23. 18. 31	23. 18. 15
May	23. 25. 16	23. 25. 14	23. 25. 3	November	23. 16. 22	23. 16. 3	23. 15. 48
June	23. 25. 37	23. 25. 33	23. 25. 31	December	23. 2. 44	23. 2. 35	23. 2. 24

		h m		° ′ ″
The mean of all for the year 1844,	at	1. 50	is	23. 20. 59
,,	,,	2. 0	is	23. 20. 52
,,	,,	2. 10	is	23. 20. 44

TABLE XXII.—The 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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0 ·038714	0 ·034281	0 ·035062	0 ·033923	0 ·034595	0 ·036633	0 ·037002	0 ·036464	*S*	0 ·037194	0 ·038758	*S*
2	0 ·037041	0 ·033512	0 ·034964	0 ·034395	0 ·035182	*S*	0 ·036682	0 ·035426	0 ·036602	0 ·038672	0 ·038431	0 ·038124
3	0 ·036272	0 ·034953	*S*	0 ·033568	0 ·035215	0 ·035856	0 ·036778	0 ·035715	0 ·036831	0 ·038197	*S*	0 ·038844
4	0 ·038412	*S*	0 ·034933	0 ·033296	0 ·035402	0 ·035889	0 ·036948	*S*	0 ·036807	0 ·038693	0 ·039028	0 ·038193
5	0 ·038161	0 ·035048	0 ·034921	Good Friday	*S*	0 ·035573	0 ·036697	0 ·036141	0 ·036594	0 ·038882	0 ·039185	0 ·037970
6	0 ·037129	0 ·035138	0 ·034221	0 ·033882	0 ·035538	0 ·035707	0 ·036980	0 ·036561	0 ·036535	*S*	0 ·039330	0 ·037582
7	*S*	0 ·035101	0 ·033094	*S*	0 ·035839	0 ·035409	*S*	0 ·036498	0 ·037453	0 ·039064	0 ·039549	0 ·038006
8	0 ·036999	0 ·035195	0 ·033845	0 ·035138	0 ·036053	0 ·034903	0 ·037486	0 ·036907	*S*	0 ·038768	0 ·039325	*S*
9	0 ·036734	0 ·035075	0 ·034244	0 ·035317	0 ·036113	*S*	0 ·037634	0 ·037561	0 ·037106	0 ·038832	0 ·039468	0 ·038496
10	0 ·036072	0 ·034841	*S*	0 ·035030	0 ·035801	0 ·035536	0 ·037548	0 ·037106	0 ·036890	0 ·038638	*S*	0 ·038358
11	0 ·036175	*S*	0 ·035962	0 ·034724	0 ·035401	0 ·035123	0 ·037668	*S*	0 ·037490	0 ·038934	0 ·039652	0 ·038080
12	0 ·036726	0 ·035560	0 ·034670	0 ·035066	*S*	0 ·034728	0 ·037816	0 ·036740	0 ·037415	0 ·039065	0 ·038906	0 ·037817
13	0 ·036770	0 ·035119	0 ·033957	0 ·035358	0 ·035674	0 ·034984	0 ·037578	0 ·036893	0 ·038511	*S*	0 ·039116	0 ·037373
14	*S*	0 ·036354	0 ·034825	*S*	0 ·035687	0 ·034656	*S*	0 ·037248	0 ·038996	0 ·039782	0 ·039602	0 ·036849
15	0 ·036885	0 ·036012	0 ·035481	0 ·036049	0 ·035919	0 ·034466	0 ·037819	0 ·037423	*S*	0 ·040036	0 ·039724	*S*
16	0 ·036629	0 ·036356	0 ·034433	0 ·035728	0 ·036485	*S*	0 ·037320	0 ·037388	0 ·039974	0 ·039812	0 ·037861	0 ·038352
17	0 ·036978	0 ·036152	*S*	0 ·035274	0 ·036351	0 ·035651	0 ·037200	0 ·037466	0 ·039695	0 ·039306	*S*	0 ·039214
18	0 ·036870	*S*	0 ·035231	0 ·036787	0 ·036474	0 ·035819	0 ·037012	*S*	0 ·039928	0 ·039630	0 ·038884	0 ·039046
19	0 ·036027	0 ·037143	0 ·035080	0 ·035976	*S*	0 ·035367	0 ·036829	0 ·037532	0 ·039995	0 ·039332	0 ·038216	0 ·038905
20	0 ·035698	0 ·034465	0 ·035715	0 ·035420	0 ·036095	0 ·035656	0 ·037530	0 ·037646	0 ·039903	*S*	0 ·038921	0 ·036415
21	*S*	0 ·034433	0 ·036096	*S*	0 ·038136	0 ·036170	*S*	0 ·037599	0 ·038738	0 ·035750	0 ·038863	0 ·035798
22	0 ·036513	0 ·035468	0 ·034282	0 ·035977	0 ·038898	0 ·036829	0 ·036733	0 ·037251	*S*	0 ·037600	0 ·038160	*S*
23	0 ·036301	0 ·035289	0 ·034290	0 ·035980	0 ·038050	*S*	0 ·036632	0 ·037065	0 ·039150	0 ·037780	0 ·037670	0 ·037189
24	0 ·035310	0 ·037525	*S*	0 ·035812	0 ·038226	0 ·036552	0 ·036788	0 ·036824	0 ·039408	0 ·038213	*S*	0 ·037169
25	0 ·034424	*S*	0 ·035678	0 ·035157	0 ·036307	0 ·036030	0 ·037006	*S*	0 ·039102	0 ·037655	0 ·038587	Christ. Day.
26	0 ·035288	0 ·037095	0 ·036413	0 ·034792	*S*	0 ·036186	0 ·036546	0 ·036979	0 ·037752	0 ·037752	0 ·038958	0 ·038002
27	0 ·034788	0 ·034666	0 ·036081	0 ·034383	0 ·035915	0 ·036338	0 ·036168	0 ·036834	0 ·038335	*S*	0 ·038804	0 ·039335
28	*S*	0 ·034654	0 ·035886	*S*	0 ·035918	0 ·037078	*S*	0 ·037079	0 ·038829	0 ·038431	0 ·038654	0 ·041485
29	0 ·035258	0 ·034232	0 ·034638	0 ·035058	0 ·035942	0 ·037070	0 ·036213	0 ·037445	*S*	0 ·038483	0 ·038453	*S*
30	0 ·036126		0 ·033723	0 ·035365	0 ·036091	*S*	0 ·036546	0 ·036444	0 ·037932	0 ·038954	0 ·038603	0 ·040490
31	0 ·033836		*S*		0 ·036762		0 ·037079	0 ·036377		0 ·039064		0 ·039596

The letter *S* denotes that the day was Sunday.

It is necessary to decrease all these numbers by 0 ·022831 (see the Introduction), to make them comparable with those of the three preceding years. By applying this correction the next table is formed.

TABLE XXIII.—The Mean Reading of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, and reduced to the same Zero as that of the three preceding years, by applying the constant number mentioned at the foot of Table XXII. to all the numbers in that Table.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.
1	0 ·015883	0 ·011450	0 ·012231	0 ·011092	0 ·011764	0 ·013802	0 ·014171	0 ·013633	*S*	0 ·014363	0 ·015927	*S*
2	0 ·014210	0 ·010681	0 ·012133	0 ·011564	0 ·012351	*S*	0 ·013851	0 ·012595	0 ·013771	0 ·015841	0 ·015600	0 ·015293
3	0 ·013441	0 ·012122	*S*	0 ·010737	0 ·012384	0 ·013026	0 ·013947	0 ·012884	0 ·014000	0 ·015366	*S*	0 ·016013
4	0 ·015581	*S*	0 ·012102	0 ·010465	0 ·012571	0 ·013058	0 ·014117	*S*	0 ·013976	0 ·015862	0 ·016197	0 ·015362
5	0 ·015330	0 ·012217	0 ·012090	Good Friday	*S*	0 ·012742	0 ·013866	0 ·013310	0 ·013763	0 ·016051	0 ·016354	0 ·015139
6	0 ·014298	0 ·012307	0 ·011390	0 ·011051	0 ·012707	0 ·012876	0 ·014149	0 ·013730	0 ·013704	*S*	0 ·016499	0 ·014751
7	*S*	0 ·012270	0 ·010263	*S*	0 ·013008	0 ·012578	*S*	0 ·013667	0 ·014622	0 ·016233	0 ·016718	0 ·015175
8	0 ·014168	0 ·012364	0 ·011014	0 ·012307	0 ·013222	0 ·012072	0 ·014655	0 ·014076	*S*	0 ·015937	0 ·016494	*S*
9	0 ·013903	0 ·012244	0 ·011413	0 ·012486	0 ·013282	*S*	0 ·014803	0 ·014730	0 ·014275	0 ·016001	0 ·016637	0 ·015665
10	0 ·013241	0 ·012010	*S*	0 ·012199	0 ·012970	0 ·012705	0 ·014717	0 ·014275	0 ·014059	0 ·015807	*S*	0 ·015527
11	0 ·013344	*S*	0 ·013131	0 ·011893	0 ·012570	0 ·012292	0 ·014837	*S*	0 ·014659	0 ·016103	0 ·016821	0 ·015249
12	0 ·013895	0 ·012729	0 ·011839	0 ·012235	*S*	0 ·011897	0 ·014985	0 ·013909	0 ·014584	0 ·016234	0 ·016075	0 ·014986
13	0 ·013939	0 ·012288	0 ·011126	0 ·012527	0 ·012843	0 ·012153	0 ·014747	0 ·014062	0 ·015680	*S*	0 ·016285	0 ·014542

The letter *S* denotes that the day was Sunday.

TABLE XXIII.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
14	*S*	0 ·013523	0 ·011994	*S*	0 ·012856	0 ·011825	*S*	0 ·014417	0 ·016165	0 ·016951	0 ·016771	0 ·014018
15	0 ·014054	0 ·013181	0 ·012650	0 ·013218	0 ·013088	0 ·011635	0 ·014988	0 ·014592	*S*	0 ·017205	0 ·016893	*S*
16	0 ·013798	0 ·013525	0 ·011602	0 ·012897	0 ·013654	*S*	0 ·014489	0 ·014557	0 ·017143	0 ·016981	0 ·015030	0 ·015521
17	0 ·014147	0 ·013321	*S*	0 ·012443	0 ·013520	0 ·012820	0 ·014369	0 ·014635	0 ·016864	0 ·016475	*S*	0 ·016383
18	0 ·014039	*S*	0 ·012400	0 ·013956	0 ·013643	0 ·012988	0 ·014181	*S*	0 ·017097	0 ·016799	0 ·016053	0 ·016215
19	0 ·013196	0 ·014312	0 ·012249	0 ·013145	*S*	0 ·012536	0 ·013998	0 ·014701	0 ·017164	0 ·016501	0 ·015385	0 ·016074
20	0 ·012867	0 ·011634	0 ·012884	0 ·012589	0 ·013264	0 ·012825	0 ·014699	0 ·014815	0 ·017072	*S*	0 ·016090	0 ·013584
21	*S*	0 ·011602	0 ·013265	*S*	0 ·015305	0 ·013339	*S*	0 ·014768	0 ·015907	0 ·012919	0 ·016032	0 ·012967
22	0 ·013682	0 ·012637	0 ·011451	0 ·013146	0 ·016067	0 ·013998	0 ·013902	0 ·014420	*S*	0 ·014769	0 ·015329	*S*
23	0 ·013470	0 ·012458	0 ·011459	0 ·013149	0 ·015219	*S*	0 ·013801	0 ·014234	0 ·016319	0 ·014949	0 ·014839	0 ·014358
24	0 ·012479	0 ·014694	*S*	0 ·012981	0 ·015395	0 ·013721	0 ·013957	0 ·013993	0 ·016577	0 ·015382	*S*	0 ·014338
25	0 ·011593	*S*	0 ·012847	0 ·012326	0 ·013476	0 ·013199	0 ·014175	*S*	0 ·016271	0 ·014824	0 ·015756	Ch. Day.
26	0 ·012457	0 ·014264	0 ·013582	0 ·011961	*S*	0 ·013355	0 ·013715	0 ·014148	0 ·014921	0 ·014921	0 ·016127	0 ·015171
27	0 ·011957	0 ·011835	0 ·013250	0 ·011552	0 ·013084	0 ·013507	0 ·013337	0 ·014003	0 ·015504	*S*	0 ·015973	0 ·016504
28	*S*	0 ·011823	0 ·013055	*S*	0 ·013087	0 ·014247	*S*	0 ·014248	0 ·015998	0 ·015600	0 ·015823	0 ·018654
29	0 ·012427	0 ·011401	0 ·011807	0 ·012227	0 ·013111	0 ·014239	0 ·013382	0 ·014614	*S*	0 ·015652	0 ·015622	*S*
30	0 ·013295		0 ·010892	0 ·012534	0 ·013260	*S*	0 ·013715	0 ·013613	0 ·015101	0 ·016123	0 ·015772	0 ·017659
31	0 ·011005		*S*		0 ·013931		0 ·014248	0 ·013546		0 ·016233		0 ·016765

The letter *S* denotes that the day was Sunday.

TABLE XXIV.—Table exhibiting the Times at which Differences greater than 0 ·000600 parts of the whole Horizontal Force took place between the Mean Daily Values of the Horizontal Force on two consecutive Days, estimated positive when the Force was greater on the Second Day.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		May.		June.	
1 & 2	−0 ·001673	1 & 2	−0 ·000769	5 & 6	−0 ·000700	2 & 3	−0 ·000827	20 & 21	+0 ·002041	21 & 22	+0 ·000659
2 & 3	−0 ·000769	2 & 3	+0 ·001441	6 & 7	−0 ·001127	17 & 18	+0 ·001513	21 & 22	+0 ·000762	27 & 28	+0 ·000740
3 & 4	+0 ·002140	13 & 14	+0 ·001235	7 & 8	+0 ·000751	24 & 25	−0 ·000655	22 & 23	−0 ·000848		
5 & 6	−0 ·001032	19 & 20	−0 ·002678	11 & 12	−0 ·001292	30 & 31	−0 ·000770	24 & 25	−0 ·001919		
9 & 10	−0 ·000662	21 & 22	+0 ·001035	12 & 13	−0 ·000713			30 & 31	+0 ·000671		
18 & 19	−0 ·000843	23 & 24	+0 ·002236	13 & 14	+0 ·000868						
23 & 24	−0 ·000991	26 & 27	−0 ·002429	14 & 15	+0 ·000656						
24 & 25	−0 ·000886	29 & 30	+0 ·000830	15 & 16	−0 ·001048						
25 & 26	+0 ·000864			19 & 20	+0 ·000635						
29 & 30	+0 ·000868			21 & 22	−0 ·001814						
30 & 31	−0 ·002290			25 & 26	+0 ·000735						
				28 & 29	−0 ·001248						
				29 & 30	−0 ·000915						
July.		August.		September.		October.		November.		December.	
19 & 20	+0 ·000701	8 & 9	+0 ·000654	6 & 7	+0 ·000918	1 & 2	+0 ·001478	11 & 12	−0 ·000746	2 & 3	+0 ·000720
31 & 32	−0 ·000615	29 & 30	−0 ·001001	10 & 11	+0 ·000600	21 & 22	+0 ·001850	15 & 16	−0 ·001863	3 & 4	−0 ·000651
				12 & 13	+0 ·001096			18 & 19	−0 ·000668	16 & 17	+0 ·000862
				20 & 21	−0 ·001165			19 & 20	+0 ·000705	19 & 20	−0 ·002340
				25 & 26	−0 ·001350			21 & 22	−0 ·000703	20 & 21	−0 ·000767
				30 & 31	−0 ·000738					26 & 27	+0 ·001333
										27 & 28	+0 ·002150
										30 & 31	−0 ·000894

From this table it appears that only a small number of great changes have taken place in the months of June, July, August, and October; and that a large number have taken place in January, February, March, and December. During the year there were

11 instances in which the force has changed more than			0 ·0006 parts of the horizontal force, and less than			0 ·0007
16	,,	,,	0 ·0007	,,	,,	0 ·0008
10	,,	,,	0 ·0008	,,	,,	0 ·0009
3	,,	,,	0 ·0009	,,	,,	0 ·0010
7	,,	,,	0 ·0010	,,	,,	0 ·0012
6	,,	,,	0 ·0012	,,	,,	0 ·0015
6	,,	,,	0 ·0015	,,	,,	0 ·0020
7	,,	,,	0 ·0020	,,	,,	0 ·0025
1	,,	,,	0 ·0025	,,	,,	0 ·0027

TABLE XXV.—Table exhibiting the Greatest and Least Differences in the Mean Daily Values of the Horizontal Force, between any two consecutive Civil Days during each Month, estimated Positive when the Horizontal Force was greater on the Second Day.

1844, Month.	Differences in the Mean Daily Values of the Horizontal Force from one Day to the next. Greatest.	Least.	Days between which the Greatest Difference took place.	Days between which the Least Difference took place.
			d d	d d
January	− 0·002290	+ 0·000044	30 & 31	12 & 13
February	− 0·002678	− 0·000012	19 & 20	27 & 28
March	− 0·001814	− 0·000012	21 & 22	4 & 5
April	+ 0·001513	+ 0·000003	17 & 18	22 & 23
May	+ 0·002041	+ 0·000003	20 & 21	27 & 28
June	+ 0·000740	− 0·000008	27 & 28	28 & 29
July	+ 0·000701	− 0·000086	19 & 20	9 & 10
August	− 0·001038	− 0·000035	1 & 2	15 & 16
September	− 0·001350	− 0·000024	25 & 26	3 & 4
October	+ 0·001850	+ 0·000052	21 & 22	28 & 29
November	− 0·001863	− 0·000058	15 & 16	20 & 21
December	− 0·002340	− 0·000020	19 & 20	23 & 24

TABLE XXVI.—Mean of all the Two-hourly Readings of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, for those Days of each Month, on which (as shewn by the Mean of the Two-hourly Readings) the marked end was most drawn towards the North, or was most drawn towards the South.

1844, Month.	Mean Daily Readings of the Horizontal Force Magnet in each Month, when the marked end of the Magnet was most drawn towards the North.	South.	Greatest Difference in the Mean Positions of the Magnet, between any Two Days in the Month.	Day of the Month when the marked end of the Magnet was most drawn to the North.	South.
				d	d
January	0·015883	0·011005	0·004878	1	31
February	0·014694	0·010681	0·004013	24	2
March	0·013582	0·010263	0·003319	26	7
April	0·013956	0·010465	0·003491	18	4
May	0·016067	0·011764	0·004303	22	1
June	0·014247	0·011635	0·002612	28	15
July	0·014988	0·013337	0·001651	15	27
August	0·014815	0·012595	0·002220	20	2
September	0·017164	0·013704	0·003460	19	6
October	0·017205	0·012919	0·004286	15	21
November	0·016893	0·014839	0·002054	15	23
December	0·018654	0·012967	0·005687	28	21

This table shews that the mean position of the magnet was subject to less variation in the month of July than in any other month. In December the mean daily position of the magnet was subject to the greatest change. The mean monthly range (estimated from the mean of all the observations on each day) was 0·003498. The yearly range (similarly estimated) was 0·008391, being the difference between the mean daily reading on December 28, when the magnet was most drawn towards the North, and the mean daily reading on March 7, when the marked end was most drawn towards the South.

TABLE XXVII.—Mean Readings of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force, in each month; corrected for Temperature and deduced from the Mean of all the Two-hourly Observations in each Month.

Means rejecting days of great disturbance

1844, Month.	Mean for each Month, corrected.		1844, Month.	Mean for each Month, corrected.	1844, Month.	Mean for each Month, corrected.	
January	0·013545		May	0·013394	September	0·015396	
February	0·012516		June	0·012937	October	0·015785	0.015839
March	0·012081	0.012142	July	0·014215	November	0·016042	0.016114
April	0·012264		August	0·014080	December	0·015442	

The mean of all the monthly results is 0·013975: the mean for 1841 was 0·032932; the mean for 1842 was 0·015535; and the mean for 1843 was 0·014778; so that the decrease of force from 1841 to 1842 was 0·017397

,, 1842 to 1843 was 0·000757

,, 1843 to 1844 was 0·000803

The mean for each month in 1842 was less than the mean for the same month in 1841; in 1843, the means for January, February, March, June, and July were less than the means of the corresponding months for 1842; and the means of the remaining months of 1843 were larger than those of 1842; in 1844 the means of the month for January, February, March, and April are less than the means of the corresponding months of 1843; and the means for the months from May to December, 1844, are larger than those of 1843. These results depend entirely on the permanency of adjustments of every kind, which is very doubtful.

TABLE XXVIII.—Readings of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, in Single Observations, when the marked end of the Magnet was most drawn towards the North, and when it was most drawn towards the South, for Daily, Term-Day, and Extraordinary Observations in each Month.

1844, Month.	Readings of the Horizontal Force Magnet when the marked end of the Magnet was most drawn towards the						Range of the Magnet in the Month.	Day and Hour when the marked end of the Magnet was most drawn towards the					
	North.	South.	North.	South.	North.	South.		North.	South.	North.	South.	North.	South.
	Daily Observations.		Term-Day Observations.		Extraordinary Observations			Daily Observations.		Term-Day Observations.		Extraordinary Observations.	
								d h m	d h m	d h m	d h m	d h m s	d h m s
January	0·040806	0·032350	0·036169	0·032793	....	....	0·008456	0. 22. 0	31. 12. 0	24. 14. 25	24. 22. 55 } 24. 23. 15 }	....	......
February	0·039613	0·031386	0·039432	0·035177	0·037229	0·034086	0·008227	18. 18. 0	2. 12. 0	24. 1. 35	23. 13. 20	7. 8. 2. 30	7. 11. 47. 0
March	0·038153	0·031546	0·038094	0·034320	0·038416	0·029900	0·008516	11. 4. 0	7. 22. 0	20. 10. 15	20. 23. 50	30. 8. 46. 0	29. 14. 4. 0
April	0·039182	0·030432	0·040194	0·032986	0·038167	0·028760	0·011434	18. 6. 0	2. 22. 0	25. 7. 15	24. 23. 20	17. 6. 2. 30	16. 23. 35. 0
May	0·041979	0·031446	0·038315	0·035206	0·040077	0·038551	0·010533	21. 8. 0	0. 22. 0	25. 5. 0	24. 19. 55	21. 12. 34 } 21. 12. 36 }	21. 14. 2. 30
June	0·039315	0·032473	0·039138	0·033299	....	....	0·006842	29. 8. 0	15. 0. 0	20. 8. 10	19. 22. 55 } 19. 23. 0 }	.....	......
July	0·039988	0·034046	0·039440	0·034545	....	....	0·005942	8. 8. 0	12. 1. 50	25. 8. 15	25. 2. 15	.....	......
August	0·040590	0·032673	0·038644	0·033376	0·039207	0·034124	0·007917	9. 6. 0	1. 22. 0	31. 7. 25	30. 22. 15	22. 10. 13. 30	1. 14. 2. 30
September	0·042060	0·034464	0·041579	0·037996	0·041250	0·035205	0·007596	19. 18. 0	3. 22. 0	19. 7. 15	19. 0. 5	27. 6. 14. 1	26. 8. 2. 30
October	0·041186	0·029775	0·039099	0·036968	0·040992	0·029775	0·011411	14. 6. 0	20. 22. 0	23. 10. 0	24. 1. 25	0. 16. 2. 30	20. 22. 2. 30
November	0·040849	0·035676	0·039554	0·037780	0·042568	0·030689	0·011879	15. 18. 0	23. 0. 0	29. 11. 5	30. 0. 30	22. 10. 47. 0	22. 8. 31. 15
December	0·042719	0·034143	0·041124	0·036384	0·035380	0·033247	0·009472	28. 6. 0	20. 12. 0	18. 12. 15	19. 4. 0	21. 4. 2. 30	21. 4. 43. 0

These numbers require to be diminished by 0·022831 to make them comparable with those of preceding years. The next table is formed from the above by the application of this number.

TABLE XXIX.—Readings of the Horizontal Force Magnet, corrected for Temperature, expressed in parts of the whole Horizontal Force, in Single Observations, when the marked end of the Magnet was most drawn towards the North, and when it was most drawn towards the South, for Daily, Term-Day, and Extraordinary Observations in each month, reduced to the same Zero as that of the three preceding years, by applying the constant number mentioned at the foot of Table XXVIII. to all the numbers in that table.

1844, Month.	Readings of the Horizontal Force Magnet when the marked end of the Magnet was most drawn towards the North. Daily Observations.	South. Daily Observations.	North. Term-Day Observations.	South. Term-Day Observations.	North. Extraordinary Observations	South. Extraordinary Observations	Range of the Magnet in the Month.	Day and Hour when the marked end of the Magnet was most drawn towards the North. Daily Observations. d h m	South. Daily Observations. d h m	North. Term-Day Observations. d h m	South. Term-Day Observations. d h m	North. Extraordinary Observations. d h m s	South. Extraordinary Observations. d h m s
January	0·017975	0·009519	0·013338	0·009962	....	....	0·008456	0. 22. 0	31. 12. 0	24. 14. 25	24. 22. 55 24. 23. 15	.....	.....
February	0·016782	0·008555	0·016601	0·012346	0·014398	0·011255	0·008227	18. 18. 0	2. 12. 0	24. 1. 35	23. 13. 20	7. 8. 2. 30	7. 11. 47. 0
March	0·015322	0·008715	0·015263	0·011489	0·015585	0·007069	0·008516	11. 4. 0	7. 22. 0	20. 10. 15	20. 23. 50	30. 8. 46. 0	29. 14. 4. 0
April	0·016351	0·007601	0·017363	0·010155	0·015336	0·005929	0·011434	18. 6. 0	2. 22. 0	25. 7. 15	24. 23. 20	17. 6. 2. 30	16. 23. 35. 0
May	0·019148	0·008615	0·015484	0·012375	0·017246	0·015720	0·010533	21. 8. 0	0. 22. 0	25. 5. 0	24. 19. 55	21. 12. 34 21. 12. 36	21. 14. 2. 30
June	0·016484	0·009642	0·016307	0·010468	....	....	0·006842	29. 8. 0	15. 0. 0	20. 8. 10	19. 22. 55 19. 23. 0	.....	.....
July	0·017157	0·011215	0·016609	0·011714	....	....	0·005942	8. 8. 0	12. 1. 50	25. 8. 15	25. 2. 15	.....	.....
August	0·017759	0·009842	0·015813	0·010545	0·016376	0·011293	0·007917	9. 6. 0	1. 22. 0	31. 7. 25	30. 22. 15	22. 10. 13. 30	1. 14. 2. 30
September	0·019229	0·011633	0·018748	0·015165	0·018419	0·012374	0·007596	19. 18. 0	3. 22. 0	19. 7. 15	19. 0. 5	27. 6. 14. 1	26. 8. 2. 30
October	0·018355	0·006944	0·016268	0·014137	0·018161	0·006944	0·011411	14. 6. 0	20. 22. 0	23. 10. 0	24. 1. 25	30. 16. 2. 30	20. 22. 2. 30
November	0·018018	0·012845	0·016723	0·014949	0·019737	0·007858	0·011879	15. 18. 0	23. 0. 0	29. 11. 5	30. 0. 30	22. 10. 47. 0	22. 8. 31. 15
December	0·019888	0·011312	0·018293	0·013553	0·012549	0·010416	0·009472	28. 6. 0	20. 12. 0	18. 12. 15	19. 4. 0	21. 4. 2. 30	21. 14. 43. 0

The marked end of the magnet was most drawn towards the North in December, on the 28th day, at 6^h, than at any other time during the year; its reduced reading being 0·019888: it was most drawn towards the South in April, during Extraordinary Observations, at $16^d.23^h.35^m$; and its reduced reading was 0·005929; the difference between these numbers is 0·013959, and it represents the extreme yearly range of the Horizontal Force Magnet from the Observations. The monthly range of the magnet in July was the smallest in the year; and it was largest in November. The monthly ranges in April, May, and in October were all large. The mean of the extreme ranges in each month thus estimated was 0·009019 for the year 1844.

TABLE XXX.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·004034	0·002139	0·003667	0·005072	0·004591	0·003929	0·003625	0·005177	*S*	0·009316	0·001899	*S*
2	0·003013	0·004479	0·002204	0·004689	0·003464	*S*	0·002700	0·005885	0·002891	0·002032	0·003975	0·003347
3	0·002230	0·005413	*S*	0·006050	0·003090	0·003201	0·003023	0·003986	0·003285	0·003184	*S*	0·001433
4	0·004068	*S*	0·004436	0·003809	0·002603	0·001948	0·002044	*S*	0·004030	0·002189	0·001622	0·001996
5	0·002568	0·004209	0·005397	Good Friday.	*S*	0·003951	0·001751	0·002469	0·001871	0·001634	0·000985	0·002223
6	0·002129	0·004477	0·004167	0·003739	0·003519	0·003135	0·003219	0·002316	0·002784	*S*	0·001716	0·002325
7	*S*	0·003143	0·002000	*S*	0·003119	0·002123	*S*	0·001735	0·003298	0·002393	0·002325	0·003242
8	0·002894	0·002771	0·004017	0·005199	0·003740	0·003266	0·004570	0·002697	*S*	0·002181	0·001682	*S*

The letter *S* denotes that the day was Sunday.

TABLE XXX.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
9	0·003103	0·003589	0·003302	0·002658	0·003897	*S*	0·004174	0·004943	0·002051	0·001633	0·001808	0·002751
10	0·004685	0·002015	*S*	0·002364	0·002352	0·003729	0·003105	0·003744	0·001902	0·001451	*S*	0·002385
11	0·003773	*S*	0·005125	0·001716	0·002574	0·004161	0·003303	*S*	0·003873	0·002955	0·002254	0·003135
12	0·003520	0·003408	0·001335	0·002245	*S*	0·002773	0·005065	0·002297	0·003818	0·001736	0·001391	0·002088
13	0·002054	0·002783	0·001823	0·001980	0·002833	0·002455	0·003235	0·002164	0·004703	*S*	0·001181	0·002224
14	*S*	0·004310	0·002457	*S*	0·002760	0·002939	*S*	0·002039	0·003022	0·003223	0·001144	0·004293
15	0·003523	0·002202	0·001799	0·002795	0·003372	0·003446	0·003803	0·003252	*S*	0·001849	0·001181	*S*
16	0·003971	0·001862	0·001765	0·001093	0·003397	*S*	0·002881	0·004679	0·002681	0·002018	0·007159	0·003550
17	0·001928	0·002170	*S*	0·009407	0·002015	0·003841	0·003333	0·004642	0·003002	0·002547	*S*	0·001461
18	0·003008	*S*	0·003515	0·003795	0·003743	0·003706	0·004094	*S*	0·002992	0·001271	0·003876	0·003211
19	0·002963	0·003930	0·004273	0·003043	*S*	0·002868	0·003567	0·003146	0·003585	0·001979	0·003196	0·004740
20	0·002684	0·001582	0·003412	0·002357	0·001434	0·005839	0·004193	0·003567	0·006294	*S*	0·002067	0·003922
21	*S*	0·001839	0·003062	*S*	0·007544	0·004511	*S*	0·003068	0·003066	0·001060	0·000849	0·003566
22	0·004862	0·003295	0·003332	0·002573	0·002339	0·002574	0·003205	0·003331	*S*	0·002002	0·011879	*S*
23	0·002938	0·002256	0·003171	0·002663	0·005943	*S*	0·002525	0·003665	0·003227	0·002713	0·003126	0·005942
24	0·001277	0·004345	*S*	0·003020	0·003173	0·003114	0·002554	0·002418	0·002145	0·001977	*S*	0·002011
25	0·003376	*S*	0·005708	0·007208	0·003109	0·002594	0·004895	*S*	0·002719	0·003050	0·002818	Ch. Day.
26	0·003259	0·004865	0·002592	0·004726	*S*	0·002434	0·002847	0·002727	0·005467	0·003191	0·001232	0·003815
27	0·001956	0·001534	0·002763	0·004563	0·003258	0·002982	0·003769	0·002614	0·005871	*S*	0·002826	0·004242
28	*S*	0·003480	0·004085	*S*	0·003036	0·003400	*S*	0·004327	0·003012	0·002595	0·002152	0·002450
29	0·001496	0·003689	0·005798	0·003489	0·003155	0·005565	0·003345	0·004492	*S*	0·001422	0·002096	*S*
30	0·001757		0·008516	0·003625	0·002736	*S*	0·003149	0·004600	0·004602	0·002432	0·001506	0·003020
31	0·002438		*S*		0·003086		0·004989	0·005268		0·001532		0·003252

The letter *S* denotes that the day was Sunday.

TABLE XXXI.—Mean of the Daily Ranges of the Horizontal Force Magnet in each Month, expressed in parts of the whole Horizontal Force.

1844, Month.	Mean of all the Daily Ranges in each Month.	1844, Month.	Mean of all the Daily Ranges in each Month.
January	0·002945	July	0·003443
February	0·003191	August	0·003528
March	0·003605	September	0·003448
April	0·003755	October	0·002428
May	0·003329	November	0·002613
June	0·003379	December	0·003065

The mean daily range of the magnet appears to be smallest in October and largest in April. By taking the means of the above numbers in two groups, those between April and September for the Summer group, and the remaining months for the Winter group, we find that,

The daily range in Summer was 0·003494 parts of the whole Horizontal Force
,, Winter was 0·002975 ,,
The mean daily range for the Year was 0·003234 ,,

TABLE XXXII.—Greatest and Least Daily Range of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force in each Month.

1844, Month.	Daily Range of the Horizontal Force Magnet.		Day on which the Range of the Magnet was	
	Greatest.	Least.	Greatest.	Least.
			d	d
January	0·004862	0·001277	22	24
February	0·005413	0·001534	3	27
March	0·008516	0·001335	30	12
April	0·009407	0·001093	17	16
May	0·007544	0·001434	21	20

TABLE XXXII.—*continued.*

1844, Month.	Daily Range of the Horizontal Force Magnet.		Day on which the Range of the Magnet was	
	Greatest.	Least.	Greatest.	Least.
			d	d
June	0 ·005839	0 ·001948	20	4
July	0 ·005065	0 ·001751	12	5
August	0 ·005885	0 ·001735	2	7
September	0 ·006294	0 ·001871	20	5
October	0 ·009316	0 ·001060	1	21
November	0 ·011879	0 ·000849	22	21
December	0 ·005942	0 ·001433	23	3

TABLE XXXIII.—Table shewing how often in each Month the Daily Range of the Horizontal Force Magnet has been included between certain Limits.

The Daily Range was	Number of Cases in Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Number of Days.
Greater than 0 ·0006 and less than 0 ·0010											2		2
,, 0 ·0010 ,, 0 ·0015	2		1	1	1					4	5	2	16
,, 0 ·0015 ,, 0 ·0020	3	4	4	2		1	1	1	2	7	6	1	32
,, 0 ·0020 ,, 0 ·0025	4	5	2	3	3	3	1	6	2	7	5	7	48
,, 0 ·0025 ,, 0 ·0030	5	2	2	4	5	6	5	3	5	4	2	1	44
,, 0 ·0030 ,, 0 ·0035	5	4	5	3	11	6	9	4	7	4	2	6	66
,, 0 ·0035 ,, 0 0040	4	3	2	4	4	5	4	4	3		2	4	39
,, 0 ·0040 ,, 0 ·0045	2	5	5			1	3	2	1			2	21
,, 0 ·0045 ,, 0 ·0050	2	1		3	1	1	3	4	2			1	18
,, 0 ·0050 ,, 0 ·0055		1	2	2			1	2	1				9
,, 0 ·0055 ,, 0 ·0060			2		1	2		1	1			1	8
,, 0 ·0060 ,, 0 ·0065				1					1				2
,, 0 ·0065 ,, 0 ·0075				1							1		2
,, 0 ·0075 ,, 0 ·0085					1								1
,, 0 ·0085 ,, 0 ·0095			1	1						1			3
,, 0 ·0115 ,, 0 ·0120											1		1

The following particulars are collected from the last column of this table :—

That on 2 days out of 312	the daily range was greater than	0 ·0006	and less than	0 ·0010
48	,,	0 ·0010	,,	0 ·0020
92	,,	0 ·0020	,,	0 ·0030
105	,,	0 ·0030	,,	0 ·0040
39	,,	0 ·0040	,,	0 ·0050
17	,,	0 ·0050	,,	0 ·0060
8	,,	0 ·0060	,,	0 ·0095
1	,,	0 ·0115	,,	0 ·0120

TABLE XXXIV.—Mean Readings 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.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0 ·035841	0 ·034720	0 ·034534	0 ·035482	0 ·036223	0 ·036031	0 ·037358	0 ·037133	0 ·038581	0 ·038763	0 ·038842	0 ·037862
16	0 ·035962	0 ·034971	0 ·034508	0 ·035127	0 ·035954	0 ·035768	0 ·037108	0 ·036917	0 ·038549	0 ·039098	0 ·038944	0 ·037778
18	0 ·036274	0 ·035295	0 ·034601	0 ·035116	0 ·035819	0 ·035489	0 ·036868	0 ·036614	0 ·038481	0 ·038859	0 ·039264	0 ·038002
20	0 ·036346	0 ·035245	0 ·034574	0 ·034581	0 ·035259	0 ·034600	0 ·036211	0 ·035893	0 ·037535	0 ·038419	0 ·039116	0 ·038019
22	0 ·036462	0 ·035061	0 ·033628	0 ·033346	0 ·034738	0 ·034003	0 ·035405	0 ·035040	0 ·036559	0 ·037280	0 ·038533	0 ·038185
0	0 ·035964	0 ·034918	0 ·033822	0 ·033488	0 ·035140	0 ·034538	0 ·035660	0 ·035738	0 ·037015	0 ·037609	0 ·038107	0 ·037802
2	0 ·036571	0 ·035546	0 ·035159	0 ·034816	0 ·036240	0 ·035817	0 ·036968	0 ·037046	0 ·038284	0 ·038611	0 ·038879	0 ·038112
4	0 ·036753	0 ·035905	0 ·035672	0 ·035412	0 ·036731	0 ·036629	0 ·037598	0 ·037544	0 ·038566	0 ·038931	0 ·039008	0 ·038932
6	0 ·036881	0 ·035924	0 ·035832	0 ·036270	0 ·037431	0 ·036835	0 ·037899	0 ·037969	0 ·038738	0 ·039126	0 ·038980	0 ·039085
8	0 ·036821	0 ·036047	0 ·035969	0 ·035900	0 ·037584	0 ·036924	0 ·038255	0 ·038044	0 ·038844	0 ·038839	0 ·039010	0 ·038684
10	0 ·036445	0 ·035534	0 ·035451	0 ·035765	0 ·036932	0 ·036480	0 ·037788	0 ·037612	0 ·038814	0 ·039021	0 ·038975	0 ·038534
12	0 ·036188	0 ·034995	0 ·035200	0 ·035827	0 ·036644	0 ·036104	0 ·037432	0 ·037383	0 ·038853	0 ·038831	0 ·038825	0 ·038286

The numbers in this table require to be decreased by 0 ·022831 to make them comparable with those of the three preceding years, and the next table is formed from the above by the application of this number.

TABLE XXXV.—Mean Readings 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 reduced to the Series beginning 1843, May, by applying the constant number mentioned at the foot of Table XXXIV. to the numbers in that table.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0 ·013010	0 ·011889	0 ·011703	0 ·012651	0 ·013392	0 ·013200	0 ·014527	0 ·014302	0 ·015750	0 ·015932	0 ·016011	0 ·015031
16	0 ·013131	0 ·012140	0 ·011677	0 ·012296	0 ·013123	0 ·012937	0 ·014277	0 ·014086	0 ·015718	0 ·016267	0 ·016113	0 ·014947
18	0 ·013443	0 ·012464	0 ·011770	0 ·012285	0 ·012988	0 ·012658	0 ·014037	0 ·013783	0 ·015650	0 ·016028	0 ·016433	0 ·015171
20	0 ·013515	0 ·012414	0 ·011743	0 ·011750	0 ·012428	0 ·011769	0 ·013380	0 ·013062	0 ·014704	0 ·015588	0 ·016285	0 ·015188
22	0 ·013631	0 ·012230	0 ·010797	0 ·010515	0 ·011907	0 ·011172	0 ·012574	0 ·012209	0 ·013728	0 ·014449	0 ·015702	0 ·015354
0	0 ·013133	0 ·012087	0 ·010991	0 ·010657	0 ·012309	0 ·011707	0 ·012829	0 ·012907	0 ·014184	0 ·014778	0 ·015276	0 ·014971
2	0 ·013740	0 ·012715	0 ·012328	0 ·011985	0 ·013409	0 ·012986	0 ·014137	0 ·014215	0 ·015453	0 ·015780	0 ·016048	0 ·015281
4	0 ·013922	0 ·013074	0 ·012841	0 ·012581	0 ·013900	0 ·013798	0 ·014767	0 ·014713	0 ·015735	0 ·016100	0 ·016177	0 ·016101
6	0 ·014050	0 ·013093	0 ·013001	0 ·013439	0 ·014600	0 ·014004	0 ·015068	0 ·015138	0 ·015907	0 ·016295	0 ·016149	0 ·016254
8	0 ·013990	0 ·013216	0 ·013138	0 ·013069	0 ·014753	0 ·014093	0 ·015424	0 ·015213	0 ·016013	0 ·016008	0 ·016179	0 ·015853
10	0 ·013614	0 ·012703	0 ·012620	0 ·012934	0 ·014101	0 ·013649	0 ·014957	0 ·014781	0 ·015983	0 ·016190	0 ·016144	0 ·015703
12	0 ·013357	0 ·012164	0 ·012369	0 ·012996	0 ·013813	0 ·013273	0 ·014601	0 ·014552	0 ·016022	0 ·016000	0 ·015994	0 ·015455

An extreme position appears from this table to take place at 22^h in the months from March to October, both inclusive, and at 0^h in the months preceding March and following October. Starting from these points in the respective months the next table in formed.

TABLE XXXVI.—Hours of Göttingen Mean Solar Time at which the Extreme Positions of the Horizontal Force Magnet occur in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the Readings and Amounts of the Changes : the Corrections for Temperature having been applied.

1844, Month.	For Extreme Positions of the Magnet.											
	First Extreme South.		First Extreme North.		Second Extreme South.		Second Extreme North.		Third Extreme South.		Third Extreme North.	
	Hour.	Reading for Horizontal Force.	Hour.	Reading for Horizontal Force.	Hour.	Reading for Horizontal Force.	Hour.	Reading for Horizontal Force.	Hour.	Reading for Horizontal Force.	Hour.	Reading for Horizontal Force.
January	0	0 ·013133	6	0 ·014050	14	0 ·013010	22	0 ·013631				
February	0	0 ·012087	8	0 ·013216	14	0 ·011889	18	0 ·012464				
March	22	0 ·010797	8	0 ·013138	16	0 ·011677	18	0 ·011770				
April	22	0 ·010515	6	0 ·013439	10	0 ·012934	12	0 ·012996				
May	22	0 ·011907	8	0 ·014753								
June	22	0 ·011172	8	0 ·014093								
July	22	0 ·012574	8	0 ·015424								
August	22	0 ·012209	8	0 ·015213								
September	22	0 ·013728	8	0 ·016013	10	0 ·015983	12	0 ·016022				
October	22	0 ·014449	6	0 ·016295	8	0 ·016008	10	0 ·016190	14	0 ·015932	16	0 ·016267
November	0	0 ·015276	4	0 ·016177	6	0 ·016149	8	0 ·016179	12	0 ·015994	18	0 ·016433
December	0	0 ·014971	6	0 ·016254	16	0 ·014947	22	0 ·015354				

TABLE XXXVI.—*continued.*

1844, Month.	Interval from First Extreme South Position to First Extreme North Position.		Interval from First Extreme North Position to Second Extreme South Position.		Interval from Second Extreme South Position to Second Extreme North Position.		Interval from Second Extreme North Position to Third Extreme South Position.		Interval from Third Extreme South Position to Third Extreme North Position.		Interval from Last Extreme North Position to First Extreme South Position.		Sums of the Changes.	Difference between the Greatest and Least Extremes, or Mean Daily Range.
	Time elapsed.	Amount of Change of Hor. Force.	Time elapsed.	Amount of Change of Hor. Force.	Time elapsed.	Amount of Change of Hor. Force.	Time elapsed.	Amount of Change of Hor. Force.	Time elapsed.	Amount of Change of Hor. Force.	Time elapsed.	Amount of Change of Hor. Force.		
	h		h		h		h		h		h			
January	6	0·000917	8	0·001040	8	0·000621					2	0·000498	0·003076	0·001040
February	8	0·001129	6	0·001327	4	0·000575					6	0·000377	0·003408	0·001327
March	10	0·002341	8	0·001461	2	0·000093					4	0·000973	0·004868	0·002341
April	8	0·002924	4	0·000505	2	0·000062					10	0·002481	0·005972	0·002924
May	10	0·002846									14	0·002846	0·005692	0·002846
June	10	0·002921									14	0·002921	0·005842	0·002921
July	10	0·002850									14	0·002850	0·005700	0·002850
August	10	0·003004									14	0·003004	0·006008	0·003004
September	10	0·002285	2	0·000030	2	0·000039					10	0·002294	0·004648	0·002294
October	8	0·001846	2	0·000287	2	0·000182	4	0·000258	2	0·000335	6	0·001818	0·004726	0·001846
November	4	0·000901	2	0·000028	2	0·000030	4	0·000185	6	0·000439	6	0·001157	0·002740	0·001157
December	6	0·001283	10	0·001307	6	0·000407					2	0·000383	0·003380	0·001307

The diurnal movement, it appears from this table, has consisted of a triple maximum and minimum in October and November; of a double maximum and minimum in January, February, March, April, September, and December; and of a single maximum and minimum in May, June, July, and August.

Examining Table XXXV., it will be seen that the motion of the magnet appears to have been checked between 6^h and 8^h in June and August; but in the months of May and July, so far as this table shews us, the magnet appears to have moved uninterruptedly from one extreme position to the other.

Examining the motion of the magnet on every day in these months, we find that in May there were only three days during which the motion of the magnet agreed with its mean motion, viz., the 9th, 27th, and 28th days; there were eight instances of the force at 16^h being greater than at 14^h; six at 18^h greater than at 16^h; three at 20^h greater than at 18^h; three at 22^h greater than at 20^h: there were eleven cases of the force at 0^h being less than at 22^h; two at 2^h less than at 0^h; eight at 4^h less than at 2^h; four at 6^h less than at 4^h; nine at 8^h less than at 6^h; four at 10^h less than at 8^h; and four at 12^h greater than at 10^h. In June there were four days during which the motion of the magnet agreed with its mean motion, viz., on the 24th, 25th, 27th, and 29th days; there were four instances of the force at 16^h, seven at 18^h, four at 22^h, four at 10^h, and five at 12^h, being greater than it was at the two-hourly observations immediately preceding those respectively. There were five cases at 0^h, one at 2^h, one at 4^h, ten at 6^h, eleven at 8^h, of the force being less than it was at the previous observation. In July there were three days during which the motion of the magnet agreed with its mean motion, viz., the 1st, 9th, and 30th days; there were four cases in which the force at 10^h, seven at 12^h, six at 16^h, six at 18^h, five at 20^h, and three at 22^h, was greater than it was at the preceding observation. There were eleven cases of the force at 0^h, three at 2^h, four at 4^h, nine at 6^h, and eight at 8^h, being less than it was at the preceding observation. In August there was no instance of the motion of the magnet during the day agreeing with its mean motion. There were five instances of the force at 10^h; ten at 12^h, seven at 16^h, three at 18^h, one at 20^h, and two at 22^h, being greater than at the previous observation. There were five cases at 0^h, one at 2^h, nine at 4^h, eight at 6^h, and nine at 8^h, of the force being less than it was at the previous observation.

The numbers of the last column but one shew the sums of all the backward and forward motions of the magnet, as found by adding, without regard to sign, all the differences between successive extremes, and they exhibit nearly the mean amount of motion in each day. The numbers in the last column shew the mean daily changes in the position of the magnet. The numbers in these two columns in the summer months are much larger than those in the winter months.

The times at which the marked end of the magnet reached its first extreme south position, are nearly identical with the times at which the same position was attained in the year 1843; and, therefore, in both years the times differ from those shewn in the years 1841 and 1842, as is indicated in the Volume for 1843.

The next table is formed by taking the means of the numbers in Table XXXV., corresponding to the same hours for several months; those from April to September inclusive are grouped together for summer, and the other six months for winter.

TABLE XXXVII.—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 Solar Time, for the Summer and Winter periods, and for the Year.

1844, Hour Göttingen Mean Time.	Mean Reading of the Magnet. For the Summer.	For the Winter.	For the Year.	1844, Hour Göttingen Mean Time.	Mean Reading of the Magnet. For the Summer.	For the Winter.	For the Year.
h				h			
14	0 ·013970	0 ·013929	0 ·013950	2	0 ·013698	0 ·014315	0 ·014006
16	0 ·013740	0 ·014046	0 ·013893	4	0 ·014249	0 ·014703	0 ·014476
18	0 ·013567	0 ·014218	0 ·013892	6	0 ·014693	0 ·014807	0 ·014750
20	0 ·012849	0 ·014122	0 ·013486	8	0 ·014761	0 ·014731	0 ·014746
22	0 ·012018	0 ·013694	0 ·012856	10	0 ·014401	0 ·014496	0 ·014447
0	0 ·012432	0 ·013539	0 ·012985	12	0 ·014210	0 ·014223	0 ·014216

The maximum force is indicated at 8^h in the summer, and at 6^h in the winter. The minimum force is indicated at 22^h in the summer, and at 0^h in the winter. In summer there is but one maximum and but one minimum; in winter there is a double maximum and minimum. The times are:—

In Summer.	h	In Winter.	h
The maximum at	8	The maximum at	6
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 single maximum and minimum; and it also shews that the force at 16^h is nearly identical with that at 18^h; and the force at 6^h with that at 8^h.

The maximum for the year is at 6^h
The minimum ,, at 22

The amount of the daily changes in summer was 0 ·002743
,, in winter 0 ·001268

So that the changes in winter were less than one half of those in summer.

The mean for the summer period was 0 ·013716
,, the winter period 0 ·014235
And the mean for the year was 0 ·013975

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 less than in the corresponding period of 1841 by 0 ·018611, and it was less in the same period of 1843 than in 1842 by 0 ·000009; the mean force in the corresponding period of 1844 was greater than in 1843 by 0 ·000289. 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; and in 1844 it was less than in the corresponding period of 1843 by 0 ·001894. 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; so that the decrease from 1841 to 1842 was 0 ·017377; from 1842 to 1843 it was 0 ·000757; and from 1843 to 1844 it was 0 ·000803. These deductions, however, rest upon an assumed permanency of the instrumental adjustments, 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 1842, in summer, the result at each hour was less than the result at the corresponding hour in 1841, the greatest difference being at 16^h, which amounted to 0 ·018940, and the least at 12^h, being 0 ·018532. In 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 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, being 0 ·000022. 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 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 difference 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 difference being 0·002123 and 0·001587 at 14^{h} and at 6^{h} respectively. Comparing the results for the whole year in the same way, it will be found that every result in 1842 was less than the result at the same hour in 1841; in 1843 it was less than in 1842; and so also every result in 1844 was less than the corresponding one of 1843; the greatest decrease from 1841 to 1842 was 0·017754 at 18^{h}; from 1842 to 1843 it was 0·000996 at 20^{h}; and the greatest decrease from 1843 to 1844 was 0·001017 at 20^{h}; the least decrease from 1841 to 1842 was 0·017130 at 2^{h}; from 1842 to 1843 it was 0·000469, also at 2^{h}; and from 1843 to 1844 it was 0·000558 at 8^{h}.

Comparing the numbers in the last column with the mean for the year, or 0·013975, 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 0·000025 parts of the whole horizontal force more South than the mean position for the year.
16 was 0·000082 ,, South ,,
18 was 0·000083 ,, South ,,
20 was 0·000489 ,, South ,,
22 was 0·001119 ,, South ,,
0 was 0·000990 ,, South ,,
2 was 0·000031 ,, North ,,
4 was 0·000501 ,, North ,,
6 was 0·000775 ,, North ,,
8 was 0·000771 ,, North ,,
10 was 0·000472 ,, North ,,
12 was 0·000241 ,, North ,,

TABLE XXXVIII.—Excess of the Mean Reading of the Horizontal Force Magnet, expressed in parts of the whole Horizontal Force, corrected for the Effect of 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 Hours throughout the Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May	June.	July.	August.	September.	October.	November.	December.
h												
14	−0·000535	−0·000627	−0·000378	+0·000387	−0·000002	+0·000263	+0·000312	+0·000231	+0·000354	+0·000147	−0·000031	−0·000411
16	−0·000414	−0·000376	−0·000404	+0·000032	−0·000271	0·000000	+0·000062	+0·000015	+0·000322	+0·000482	+0·000071	−0·000495
18	−0·000102	−0·000052	−0·000311	+0·000021	−0·000406	−0·000279	−0·000178	−0·000288	+0·000254	+0·000243	+0·000391	−0·000271
20	−0·000030	−0·000102	−0·000338	−0·000514	−0·000966	−0·001168	−0·000835	−0·001009	−0·000692	−0·000197	+0·000243	−0·000254
22	+0·000086	−0·000286	−0·001284	−0·001749	−0·001487	−0·001765	−0·001641	−0·001862	−0·001668	−0·001336	−0·000340	−0·000088
0	−0·000412	−0·000429	−0·001090	−0·001607	−0·001085	−0·001230	−0·001386	−0·001164	−0·001212	−0·001007	−0·000766	−0·000471
2	+0·000195	+0·000199	+0·000247	−0·000279	+0·000015	+0·000049	−0·000078	+0·000144	+0·000057	−0·000005	+0·000006	−0·000161
4	+0·000377	+0·000558	+0·000760	+0·000317	+0·000506	+0·000861	+0·000552	+0·000642	+0·000339	+0·000315	+0·000135	+0·000659
6	+0·000505	+0·000577	+0·000920	+0·001175	+0·001206	+0·001067	+0·000853	+0·001067	+0·000511	+0·000510	+0·000107	+0·000812
8	+0·000445	+0·000700	+0·001057	+0·000805	+0·001359	+0·001156	+0·001209	+0·001142	+0·000617	+0·000223	+0·000137	+0·000411
10	+0·000069	+0·000187	+0·000539	+0·000670	+0·000707	+0·000712	+0·000742	+0·000710	+0·000587	+0·000405	+0·000102	+0·000261
12	−0·000188	−0·000352	+0·000288	+0·000732	+0·000419	+0·000336	+0·000386	+0·000481	+0·000626	+0·000215	−0·000048	+0·000013

The quantity at 22^{h} in January has a positive sign; with the exception of January and December, 1841, there has been no similar instance since the establishment of the Magnetic Observatory. The quantities at 20^{h} and 22^{h} deserve particular attention. In all the months, except January and November, the number opposite 20^{h} is affected with a negative sign, and at 22^{h} the numbers are much larger with the same sign; in the case of November, which has a positive sign at 20^{h}, the sign is negative at 22^{h}.

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 14^{h} the mean departure from the mean of the month was, in summer 0·000258, in winter 0·000355
16 ,, ,, 117 ,, 374
18 ,, ,, 238 ,, 228
20 ,, ,, 864 ,, 194
22 ,, ,, 1695 ,, 570
0 ,, .. 1281 ,, 696

At $\overset{h}{2}$ the mean departure from the mean of the month was,	in summer	0 ·000104,	in winter	0 ·000136
4	,,	,,	536	,,	467
6	,,	,,	980	,,	572
8	,,	,,	1048	,,	496
10	,,	,,	688	,,	261
12	,,	,,	497	,,	184

TABLE XXXIX.—Table exhibiting the Differences in the Mean Positions of the Horizontal Force Magnet between every Pair of Consecutive Observation-hours in every Month, estimated positive when the force was greater at the latter Hour (obtained by taking the Differences between the Consecutive Numbers in each Month, contained in Table XXXV. or Table XXXVIII.).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h h												
Between 14 & 16	+0 ·000121	+0 ·000251	−0 ·000026	−0 ·000355	−0 ·000269	−0 ·000263	−0 ·000250	−0 ·000216	−0 ·000032	+0 ·000335	+0 ·000102	−0 ·000084
,, 16 & 18	+0 ·000312	+0 ·000324	+0 ·000093	−0 ·000011	−0 ·000135	−0 ·000279	−0 ·000240	−0 ·000303	−0 ·000068	−0 ·000239	+0 ·000320	+0 ·000224
,, 18 & 20	+0 ·000072	−0 ·000050	−0 ·000027	−0 ·000535	−0 ·000560	−0 ·000889	−0 ·000657	−0 ·000721	−0 ·000946	−0 ·000440	−0 ·000148	+0 ·000017
,, 20 & 22	+0 ·000116	−0 ·000184	−0 ·000946	−0 ·001235	−0 ·000521	−0 ·000597	−0 ·000806	−0 ·000853	−0 ·000976	−0 ·001139	−0 ·000583	+0 ·000166
,, 22 & 0	−0 ·000498	−0 ·000143	+0 ·000194	+0 ·000142	+0 ·000402	+0 ·000535	+0 ·000255	+0 ·000698	+0 ·000456	+0 ·000329	−0 ·000426	−0 ·000383
,, 0 & 2	+0 ·000607	+0 ·000628	+0 ·001337	+0 ·001328	+0 ·001100	+0 ·001279	+0 ·001308	+0 ·001308	+0 ·001269	+0 ·001002	+0 ·000772	+0 ·000310
,, 2 & 4	+0 ·000182	+0 ·000359	+0 ·000513	+0 ·000596	+0 ·000491	+0 ·000812	+0 ·000630	+0 ·000498	+0 ·000282	+0 ·000320	+0 ·000129	+0 ·000820
,, 4 & 6	+0 ·000128	+0 ·000019	+0 ·000160	+0 ·000858	+0 ·000700	+0 ·000206	+0 ·000301	+0 ·000425	+0 ·000172	+0 ·000195	−0 ·000028	+0 ·000153
,, 6 & 8	−0 ·000060	+0 ·000123	+0 ·000137	−0 ·000370	+0 ·000153	+0 ·000089	+0 ·000356	+0 ·000075	+0 ·000106	−0 ·000287	+0 ·000030	−0 ·000401
,, 8 & 10	−0 ·000376	−0 ·000513	−0 ·000518	−0 ·000135	−0 ·000652	−0 ·000444	−0 ·000467	−0 ·000432	−0 ·000030	+0 ·000182	−0 ·000035	−0 ·000150
,, 10 & 12	−0 ·000257	−0 ·000539	−0 ·000251	+0 ·000062	−0 ·000288	−0 ·000376	−0 ·000356	−0 ·000229	+0 ·000039	−0 ·000190	−0 ·000150	−0 ·000248
,, 12 & 14	−0 ·000347	−0 ·000275	−0 ·000666	−0 ·000345	−0 ·000421	−0 ·000073	−0 ·000074	−0 ·000250	−0 ·000272	−0 ·000068	+0 ·000017	−0 ·000424

The largest number contained in this table is that in March between 0^h and 2^h; the next in order are in April, July, August, June, and September, and all between 0^h and 2^h.

By taking the mean of the numbers in each column (without regard to their signs), the mean change for two hours is exhibited.

In January the mean change for two hours was			0 ·000256
February	,,	,,	·000284
March	,,	,,	·000406
April	,,	,,	·000498
May	,,	,,	·000474
June	,,	,,	·000487
July	,,	,,	·000475
August	,,	,,	·000501
September	,,	,,	·000387
October	,,	,,	·000394
November	,,	,,	·000228
December	,,	,,	·000282

The mean of all the monthly two-hourly changes is 0 ·000389.

The following table is formed by taking the means of the numbers in Table XXXIX. (without regard to their signs) which correspond to the same pair of hours. The months from April to September are grouped together for summer, and the remaining months for winter.

TABLE XL.—Amounts of the Differences in the Mean Positions of the Horizontal Force Magnet, between every Pair of Consecutive Observation-Hours, with the character of the Changes for the Summer, the Winter, and the Year.

Between what Hours.	Amount of Difference of Mean Position of the Horizontal Force Magnet.			CHARACTER OF THE CHANGES.		
				Summer Period.	Winter Period.	The Year.
	Summer.	Winter.	Year.	The Horizontal Force was, at the latter Hour,		
h h						
14 to 16	0 ·000231	0 ·000153	0 ·000192	Always smaller.	Larger, except in March and Dec.	Generally smaller.
16 to 18	0 ·000173	0 ·000252	0 ·000213	,,	Always larger, except in October.	,,
18 to 20	0 ·000718	0 ·000126	0 ·000422	,,	Smaller, except in Jan. and Dec.	,,
20 to 22	0 ·000831	0 ·000522	0 ·000677	,,	,, ,,	,,
22 to 0	0 ·000415	0 ·000329	0 ·000372	Always larger.	Smaller, except in March and Oct.	Generally larger.
0 to 2	0 ·001265	0 ·000776	0 ·001021	,,	Always larger.	Always larger.
2 to 4	0 ·000552	0 ·000387	0 ·000470	,,	,,	,,

TABLE XL.—*continued.*

Between what Hours.	Amount of Difference of Mean Position of the Horizontal Force Magnet.			CHARACTER OF THE CHANGES.		
				Summer Period.	Winter Period.	The Year.
	Summer.	Winter.	Year.	The Horizontal Force was, at the latter Hour,		
h h						
4 to 6	0 ·000444	0 ·000114	0 ·000279	Always larger.	Always larger, except in Nov.	Generally larger.
6 to 8	0 ·000192	0 ·000173	0 ·000183	Always larger, except in April.	Larger in Feb., March, and Nov.; smaller in Jan., Oct., and Dec.	,,
8 to 10	0 ·000360	0 ·000296	0 ·000328	Always smaller.	Always smaller, except in Oct.	Generally smaller.
10 to 12	0 ·000225	0 ·000273	0 ·000249	Smaller, except in April and September.	Always smaller.	,,
12 to 14	0 ·000239	0 ·000300	0 ·000270	Always smaller.	Always smaller, except in Nov.	,,

The smallest two-hourly change of force appears to be between 16^h and 18^h in summer, and between 4^h and 6^h in winter; the largest between 0^h and 2^h, at all seasons.

The mean two-hourly change was, in Summer, 0 ·000470
,, Winter, 0 ·000308
and the mean for the Year was 0 ·000389

TABLE XLI.—Mean Reading of the Horizontal Force Magnet at each Hour during each Month, obtained by taking the Mean of all the Readings at the same Hour during each Month (Table XXXV.), diminished by the Mean Reading for the Month (Table XXVII.), and by the Mean Diurnal Change at each Hour (in the remarks following Table XXXVII.).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	−0 ·000510	−0 ·000602	−0 ·000353	+0 ·000412	+0 ·000023	+0 ·000288	+0 ·000337	+0 ·000256	+0 ·000379	+0 ·000172	−0 ·000006	−0 ·000386
16	−0 ·000332	−0 ·000294	−0 ·000322	+0 ·000114	−0 ·000189	+0 ·000082	+0 ·000144	+0 ·000097	+0 ·000404	+0 ·000564	+0 ·000153	−0 ·000413
18	−0 ·000019	+0 ·000031	−0 ·000228	+0 ·000104	−0 ·000323	−0 ·000196	−0 ·000095	−0 ·000205	+0 ·000337	+0 ·000326	+0 ·000474	−0 ·000188
20	+0 ·000459	+0 ·000387	+0 ·000151	−0 ·000025	−0 ·000477	−0 ·000679	−0 ·000346	−0 ·000520	−0 ·000203	+0 ·000292	+0 ·000732	+0 ·000235
22	+0 ·001205	+0 ·000833	−0 ·000165	−0 ·000630	−0 ·000368	−0 ·000646	−0 ·000522	−0 ·000743	−0 ·000549	−0 ·000217	+0 ·000779	+0 ·001031
0	+0 ·000578	+0 ·000561	−0 ·000100	−0 ·000617	−0 ·000095	−0 ·000240	−0 ·000396	−0 ·000174	−0 ·000222	−0 ·000017	+0 ·000224	+0 ·000519
2	+0 ·000164	+0 ·000168	+0 ·000216	−0 ·000310	−0 ·000016	+0 ·000018	−0 ·000109	+0 ·000113	+0 ·000026	−0 ·000036	−0 ·000025	−0 ·000192
4	−0 ·000124	+0 ·000057	+0 ·000259	−0 ·000184	+0 ·000005	+0 ·000360	+0 ·000051	+0 ·000141	−0 ·000162	−0 ·000186	−0 ·000366	+0 ·000158
6	−0 ·000270	−0 ·000198	+0 ·000145	+0 ·000400	+0 ·000431	+0 ·000292	+0 ·000078	+0 ·000292	−0 ·000264	−0 ·000265	−0 ·000668	+0 ·000037
8	−0 ·000326	−0 ·000071	+0 ·000286	+0 ·000034	+0 ·000588	+0 ·000385	+0 ·000438	+0 ·000371	−0 ·000154	−0 ·000548	−0 ·000634	−0 ·000360
10	−0 ·000403	−0 ·000285	+0 ·000067	+0 ·000198	+0 ·000235	+0 ·000240	+0 ·000270	+0 ·000238	+0 ·000115	−0 ·000067	−0 ·000370	−0 ·000211
12	−0 ·000429	−0 ·000593	+0 ·000047	+0 ·000491	+0 ·000178	+0 ·000095	+0 ·000145	+0 ·000240	+0 ·000385	−0 ·000026	−0 ·000289	−0 ·000228

The order of the signs in this table being different at different periods of the year, it is thereby indicated that the daily changes in the horizontal force were different at different times of the year.

By taking the sums of all the quantities ranging with each hour, without regard to their signs, Table XLII. is formed; and by taking the sums of all the quantities in each month, without regard to their signs, Table XLIII. is formed.

TABLE XLII.—Sums of the Differences of Diurnal Inequality at each Hour.

1844, Hour.	Sums of the Differences.	1844, Hour.	Sums of the Differences.
h		h	
14	0 ·003724	2	0 ·001393
16	0 ·003108	4	0 ·002053
18	0 ·002526	6	0 ·003340
20	0 ·004506	8	0 ·004195
22	0 ·007688	10	0 ·002699
0	0 ·003743	12	0 ·003146

Considering that the smallest and largest numbers indicate respectively the hours subject to the least and greatest irregularity, the hours thus shewn are 2^h and 22^h respectively.

TABLE XLIII.—Monthly Sums of the Differences of Diurnal Inequality.

1844, Month.	Sums of the Differences.	1844, Month.	Sums of the Differences.
January	0 ·004819	July	0 ·002931
February	0 ·004080	August	0 ·003390
March	0 ·002339	September	0 ·003200
April	0 ·003519	October	0 ·002716
May	0 ·002928	November	0 ·004720
June	0 ·003521	December	0 ·003958

The months of January and November shew the greatest departure from the mean annual force, and those of March and October agree most nearly with it.

TABLE XLIV.—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 near 2^h Göttingen Mean Time on every Day in each Month.

1844, Month.	Mean Reading at $1^h.52^m.30^s$.	Mean Reading at $2^h.2^m.30^s$.	Mean Reading at $2^h.12^m.30^s$.	1844, Month.	Mean Reading at $1^h.52^m.30^s$.	Mean Reading at $2^h.2^m.30^s$.	Mean Reading at $2^h.12^m.30^s$.
January	0 ·013606	0 ·013740	0 ·013785	July	0 ·013941	0 ·014137	0 ·014175
February	0 ·012665	0 ·012715	0 ·012633	August	0 ·014125	0 ·014216	0 ·014320
March	0 ·012149	0 ·012328	0 ·012369	September	0 ·015392	0 ·015453	0 ·015511
April	0 ·011990	0 ·011985	0 ·012122	October	0 ·015807	0 ·015780	0 ·015838
May	0 ·013382	0 ·013409	0 ·013467	November	0 ·016017	0 ·016048	0 ·016099
June	0 ·012996	0 ·012986	0 ·013051	December	0 ·015244	0 ·015281	0 ·015354

The mean of all the observations in 1844, taken at $1^h. 52^m. 30^s$, is 0 ·013943
,, ,, 2. 2. 30, is 0 ·014006
,, ,, 2. 12. 30, is 0 ·014060

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 XLV.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, as deduced from the Twelve Observations taken on every Civil Day of the Year 1844 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0 ·039955	0 ·036630	0 ·037059	0 ·039196	0 ·039186	0 ·038648	0 ·038299	0 ·037158	*S*	0 ·036359	0 ·033175	*S*
2	0 ·040100	0 ·036941	0 ·038132	0 ·039002	0 ·039405	*S*	0 ·038149	0 ·037291	0 ·037150	0 ·036648	0 ·033030	0 ·031630
3	0 ·039393	0 ·037634	*S*	0 ·039230	0 ·039284	0 ·038686	0 ·038187	0 ·037183	0 ·036909	0 ·036466	*S*	0 ·031783
4	0 ·039691	*S*	0 ·038958	0 ·039018	0 ·039325	0 ·038785	0 ·038353	*S*	0 ·037101	0 ·036553	0 ·032947	0 ·031788
5	0 ·039656	0 ·037657	0 ·038824	Good Friday	*S*	0 ·038584	0 ·038041	0 ·037244	0 ·036876	0 ·036491	0 ·032927	0 ·031457
6	0 ·039460	0 ·037852	0 ·038859	0 ·038399	0 ·039406	0 ·038630	0 ·038037	0 ·037401	0 ·036803	*S*	0 ·033038	0 ·031458
7	*S*	0 ·037735	0 ·038872	*S*	0 ·039584	0 ·038437	*S*	0 037039	0 ·036703	0 ·036116	0 ·033004	0 ·031199
8	0 ·039179	0 ·037682	0 ·038997	0 ·038883	0 ·039486	0 ·038679	0 ·038367	0 037350	*S*	0 ·036099	0 ·032733	*S*
9	0 ·039205	0 ·037744	0 ·039265	0 ·038970	0 ·039426	*S*	0 ·037994	0 ·037697	0 ·036619	0 ·036257	0 ·032454	0 ·030844
10	0 ·039356	0 ·037698	*S*	0 ·038745	0 ·039214	0 ·038556	0 ·037620	0 ·037323	0 ·036475	0 ·036513	*S*	0 ·031077
11	0 ·039310	*S*	0 ·039126	0 ·038790	0 ·039275	0 ·038679	0 ·037703	*S*	0 ·036561	0 ·036561	0 ·032064	0 ·031046
12	0 ·039339	0 ·037567	0 ·038935	0 ·038912	*S*	0 ·038749	0 ·037405	0 ·037483	0 ·036540	0 ·036479	0 ·032607	0 ·030986
13	0 ·039355	0 ·037445	0 ·038808	0 ·038778	0 ·039468	0 ·039000	0 037438	0 ·037274	0 ·036754	*S*	0 ·032801	0 ·030888
14	*S*	0 ·037550	0 ·038934	*S*	0 ·039391	0 ·038715	*S*	0 ·037210	0 ·036724	0 ·033588	0 ·032666	0 ·031208
15	0 ·038973	0 ·037668	0 ·039177	0 ·038870	0 ·039062	0 ·038456	0 ·037494	0 ·037260	*S*	0 ·033552	0 ·032797	*S*
16	0 ·039017	0 ·037870	0 ·038946	0 ·038808	0 ·039310	*S*	0 ·037201	0 ·037480	0 ·036855	0 ·033391	0 ·033135	0 ·031606

The letter *S* denotes that the day was Sunday.

TABLE XLV.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
17	0·039230	0·037600	*S*	0·039699	0·039018	0·038447	0·037409	0·037281	0·036667	0·033312	*S*	0·031846
18	0·039267	*S*	0·038989	0·038974	0·038999	0·038338	0·037518	*S*	0·036509	0·033356	0·032621	0·031670
19	0·039196	0·037374	0·038909	0·038915	*S*	0·038198	0·037185	0·037259	0·036539	0·033121	0·032721	0·032075
20	0·039087	0·036217	0·038884	0·039216	0·039252	0·038567	0·037450	0·037468	0·036406	*S*	0·032606	0·031387
21	*S*	0·036464	0·039004	*S*	0·039141	0·038791	*S*	0·036962	0·036521	0·032910	0·032162	0·031248
22	0·039221	0·036559	0·039039	0·039267	0·039941	0·038801	0·037733	0·037047	*S*	0·033275	0·032091	*S*
23	0·039075	0·036492	0·039300	0·039097	0·039027	*S*	0·037767	0·037388	0·036328	0·033356	0·032153	0·031107
24	0·039125	0·036923	*S*	0·038905	0·038679	0·038823	0·037629	0·037180	0·036386	0·033404	*S*	0·031292
25	0·039129	*S*	0·039156	0·039129	0·038616	0·038146	0·037754	*S*	0·036322	0·033467	0·031935	Christ. Day.
26	0·039226	0·036791	0·039255	0·039465	*S*	0·038342	0·037427	0·036942	0·036366	0·033200	0·032102	....
27	0·039157	0·036512	0·039379	0·038944	0·038411	0·038451	0·037560	0·037085	0·036552	*S*	0·031719	....
28	*S*	0·036731	0·039273	*S*	0·038687	0·038257	*S*	0·036929	0·036386	0·033058	0·031964	....
29	0·038489	0·036940	0·039204	0·038917	0·038538	0·038470	0·037319	0·037115	*S*	0·033131	0·032029	*S*
30	0·037114		0·038856	0·038947	0·038776	*S*	0·037068	0·037104	0·036160	0·033184	0·032309	
31	0·036543		*S*		0·038733		0·037245	0·037391		0·033318		

The letter *S* denotes that the day was Sunday.

The numbers between January 1 and April 30 would require to be increased by 0·002309 to make them comparable with the series in December, 1843, as exhibited in Table XLV. page 28 of the volume for 1843. This correction, however, has nowhere been applied.

The numbers between January 1 and April 30 require the additive correction 0·006161 to make them comparable with the series beginning 1843, May 6, as exhibited in Table XLV. above mentioned. The numbers between May 1 and October 12 require to be diminished by 0·000359 to reduce them to the series January 1—April 30, or require to be increased by 0·005802 to make them comparable with the series beginning 1843, May 6. The numbers from October 13 to December 30 require to be increased by 0·002265 to reduce them to the series May 1—October 12, or require to be increased by 0·008067 to make them comparable with the series beginning 1843, May 6. (See the Introduction.) By the application of these numbers the following table is formed, the numbers of which are comparable with those in the series beginning 1843, May 6.

TABLE XLVI.—Table formed from the preceding (Table XLV.) by applying the Correction mentioned at the foot of the latter, to reduce the series of Numbers to the same Zero as that beginning 1843, May 6.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·046116	0·042791	0·043220	0·045357	0·044988	0·044450	0·044101	0·042960	*S*	0·042161	0·041242	*S*
2	0·046261	0·043102	0·044293	0·045163	0·045207	*S*	0·043951	0·043093	0·042952	0·042450	0·041097	0·039697
3	0·045554	0·043795	*S*	0·045391	0·045086	0·044488	0·043989	0·042985	0·042711	0·042268	*S*	0·039850
4	0·045852	*S*	0·045119	0·045179	0·045127	0·044587	0·044155	*S*	0·042903	0·042355	0·041014	0·039855
5	0·045817	0·043818	0·044985	Good Friday	*S*	0·044386	0·043843	0·043046	0·042678	0·042293	0·040994	0·039524
6	0·045621	0·044013	0·045020	0·044560	0·045208	0·044432	0·043839	0·043203	0·042605	*S*	0·041105	0·039525
7	*S*	0·044396	0·045033	*S*	0·045386	0·044239	*S*	0·042841	0·042505	0·041918	0·041071	0·039266
8	0·045340	0·043843	0·045158	0·045044	0·045288	0·044481	0·044169	0·043152	*S*	0·041901	0·040800	*S*
9	0·045366	0·043905	0·045426	0·045131	0·045228	*S*	0·043796	0·043499	0·042421	0·042059	0·040521	0·038911
10	0·045517	0·043859	*S*	0·044906	0·045016	0·044358	0·043422	0·043125	0·042277	0·042315	*S*	0·039144
11	0·045471	*S*	0·045287	0·044951	0·045077	0·044481	0·043505	*S*	0·042363	0·042363	0·040131	0·039113
12	0·045500	0·043728	0·045096	0·045073	*S*	0·044551	0·043207	0·043285	0·042342	0·042281	0·040674	0·039053
13	0·045516	0·043606	0·044969	0·044939	0·045270	0·044802	0·043240	0·043076	0·042556	*S*	0·040868	0·038955
14	*S*	0·043711	0·045095	*S*	0·045193	0·044517	*S*	0·043012	0·042526	0·041655	0·040733	0·039275
15	0·045134	0·043829	0·045338	0·045031	0·044864	0·044258	0·043296	0·043062	*S*	0·041619	0·040864	*S*
16	0·045178	0·044031	0·045107	0·044969	0·045112	*S*	0·043003	0·043282	0·042657	0·041458	0·041202	0·039673
17	0·045391	0·043761	*S*	0·045860	0·044820	0·044249	0·043211	0·043083	0·042469	0·041379	*S*	0·039913
18	0·045428	*S*	0·045150	0·045135	0·044801	0·044140	0·043320	*S*	0·042311	0·041423	0·040688	0·039737
19	0·045357	0·043535	0·045070	0·045076	*S*	0·044000	0·042987	0·043061	0·042341	0·041188	0·040788	0·040142
20	0·045248	0·042378	0·045045	0·045377	0·045054	0·044369	0·043252	0·043270	0·042208	*S*	0·040673	0·039454
21	*S*	0·042625	0·045165	*S*	0·044943	0·044593	*S*	0·042764	0·042323	0·040977	0·040229	0·039315
22	0·045382	0·042720	0·045200	0·045428	0·045743	0·044603	0·043535	0·042849	*S*	0·041342	0·040158	*S*
23	0·045236	0·042653	0·045461	0·045258	0·044829	*S*	0·043569	0·043190	0·042130	0·041423	0·040220	0·039174
24	0·045286	0·043084	*S*	0·045066	0·044481	0·044625	0·043431	0·042982	0·042188	0·041471	*S*	0·039359
25	0·045290	*S*	0·045317	0·045290	0·044418	0·043948	0·043556	*S*	0·042124	0·041534	0·040002	Christ. Day.
26	0·045387	0·042952	0·045416	0·045626	*S*	0·044144	0·043229	0·042744	0·042168	0·041267	0·040169	....
27	0·045318	0·042673	0·045540	0·045105	0·044213	0·044253	0·043362	0·042887	0·042354	*S*	0·039786	....
28	*S*	0·042892	0·045434	*S*	0·044489	0·044059	*S*	0·042731	0·042188	0·041125	0·040031	....
29	0·044650	0·043101	0·045365	0·045078	0·044340	0·044272	0·043121	0·042917	*S*	0·041198	0·040096	*S*
30	0·043275		0·045017	0·045108	0·044578	*S*	0·042870	0·042906	0·041962	0·041251	0·040376	
31	0·042704		*S*		0·044535		0·043047	0·043193		0·041385		

The letter *S* denotes that the day was Sunday.

TABLE XLVII.—Table exhibiting the Times at which Differences greater than 0·0003 took place between the Mean Positions of the Vertical Force Magnet on two Consecutive Days, estimated positive when the Vertical Force was greater on the Second Day.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		May.		June.	
2 & 3	−0·000707	1 & 2	+0·000311	1 & 2	+0·001073	16 & 17	+0·000891	14 & 15	−0·000329	19 & 20	+0·000369
29 & 30	−0·001375	2 & 3	+0·000693	29 & 30	−0·000348	17 & 18	−0·000725	21 & 22	+0·000800	24 & 25	−0·000677
30 & 31	−0·000571	19 & 20	−0·001157			19 & 20	+0·000301	22 & 23	−0·000914		
		23 & 24	+0·000431			25 & 26	+0·000336	23 & 24	−0·000348		
						26 & 27	−0·000521				
July.		August.		October.		November.		December.			
4 & 5	−0·000312	6 & 7	−0·000362	21 & 22	+0·000365	11 & 12	+0·000543	4 & 5	−0·000331		
8 & 9	−0·000373	7 & 8	+0·000311			15 & 16	+0·000338	13 & 14	+0·000320		
9 & 10	−0·000374	8 & 9	+0·000347			20 & 21	−0·000444	18 & 19	+0·000405		
18 & 19	−0·000333	9 & 10	−0·000374			26 & 27	−0·000383	19 & 20	−0·000688		
25 & 26	−0·000327	20 & 21	−0·000506								
		22 & 23	+0·000341								

From the numbers in this table it appears that there are

22	instances in which the force has changed more than		0·0003	parts of the whole vertical force,	and less than	0·0004
3	,,	,,	0·0004	,,	,,	0·0005
4	,,	,,	0·0005	,,	,,	0·0006
3	,,	,,	0·0006	,,	,,	0·0007
2	,,	,,	0·0007	,,	,,	0·0008
2	,,	,,	0·0008	,,	,,	0·0009
1	,,	,,	0·0009	,,	,,	0·0010
1	,,	,,	0·0010	,,	,,	0·0011
1	,,	,,	0·0011	,,	,,	0·0012
1	,,	,,	0·0013	,,	,,	0·0014

TABLE XLVIII.—Table exhibiting the Greatest and the Least Differences in the Mean Positions of the Vertical Force Magnet, between any two consecutive Civil Days during each Month, estimated Positive when the Vertical Force was greater on the Second Day.

1844, Month.	Differences in the Mean Daily Positions of the Vertical Force Magnet, from one Day to the next. Greatest.	Least.	Days between which the Greatest Difference took place.	Days between which the Least Difference took place.
			d d	d d
January	− 0·001375	+ 0·000004	29 & 30	24 & 25
February	− 0·001157	− 0·000046	19 & 20	9 & 10
March	+ 0·001073	+ 0·000013	1 & 2	6 & 7
April	+ 0·000891	+ 0·000030	16 & 17	29 & 30
May	− 0·000914	− 0·000019	22 & 23	17 & 18
June	− 0·000677	+ 0·000010	24 & 25	21 & 22
July	− 0·000374	− 0·000004	9 & 10	5 & 6
August	− 0·000506	− 0·000011	20 & 21	29 & 30
September	− 0·000241	− 0·000021	2 & 3	11 & 12
October	+ 0·000365	− 0·000017	21 & 22	7 & 8
November	+ 0·000543	− 0·000020	11 & 12	4 & 5
December	− 0·000688	+ 0·000001	19 & 20	5 & 6

TABLE XLIX.—Mean of all the Two-hourly Readings of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, and reduced to the same Zero as the series beginning 1843, May 6, for those Days of each Month on which, as shewn by the Mean of the Two-hourly Readings, the marked end was most drawn towards the Nadir, or was most drawn towards the Zenith.

1844, Month.	Mean Daily Reading of the Vertical Force Magnet when the marked end was most drawn towards the Nadir.	Zenith.	Greatest Difference in the extreme Positions of the Magnet, between any Two Days in the Month.	Day on which the marked end was most drawn towards the Nadir.	Zenith.
January	0·046261	0·042704	0·003557	2	31
February	0·044031	0·042378	0·001653	16	20
March	0·045540	0·043220	0·002320	27	1
April	0·045860	0·044560	0·001300	17	6
May	0·045743	0·044213	0·001530	22	27
June	0·044802	0·043948	0·000854	13	25
July	0·044169	0·042870	0·001299	8	30
August	0·043499	0·042731	0·000768	9	28
September	0·042952	0·041962	0·000990	2	30
October	0·042450	0·040977	0·001473	2	21
November	0·041242	0·039786	0·001456	1	27
December	0·040142	0·038911	0·001231	19	9

This table shews that the mean daily position was subject to the least variation in the month of August, and that in January it was subject to the greatest. The mean monthly range (estimated from the mean of all the observations on each day) was 0·001536. The yearly range (similarly estimated) was 0·007350, being the difference between the mean daily vertical force on January 2nd, when the marked end of the magnet was most drawn towards the Nadir; and the mean daily vertical force on December 9th, when the marked end was most drawn towards the Zenith.

TABLE L.—Mean Reading of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, and reduced to the same Zero as the series beginning 1843, May 6, derived from the Mean of all the Two-hourly Observations in each Month.

Means, rejecting disturbed days
0·045081

1844, Month.	Mean for each Month.	1844, Month.	Mean for each Month.
January	0·045266	July	0·043482
February	0·043372	August	0·043044
March	0·045089	September	0·042410
April	0·045164	October	0·041707
May	0·044937	November	0·040597
June	0·044371	December	0·039447

Mean, rejecting disturbed days
0·041689
0·040590

The mean of the monthly results is 0·043240; this number belongs to the series commencing 1843, May. The numbers in the months of 1843, before May, require to be increased by 0·022900 to make them comparable with the series of numbers beginning at that time; and, were this number applied, the mean of the monthly results for 1843 would be 0·051755; so that between 1843 and 1844 the force appears to have decreased by 0·008515. The decrease of force from 1842 to 1843 appeared to be 0·014696. These inferences, however, depend upon an assumed permanency of adjustment, which is very questionable.

TABLE LI.—Readings of the Vertical Force Magnet, corrected for Temperature, expressed in parts of the whole Vertical Force, in Single Observations, when the marked end of the Magnet was most drawn towards the Nadir, and when it was most drawn towards the Zenith, for the Daily, Term-Day, and Extraordinary Observations of each month, reduced to the same Zero as the series commencing 1843, May 6.

1844, Month.	Readings of the Vertical Force Magnet when the marked end of the Magnet was most drawn towards the Nadir. Daily Observations.	Zenith. Daily Observations.	Nadir. Term-Day Observations.	Zenith. Term-Day Observations.	Nadir. Extraordinary Observations.	Zenith. Extraordinary Observations.	Range of the Magnet in the Month.	Day and Hour when the marked end of the Magnet was most drawn towards the Nadir. Daily Observations. d h m	Zenith. Daily Observations. d h m	Nadir. Term-Day Observations. d h m	Zenith. Term-Day Observations. d h m	Nadir. Extraordinary Observations. d h m s	Zenith. Extraordinary Observations. d h m s
January	0 ·046689	0 ·042202	0 ·046163	0 ·044488	....	....	0 ·004487	2. 2. 0	30. 18. 0	25. 3. 15	24. 18. 10 24. 18. 15 24. 18. 20	.....	.....
February	0 ·045633	0 ·040776	0 ·043395	0 ·042811	0 ·044335	0 ·043860	0 ·004857	6. 6. 0	0. 22. 0	23. 16. 0 23. 16. 5 23. 16. 10	23. 22. 15	7. 7. 37. 30	7. 9. 59. 0 7. 9. 60. 0 7. 9. 61. 0 7. 9. 62. 0
March	0 ·047189	0 ·042425	0 ·046161	0 ·044540	0 ·047199	0 ·043071	0 ·004774	30. 4. 0	1. 20. 0	21. 4. 55	20. 19. 45	30. 3. 49. 0	29. 15. 25. 0
April	0 ·047935	0 ·043002	0 ·046673	0 ·044535	0 ·047935	0 ·044462	0 ·004933	17. 6. 0	9. 14. 0	25. 7. 20	24. 14. 25	17. 5. 57. 30	16. 19. 57. 30
May	0 ·048051	0 ·043493	0 ·045120	0 ·043877	0 ·044987	0 ·044658	0 ·004558	22. 6. 0	23. 16. 0	25. 6. 0	25. 0. 0	21. 12. 34. 0 21. 12. 36. 0	21. 13. 57. 30
June	0 ·045939	0 ·043264	0 ·045060	0 ·043621	....	....	0 ·002675	12. 4. 0	16. 16. 0	20. 6. 40 20. 7. 0	19. 14. 0	.....	.....
July	0 ·045569	0 ·042206	0 ·044886	0 ·042135	....	....	0 ·003434	8. 6. 0	24. 18. 0	25. 5. 50	24. 18. 15	.....	.....
August	0 ·045113	0 ·041965	0 ·044319	0 ·042165	0 ·044134	0 ·042230	0 ·003148	9. 2. 0	25. 22. 0	31. 3. 55	30. 13. 40	1. 7. 57. 30	22. 13. 57. 30
September	0 ·044025	0 ·040730	0 ·043109	0 ·041896	0 ·044025	0 ·040780	0 ·003295	26. 6. 0	25. 16. 0	19. 5. 55 19. 6. 0	18. 19. 45	26. 5. 57. 30	25. 14. 31. 0
October	0 ·044561	0 ·039171	0 ·042016	0 ·041185	0 ·044561	0 ·038293	0 ·006268	1. 6. 0	20. 16. 0	24. 3. 55 24. 4. 0	23. 17. 0	1. 5. 57. 30	20. 17. 0. 0
November	0 ·042763	0 ·039145	0 ·040598	0 ·039795	0 ·043041	0 ·039063	0 ·003978	16. 6. 0	26. 20. 0	29. 19. 30	29. 10. 0	16. 4. 58. 19	22. 11. 52. 0
December	0 ·040421	0 ·038552	0 ·040497	0 ·039851	0 ·040074	0 ·039458	0 ·001945	14. 8. 0	12. 20. 0	19. 5. 55	18. 12. 35	21. 4. 21. 0	21. 6. 27. 0

From this table we learn the following particulars:—The marked end of the magnet was most drawn downwards in May on the 22nd day at 6^h, and least drawn downwards in October on the 20th day at 17^h; the difference between these numbers was 0 ·009758. The monthly range of the magnet was the smallest in December, and the largest in October. The mean monthly range was 0 ·004762 in the year 1842; it was 0 ·003626 in 1843; and it was 0 ·004029 in 1844.

TABLE LII.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0 ·000570	0 ·002962	0 ·001474	0 ·002054	0 ·002119	0 ·001666	0 ·001320	0 ·001905	*S*	0 ·005076	0 ·000722	*S*
2	0 ·000721	0 ·001155	0 ·003988	0 ·002637	0 ·002053	*S*	0 ·001040	0 ·001722	0 ·001330	0 ·001186	0 ·001028	0 ·000812
3	0 ·000839	0 ·001465	*S*	0 ·002761	0 ·001998	0 ·001726	0 ·001061	0 ·000910	0 ·001218	0 ·001520	*S*	0 ·000649
4	0 ·000628	*S*	0 ·001415	0 ·001968	0 ·000755	0 ·001142	0 ·001366	*S*	0 ·001196	0 ·001290	0 ·001063	0 ·000580
5	0 ·000848	0 ·001161	0 ·001357	Good Friday.	*S*	0 ·001366	0 ·000754	0 ·000961	0 ·000912	0 ·001292	0 ·000804	0 ·001291
6	0 ·000766	0 ·002381	0 ·002592	0 ·002148	0 ·001601	0 ·000557	0 ·000856	0 ·001008	0 ·001547	*S*	0 ·000755	0 ·001143
7	*S*	0 ·000687	0 ·002134	*S*	0 ·001784	0 ·000984	*S*	0 ·001302	0 ·001334	0 ·001142	0 ·001415	0 ·000653
8	0 ·000837	0 ·001128	0 ·002362	0 ·001510	0 ·001703	0 ·001033	0 ·002165	0 ·001332	*S*	0 ·001647	0 ·000440	*S*

The letter *S* denotes that the day was Sunday.

TABLE LII.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
9	0 ·000575	0 ·000682	0 ·001895	0 ·001696	0 ·002364	*S*	0 ·001737	0 ·002495	0 ·000860	0 ·000827	0 ·000753	0 ·000671
10	0 ·001357	0 ·000861	*S*	0 ·002854	0 ·000927	0 ·001109	0 ·001354	0 ·001485	0 ·000610	0 ·000975	*S*	0 ·000686
11	0 ·000779	*S*	0 ·001088	0 ·001175	0 ·001418	0 ·001411	0 ·001121	*S*	0 ·001887	0 ·001351	0 ·001192	0 ·000500
12	0 ·000444	0 ·000891	0 ·000879	0 ·001114	*S*	0 ·002580	0 ·001015	0 ·000938	0 ·000913	0 ·000554	0 ·001175	0 ·000654
13	0 ·000371	0 ·000527	0 ·001148	0 ·000623	0 ·001365	0 ·001655	0 ·001025	0 ·000539	0 ·001233	*S*	0 ·000629	0 ·000577
14	*S*	0 ·001303	0 ·000617	*S*	0 ·002170	0 ·001185	*S*	0 ·000744	0 ·001165	0 ·000417	0 ·001040	0 ·001643
15	0 ·000636	0 ·000634	0 ·001223	0 ·001241	0 ·001662	0 ·001212	0 ·001565	0 ·000643	*S*	0 ·001046	0 ·000470	*S*
16	0 ·000865	0 ·000922	0 ·000970	0 ·001193	0 ·001499	*S*	0 ·000889	0 ·001302	0 ·000886	0 ·000570	0 ·002810	0 ·000923
17	0 ·000472	0 ·001051	*S*	0 ·003880	0 ·000906	0 ·001854	0 ·001410	0 ·000820	0 ·000939	0 ·001100	*S*	0 ·000568
18	0 ·000428	*S*	0 ·001806	0 ·001320	0 ·001545	0 ·001353	0 ·001592	*S*	0 ·000583	0 ·001140	0 ·000823	0 ·000556
19	0 ·000330	0 ·001527	0 ·001095	0 ·001148	*S*	0 ·000843	0 ·000899	0 ·001351	0 ·001213	0 ·000742	0 ·000965	0 ·000646
20	0 ·000343	0 ·000815	0 ·000687	0 ·000994	0 ·000941	0 ·001439	0 ·001695	0 ·001287	0 ·001866	*S*	0 ·000168	0 ·001064
21	*S*	0 ·000893	0 ·001621	*S*	0 ·001254	0 ·002069	*S*	0 ·000676	0 ·001503	0 ·003991	0 ·000836	0 ·001138
22	0 ·000598	0 ·000586	0 ·001135	0 ·001130	0 ·003626	0 ·001225	0 ·001384	0 ·001335	*S*	0 ·000907	0 ·002336	*S*
23	0 ·000664	0 ·001094	0 ·001153	0 ·001432	0 ·003373	*S*	0 ·001646	0 ·002290	0 ·000998	0 ·001323	0 ·001640	0 ·001673
24	0 ·000459	0 ·000634	*S*	0 ·001750	0 ·001957	0 ·001019	0 ·001609	0 ·001430	0 ·001336	0 ·000831	*S*	0 ·000856
25	0 ·001675	*S*	0 ·001288	0 ·002138	0 ·001243	0 ·000641	0 ·002751	*S*	0 ·002172	0 ·000922	0 ·001047	Christ. Day.
26	0 ·000553	0 ·000966	0 ·002048	0 ·002335	*S*	0 ·001003	0 ·000826	0 ·001366	0 ·003295	0 ·001345	0 ·001011	....
27	0 ·000875	0 ·000813	0 ·000543	0 ·001929	0 ·001131	0 ·001020	0 ·001646	0 ·001045	0 ·002351	*S*	0 ·001145	....
28	*S*	0 ·001398	0 ·001237	*S*	0 ·001084	0 ·000807	*S*	0 ·001280	0 ·002185	0 ·001249	0 ·001620	....
29	0 ·002909	0 ·001377	0 ·001637	0 ·001295	0 ·000669	0 ·002091	0 ·001118	0 ·001850	*S*	0 ·001152	0 ·000631	*S*
30	0 ·000509		0 ·004128	0 ·001579	0 ·001040	*S*	0 ·001636	0 ·001826	0 ·002634	0 ·000745	0 ·000646	
31	0 ·000845		*S*		0 ·000852		0 ·000698	0 ·002154		0 ·000856		

The letter *S* denotes that the day was Sunday.

TABLE LIII.—Greatest and Least Daily Range of the Vertical Force Magnet, expressed in parts of the whole Vertical Force in each Month.

1844, Month.	Daily Range of the Vertical Force Magnet.		Day on which the Range of the Magnet was	
	Greatest.	Least.	Greatest.	Least.
			d	d
January	0 ·002909	0 ·000330	29	19
February	0 ·002962	0 ·000527	1	13
March	0 ·004128	0 ·000543	30	27
April	0 ·003880	0 ·000623	17	13
May	0 ·003626	0 ·000669	22	29
June	0 ·002580	0 ·000557	12	6
July	0 ·002751	0 ·000698	25	31
August	0 ·002495	0 ·000539	9	13
September	0 ·003295	0 ·000583	26	18
October	0 ·005076	0 ·000417	1	14
November	0 ·002810	0 ·000168	16	20
December	0 ·001673	0 ·000500	23	11

TABLE LIV.—Mean of the Daily Ranges of the Vertical Force Magnet in each Month, expressed in parts of the whole Vertical Force.

1844, Month.	Mean of all the Daily Ranges in each Month.	1844, Month.	Mean of all the Daily Ranges in each Month.
January	0·000774	July	0·001340
February	0·001117	August	0·001380
March	0·001597	September	0·001447
April	0·001736	October	0·001304
May	0·001594	November	0·001045
June	0·001320	December	0·001864

The mean daily range of the magnet appears to be smallest in January and largest in April.

By taking the means of the above numbers in two groups, those between April and September for the summer group, and the remaining months for the winter group, we find that,

The daily range in Summer was 0·001469
,, Winter was 0·001284
The mean daily range for the Year was 0·001377

TABLE LV.—Table shewing how often in each Month the Daily Range of the Vertical Force Magnet has been included between certain Limits.

The Daily Range was	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Number of Days.
Greater than 0·00016 and less than 0·00020											1		1
,, 0·00020 ,, 0·00050	7									1	2		10
,, 0·00050 ,, 0·00100	17	13	5	2	6	5	6	8	8	10	10	14	104
,, 0·00100 ,, 0·00150	1	9	11	9	8	13	11	12	8	12	9	4	107
,, 0·00150 ,, 0·00200	1	1	4	6	7	4	8	4	4	2	2	2	45
,, 0·00200 ,, 0·00300	1	2	4	7	4	3	2	3	4		2		32
,, 0·00300 ,, 0 00400			1	1	2				1	1			6
,, 0·00400 ,, 0·00500			1										1
,, 0·00500 ,, 0·00510										1			1

From the last column of this table we collect the following particulars:—

That on 11 days out of 307 the daily range was greater than 0 00020 and less than 0·00050
104 ,, ,, 0·00050 0·00100
107 ,, ,, 0·00100 0·00150
77 ,, ,, 0·00150 0·00300
8 ,, ,, 0·00300 0·00510

TABLE LVI.—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.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h 14	0·039111	0·037110	0·038596	0·038572	0·038858	0·038372	0·037529	0·036958	0·036342	0·035658	0·032365	0·031273
16	0·038976	0·037054	0·038545	0·038485	0·038765	0·038220	0·037466	0·036902	0·036258	0·035553	0·032368	0·031178
18	0·038928	0·036990	0·038443	0·038429	0·038722	0·038173	0·037364	0·036988	0·036333	0·035541	0·032361	0·031197
20	0·038894	0·036895	0·038431	0·038480	0·038640	0·038102	0·037279	0·036898	0·036194	0·035615	0·032345	0·031138
22	0·039008	0·036856	0·038616	0·038573	0·038691	0·038144	0·037247	0·036831	0·036170	0·035645	0·032247	0·031173
0	0·039018	0·037026	0·038824	0·038813	0·038821	0·038320	0·037417	0·036975	0·036306	0·035758	0·032340	0·031222
2	0·039196	0·037337	0·039248	0·039339	0·039373	0·038800	0·037807	0·037509	0·036779	0·036194	0·032610	0·031422
4	0·039395	0·037601	0·039667	0·039864	0·039665	0·039174	0·038173	0·037786	0·037314	0·036552	0·032962	0·031708
6	0·039262	0·037610	0·039559	0·039883	0·039893	0·039210	0·038318	0·037894	0·037346	0·036391	0·032925	0·031675
8	0·039233	0·037515	0·039300	0·039555	0·039721	0·039063	0·038146	0·037679	0·037035	0·036181	0·032807	0·031599
10	0·039167	0·037350	0·039051	0·039174	0·039382	0·038765	0·037830	0·037388	0·036731	0·035959	0·032599	0·031534
12	0·039077	0·037186	0·038862	0·038877	0·039085	0·038488	0·037580	0·037099	0·036476	0·035795	0·032433	0·031438

In forming the preceding table, the numbers as observed, from October 13^d. 14^h to October 31^d. 12^h have been increased by 0·002265 to reduce them to the series at the former part of the month, and then the mean of the numbers at each hour has been taken.

The numbers from January to April, both inclusive, require to be increased by 0·002309, to reduce them to the series in December, 1843 (See page 28, Note to Table XLV.). This correction, however, has not been applied. The numbers from January to April require the additive correction 0·006161 to reduce them to the same zero as the series beginning 1843, May 6; those from May to October require the additive correction 0·005802; and those of November and December the additive correction 0·008067. By application of these numbers the following table is formed.

TABLE LVII.—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, and reduced to the same Zero as that of 1843, by applying the constant numbers mentioned in the Remarks following Table LVI. to the numbers in that Table.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	0·045272	0·043271	0·044757	0·044733	0·044660	0·044174	0·043331	0·042760	0·042144	0·041460	0·040432	0·039340
16	0·045137	0·043215	0·044706	0·044646	0·044567	0·044022	0·043268	0·042704	0·042060	0·041355	0·040435	0·039245
18	0·045089	0·043151	0·044604	0·044590	0·044524	0·043975	0·043166	0·042790	0·042135	0·041343	0·040428	0·039264
20	0·045055	0·043056	0·044592	0·044641	0·044442	0·043904	0·043081	0·042700	0·041996	0·041417	0·040412	0·039205
22	0·045169	0·043017	0·044777	0·044734	0·044493	0·043946	0·043049	0·042633	0·041972	0·041447	0·040314	0·039240
0	0·045179	0·043187	0·044985	0·044974	0·044623	0·044122	0·043219	0·042777	0·042108	0·041560	0·040407	0·039289
2	0·045357	0·043498	0·045409	0·045500	0·045175	0·044602	0·043609	0·043311	0·042581	0·041996	0·040677	0·039489
4	0·045556	0·043762	0·045828	0·046025	0·045467	0·044976	0·043975	0·043588	0·043116	0·042354	0·041029	0·039775
6	0·045423	0·043771	0·045720	0·046044	0·045695	0·045012	0·044120	0·043696	0·043148	0·042193	0·040992	0·039742
8	0·045394	0·043676	0·045461	0·045716	0·045523	0·044865	0·043948	0·043481	0·042837	0·041983	0·040874	0·039666
10	0·045328	0·043511	0·045212	0·045335	0·045184	0·044567	0·043632	0·043190	0·042533	0·041761	0·040666	0·039601
12	0·045238	0·043347	0·045023	0·045038	0·044887	0·044290	0·043382	0·042901	0·042278	0·041597	0·040500	0·039505

To ascertain the times and the amounts of the changes contained in this table, the next table is formed by considering that number which is the smallest at about 20^h, as denoting the first extreme position towards the Zenith; then, the greatest of the following increasing numbers, as denoting the first extreme position towards the Nadir; then the smallest of the following decreasing numbers, as denoting the second extreme position towards the Zenith, and so on successively.

TABLE LVIII.—Hours of Göttingen Mean Solar Time at which the Extreme Positions of the Vertical Force Magnet occur in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the Readings and Amounts of the Changes: the Corrections for Temperature having been applied.

1844, Month.	For Extreme Positions of the Magnet.							
	First Extreme Zenith Position.		First Extreme Nadir Position.		Second Extreme Zenith Position.		Second Extreme Nadir Position.	
	Hour.	Reading for Vertical Force.	Hour.	Reading for Vertical Force.	Hour.	Reading for Vertical Force.	Hour.	Reading for Vertical Force.
	h		h		h		h	
January	20	0·045055	4	0·045556	12	0·045238	14	0·045272
February	22	0·043017	6	0·043771				
March	20	0·044592	4	0·045828				
April	18	0·044590	6	0·046044				
May	20	0·044442	6	0·045695				
June	20	0·043904	6	0·045012				
July	22	0·043049	6	0·044120				
August	22	0·042633	6	0·043696	16	0·042704	18	0·042790
September	22	0·041972	6	0·043148	16	0·042060	18	0·042135
October	18	0·041343	4	0·042354				
November	22	0·040314	4	0·041029	14	0·040432	16	0·040435
December	20	0·039205	4	0·039775	16	0·039245	18	0·039264

TABLE LVIII.—*continued.*

1844, Month.	Interval from First Extreme Zenith Position to First Extreme Nadir Position.		Interval from First Extreme Nadir Position to Second Extreme Zenith Position.		Interval from Second Extreme Zenith Position to Second Extreme Nadir Position.		Interval from Last Extreme Nadir Position to First Extreme Zenith Position.		Sums of the Changes.	Difference between the Greatest and Least Extremes.
	Time elapsed.	Amount of Change of Vertical Force.	Time elapsed.	Amount of Change of Vertical Force.	Time elapsed.	Amount of Change of Vertical Force.	Time elapsed.	Amount of Change of Vertical Force.		
	h		h		h		h			
January	8	0·000501	8	0·000318	2	0·000034	6	0·000217	0·001070	0·000501
February	8	0·000754					16	0·000754	0·001508	0·000754
March	8	0·001236					16	0·001236	0·002472	0·001236
April	12	0·001454					12	0·001454	0·002908	0·001454
May	10	0·001253					14	0·001253	0·002506	0·001253
June	10	0·001108					14	0·001108	0·002216	0·001108
July	8	0·001071					16	0·001071	0·002142	0·001071
August	8	0·001063	10	0·000992	2	0·000086	4	0·000157	0·002298	0·001063
September	8	0·001176	10	0·001088	2	0·000075	4	0·000163	0·002502	0·001176
October	10	0·001011					14	0·001011	0·002022	0·001011
November	6	0·000715	10	0·000597	2	0·000003	6	0·000121	0·001436	0·000715
December	8	0·000570	12	0·000530	2	0·000019	2	0·000059	0·001178	0·000570

The diurnal movement, it appears from this table, has consisted of a single maximum and a single minimum in seven months of the year, and of a double maximum and a double minimum in the remaining five months.

The numbers in the last column but one shew the sums of all the upward and downward motions of the magnet as found by adding, without regard to sign, all the differences between successive extremes, and they exhibit nearly the mean amount of motion on each day.

The numbers in the last column shew the extreme changes in the mean daily positions of the magnet. In the summer months the numbers in the two last columns are nearly the double of those in the winter months.

The next table is formed by taking the means of the numbers in Table LVII., corresponding to the same hours for the several months; those from April to September are grouped together for summer, and the other six months for winter.

TABLE LIX.—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.

1844, Hour of Observation.	Mean Position of the Magnet. Summer.	Mean Position of the Magnet. Winter.	For the Year.
h			
14	0·043634	0·042422	0·043028
16	0·043544	0·042349	0·042946
18	0·043530	0·042313	0·042922
20	0·043461	0·042290	0·042875
22	0·043471	0·042327	0·042899
0	0·043637	0·042434	0·043036
2	0·044130	0·042738	0·043434
4	0·044524	0·043051	0·043787
6	0·044619	0·042973	0·043796
8	0·044395	0·042842	0·043619
10	0·044074	0·042680	0·043377
12	0·043796	0·042535	0·043166

The minimum force is indicated at 20^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 the winter. In summer and in winter there is only one maximum and one minimum, occurring at the times above-mentioned.

The amount of the daily changes in Summer was 0·001158
,, Winter was 0·000761

The changes in the winter are about two-thirds of those in the summer; this ratio is nearly the same as that derived from each of the preceding years.

The mean vertical force for the Summer period was 0·043901
,, Winter period was 0·042579
And the mean for the Year was 0·043240

If these numbers be diminished by 0·022900, and, thus decreased, be compared with the similar results derived from the observations in the year 1843, we find

That the decrease of the whole vertical force from the Summer of 1842 to the Summer of 1843 was 0·008263
,, ,, Winter of 1842 to the Winter of 1843 was 0·008772
,, ,, Year 1842 to the Year 1843 was 0·008517

These results however, are liable to great doubt.

Comparing the numbers in the last column of the above table with the mean for the year, or 0·043240, the following results are obtained, exhibiting the difference between the mean position for the year and the mean position for the year at every observation-hour; and thus it appears that the mean position of the marked end of the magnet

At 14^h was 0·000212 parts of the whole vertical force *less* drawn downwards than the mean position of the year.
16 was 0·000294 ,, ,, ,,
18 was 0·000318 ,, ,, ,,
20 was 0·000365 ,, ,, ,,
22 was 0·000341 ,, ,, ,,
0 was 0·000204 ,, ,, ,,
2 was 0·000194 parts of the whole vertical force *more* drawn downwards than the mean position of the year.
4 was 0·000547 ,, ,, ,,
6 was 0·000556 ,, ,, ,,
8 was 0·000379 ,, ,, ,,
10 was 0·000137 ,, ,, ,,
12 was 0·000074 ,, *less* drawn downwards than the mean position of the year.

TABLE LX.—Excess of the Mean Reading of the Vertical Force Magnet, corrected for Temperature, 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.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	+0·000006	−0·000101	−0·000332	−0·000432	−0·000277	−0·000197	−0·000151	−0·000284	−0·000265	−0·000246	−0·000165	−0·000107
16	−0·000129	−0·000157	−0·000383	−0·000519	−0·000370	−0·000349	−0·000214	−0·000340	−0·000349	−0·000351	−0·000162	−0·000202
18	−0·000177	−0·000221	−0·000485	−0·000575	−0·000413	−0·000396	−0·000316	−0·000254	−0·000274	−0·000363	−0·000169	−0·000183
20	−0·000211	−0·000316	−0·000497	−0·000524	−0·000495	−0·000467	−0·000401	−0·000344	−0·000413	−0·000289	−0·000185	−0·000242
22	−0·000097	−0·000355	−0·000312	−0·000431	−0·000444	−0·000425	−0·000433	−0·000411	−0·000437	−0·000259	−0·000283	−0·000207
0	−0·000087	−0·000185	−0·000104	−0·000191	−0·000314	−0·000249	−0·000263	−0·000267	−0·000301	−0·000146	−0·000190	−0·000158
2	+0·000091	+0·000126	+0·000320	+0·000335	+0·000238	+0·000231	+0·000127	+0·000267	+0·000172	+0·000290	+0·000080	+0·000042
4	+0·000290	+0·000390	+0·000739	+0·000860	+0·000530	+0·000605	+0·000493	+0·000544	+0·000707	+0·000648	+0·000432	+0·000328
6	+0·000157	+0·000399	+0·000631	+0·000879	+0·000758	+0·000641	+0·000638	+0·000652	+0·000739	+0·000487	+0·000395	+0·000295
8	+0·000128	+0·000304	+0·000372	+0·000551	+0·000586	+0·000494	+0·000466	+0·000437	+0·000428	+0·000277	+0·000277	+0·000219
10	+0·000062	+0·000139	+0·000123	+0·000170	+0·000247	+0·000196	+0·000150	+0·000146	+0·000124	+0·000055	+0·000069	+0·000154
12	−0·000028	−0·000025	−0·000066	−0·000127	−0·000050	−0·000081	−0·000100	−0·000143	−0·000131	−0·000109	−0·000097	+0·000058

This table exhibits the following particulars:—The sign of the numbers in every month at 0^h is −; the sign of the numbers in every month at 2^h is +; the sign of the numbers in every month at 10^h is +, and at 12^h they are all −, except for December. Thus it appears, that between 0^h and 2^h, and between 10^h and 12^h, the magnet was in its mean position.

In the months of January, February, and December there are six negative and six positive signs, shewing that in those months 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 closely with each other and with the results derived from the observations of previous years.

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 14^h the mean departure from the mean of the month was, in Summer 0 ·000268, in Winter 0 ·000160						
16	,,	,,	,,	357	,,	231
18	,,	,,	,,	371	,,	266
20	,,	,,	,,	441	,,	290
22	,,	,,	,,	430	,,	252
0	,,	,,	,,	264	,,	145
2	,,	,,	,,	228	,,	158
4	,,	,,	,,	623	,,	471
6	,,	,,	,,	718	,,	394
8	,,	,,	,,	494	,,	263
10	,,	,,	,,	172	,,	100
12	,,	,,	,,	105	,,	064

And at 14^h the mean departure from the mean of the Year was 0 ·000214			
16	,,	,,	294
18	,,	,,	319
20	,,	,,	365
22	,,	,,	341
0	,,	,,	205
2	,,	,,	193
4	,,	,,	547
6	,,	,,	556
8	,,	,,	378
10	,,	,,	136
12	,,	,,	085

These numbers are identical with those following Table LIX., in all cases where the signs of the numbers in Table LIX. are the same in every month at that hour; and they differ in those cases where there is a change of sign at that hour.

TABLE LXI.—Table exhibiting the Differences in the Mean Positions of the Vertical Force Magnet between every Pair of Consecutive Observation-hours in every Month, estimated positive when the Force was greater at the latter Hour (obtained by taking the Differences between the Consecutive Numbers in each Month, contained in Table LVII. or Table LX.).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Between 14^h & 16^h	−0 ·000135	−0 ·000056	−0 ·000051	−0 ·000087	−0 ·000093	−0 ·000152	−0 ·000063	−0 ·000056	−0 ·000084	−0 ·000105	+0 ·000003	−0 ·000095
,, 16 & 18	−0 ·000048	−0 ·000064	−0 ·000102	−0 ·000056	−0 ·000043	−0 ·000047	−0 ·000102	+0 ·000086	+0 ·000075	−0 ·000012	−0 ·000007	+0 ·000019
,, 18 & 20	−0 ·000034	−0 ·000095	−0 ·000012	+0 ·000051	−0 ·000082	−0 ·000071	−0 ·000085	−0 ·000090	−0 ·000139	+0 ·000074	−0 ·000016	−0 ·000059
,, 20 & 22	+0 ·000114	−0 ·000039	+0 ·000185	+0 ·000093	+0 ·000051	+0 ·000042	−0 ·000032	−0 ·000067	−0 ·000024	+0 ·000030	−0 ·000098	+0 ·000035
,, 22 & 0	+0 ·000010	+0 ·000170	+0 ·000208	+0 ·000240	+0 ·000130	+0 ·000176	+0 ·000170	+0 ·000144	+0 ·000136	+0 ·000113	+0 ·000093	+0 ·000049
,, 0 & 2	+0 ·000178	+0 ·000311	+0 ·000424	+0 ·000526	+0 ·000552	+0 ·000480	+0 ·000390	+0 ·000534	+0 ·000473	+0 ·000436	+0 ·000270	+0 ·000200
,, 2 & 4	+0 ·000199	+0 ·000264	+0 ·000419	+0 ·000525	+0 ·000292	+0 ·000374	+0 ·000366	+0 ·000277	+0 ·000535	+0 ·000358	+0 ·000352	+0 ·000286
,, 4 & 6	−0 ·000133	+0 ·000009	−0 ·000108	+0 ·000019	+0 ·000228	+0 ·000036	+0 ·000145	+0 ·000108	+0 ·000032	−0 ·000161	−0 ·000037	−0 ·000033
,, 6 & 8	−0 ·000029	−0 ·000095	−0 ·000259	−0 ·000328	−0 ·000172	−0 ·000147	−0 ·000172	−0 ·000215	−0 ·000311	−0 ·000210	−0 ·000118	−0 ·000076
,, 8 & 10	−0 ·000066	−0 ·000165	−0 ·000249	−0 ·000381	−0 ·000339	−0 ·000298	−0 ·000316	−0 ·000291	−0 ·000304	−0 ·000222	−0 ·000208	−0 ·000065
,, 10 & 12	−0 ·000090	−0 ·000164	−0 ·000189	−0 ·000297	−0 ·000297	−0 ·000277	−0 ·000250	−0 ·000289	−0 ·000255	−0 ·000164	−0 ·000166	−0 ·000096
,, 12 & 14	+0 ·000034	−0 ·000076	−0 ·000266	−0 ·000305	−0 ·000227	−0 ·000116	−0 ·000051	−0 ·000141	−0 ·000134	−0 ·000137	−0 ·000068	−0 ·000165

The largest number contained in this table is that in May between 0^h and 2^h. By taking the mean of the numbers in each column (without regard to their signs), the mean change for two hours is exhibited:—

In January the mean change for two hours was 0 ·000089			
February	,,	,,	·000126
March	,,	,,	·000206
April	,,	,,	·000242
May	,,	,,	·000209

In June the mean change for two hours was			0·000185
July	,,	,,	·000178
August	,,	,,	·000192
September	,,	,,	·000209
October	,,	,,	·000169
November	,,	,,	·000119
December	,,	,,	·000098

And the next table is formed by taking the means of the numbers contained in this table (without regard to their signs) which correspond to the same pair of hours. The months from April to September are grouped together for summer, and the remaining months for winter.

TABLE LXII.—Amounts of the Differences in the Mean Positions of the Vertical Force Magnet, between every Pair of Consecutive Hours, with the character of the Changes for the Winter, the Summer, and the Year.

Between what Hours.	Amounts of the Differences in the Mean Position of the Vertical Force Magnet.			CHARACTER OF THE CHANGES.		
				Summer Period.	Winter Period.	For the Year.
	Summer.	Winter.	Year.	The Vertical Force was, at the latter Hour,		
h h						
14 to 16	0·000073	0·000074	0·000074	Always smaller.	Always smaller, except in Nov.	Generally smaller.
16 to 18	0·000068	0·000042	0·000055	Smaller, except in August and September.	Always smaller, except in December.	,,
18 to 20	0·000086	0·000048	0·000067	Always smaller, except in Apr.	Smaller, except in October.	,,
20 to 22	0·000051	0·000084	0·000067	Larger in April, May, and June; smaller in July, August, and September.	Sometimes larger, sometimes smaller.	Generally larger.
22 to 0	0·000166	0·000107	0·000137	Always larger.	Always larger.	Always larger.
0 to 2	0·000493	0·000303	0·000398	,,	,,	,,
2 to 4	0·000395	0·000313	0·000354	,,	,,	,,
4 to 6	0·000095	0·000080	0·000087	,,	Always smaller, except in February.	Larger during the summer period, and smaller during the winter period.
6 to 8	0·000224	0·000131	0·000178	Always smaller.	Always smaller.	Always smaller.
8 to 10	0·000321	0·000163	0·000242	,,	,,	,,
10 to 12	0·000278	0·000145	0·000211	,,	,,	,,
12 to 14	0·000162	0·000124	0·000143	,,	Always smaller, except in January.	Generally smaller.

The smallest change of force for two hours in summer appears to be between 20^h and 22^h, and in winter between 16^h and 18^h; and the largest appears to be between 0^h and 2^h at all seasons.

The mean change for two hours in Summer was		0·000201
,,	Winter was	0·000135
,,	the Year was	0·000168

TABLE LXIII.—Mean Reading of the Vertical Force Magnet at each Hour during each Month, obtained by taking the Means of all the Readings at the same Hour during each Month (Table LVII.), diminished by the Mean Reading for the Month (Table L.), and by the Mean Diurnal Change in each Hour (in the remarks following Table LX.).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	+0·000218	+0·000111	−0·000120	−0·000220	−0·000065	+0·000015	+0·000061	−0·000072	−0·000053	−0·000034	+0·000047	+0·000105
16	+0·000165	+0·000137	−0·000089	−0·000225	−0·000076	−0·000055	+0·000080	−0·000046	−0·000055	−0·000057	+0·000132	+0·000092
18	+0·000141	+0·000097	−0·000167	−0·000257	−0·000095	−0·000078	+0·000002	+0·000064	+0·000044	−0·000045	+0·000149	+0·000135
20	+0·000154	+0·000049	−0·000132	−0·000159	−0·000130	−0·000102	−0·000036	+0·000021	−0·000048	+0·000076	+0·000180	+0·000123
22	+0·000244	−0·000014	+0·000029	−0·000090	−0·000103	−0·000084	−0·000092	−0·000070	−0·000096	+0·000082	+0·000058	+0·000134
0	+0·000117	+0·000019	+0·000100	+0·000013	−0·000110	−0·000045	−0·000059	−0·000063	−0·000097	+0·000058	+0·000014	+0·000046
2	−0·000103	−0·000068	+0·000126	+0·000141	+0·000044	+0·000037	−0·000067	+0·000073	−0·000022	+0·000096	−0·000114	−0·000152
4	−0·000257	−0·000157	+0·000192	+0·000313	−0·000017	+0·000058	−0·000054	−0·000003	+0·000160	+0·000101	−0·000115	−0·000219
6	−0·000399	−0·000157	+0·000075	+0·000323	+0·000202	+0·000085	+0·000082	+0·000096	+0·000183	−0·000069	−0·000161	−0·000261
8	−0·000251	−0·000075	−0·000007	+0·000172	+0·000207	+0·000115	+0·000087	+0·000058	+0·000049	−0·000102	−0·000102	−0·000160
10	−0·000075	+0·000002	−0·000014	+0·000033	+0·000110	+0·000059	+0·000013	+0 000009	−0·000013	−0·000082	−0·000068	+0·000017
12	+0·000046	+0·000049	+0·000008	−0·000053	+0·000024	−0·000007	−0·000026	−0·000069	−0·000057	−0·000035	−0·000023	+0·000132

As in previous years, no simple law exists in this table relative to the order of the signs: generally, however, the order of the signs in the summer period is different from that in the winter period. By taking the sums of all the numbers ranging with each hour, without regard to sign, the following table is formed :—

TABLE LXIV.—Sums of the Differences of Diurnal Inequality at each Hour.

1844, Hours of Göttingen Mean Time.	Sums of the Differences.	1844, Hours of Göttingen Mean Time.	Sums of the Differences.
h		h	
14	0·001121	2	0·001043
16	0·001209	4	0·001646
18	0·001274	6	0·002093
20	0·001210	8	0·001385
22	0·001096	10	0·000495
0	0·000741	12	0·000529

Considering that the smallest number indicates the hour subject to the least irregularity, and the largest the hour subject to the greatest irregularity, it appears that the vertical force at 10^h is the most uniform. At 6^h the largest number appears, and this hour would therefore appear subject to the greatest irregularity: these times are the same as those indicated last year. The following table contains the Sums of all the quantities in each month in Table LXIII., without regard to their signs.

TABLE LXV.—Monthly Sums of the Differences of Diurnal Inequality.

1844, Month.	Sums of the Differences.	1844, Month.	Sums of the Differences.
January	0·002170	July	0·000659
February	0·000935	August	0·000644
March	0·001059	September	0·000877
April	0·001999	October	0·000837
May	0·001183	November	0·001163
June	0·000740	December	0·001576

From this table it appears that the diurnal motion of the Vertical Force Magnet agrees most nearly with its mean diurnal motion, as found from the mean of the determinations throughout the year, in August; and that it departs the most from the mean in January.

TABLE LXVI.—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.

1844, Month.	Mean Reading at $1^h.47^m.30^s$.	$1^h.57^m.30^s$.	$2^h.7^m.30^s$.	1844, Month.	Mean Reading at $1^h.47^m.30^s$.	$1^h.57^m.30^s$.	$2^h.7^m.30^s$.
January	0·045348	0·045357	0·045362	July	0·043636	0·043609	0·043609
February	0·043513	0·043498	0·043482	August	0·043317	0·043311	0·043315
March	0·045408	0·045409	0·045409	September	0·042584	0·042581	0·042570
April	0·043550	0·045500	0·045459	October	0·042044	0·041996	0·041987
May	0·045190	0·045175	0·045148	November	0·040676	0·040677	0·040674
June	0·044646	0·044602	0·044592	December	0·039490	0·039489	0·039498

The mean of all the observations taken at $1^h.47^m.30^s$ is 0·043448
, ,, 1.57.30 is 0·043434
,, ,, 2. 7.30 is 0·043425

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.

Abstracts of the Observations of the Magnetic Dip.

The results of all the observations, made at 21ʰ and 3ʰ, with both needles in every month, have been collected, and their means taken, and thus the following table is formed.

TABLE LXVII.—Mean Monthly Magnetic Dip.

1844, Month.	Mean Monthly Dip at 21ʰ. By Needle Marked A 1.	No. of Obs.	By Needle Marked A 2.	No. of Obs.	Mean Monthly Dip at 3ʰ. By Needle Marked A 1.	No. of Obs.	By Needle Marked A 2.	No. of Obs.
	° ′		° ′		° ′		° ′	
January	68. 58 ·50	4	69. 0 ·94	4	68. 58 ·75	2	69. 0 ·00	3
February	69. 0 ·00	4	69. 1 ·30	4	68. 58 ·00	5	68. 59 ·35	5
March	68. 58 ·50	4	69. 0 ·50	4	68. 59 ·50	3	69. 0 ·50	3
April	68. 57 ·50	5	69. 0 ·30	5	68. 59 ·50	3	69. 1 ·75	3
May	69. 2 ·14	4	69. 0 ·30	4	69. 2 ·25	3	68. 59 ·00	4
June	69. 1 ·00	5	69. 0 ·90	5	69. 0 ·75	3	69. 2 ·50	3
July	69. 2 ·50	3	69. 2 ·75	3	68. 59 ·00	3	69. 1 ·75	3
August	69. 4 ·25	4	69. 5 ·00	4	69. 3 ·75	5	69. 4 ·00	5
September	69. 2 ·64	3	68. 55 ·09	4	69. 2 ·25	1	68. 56 ·88	2
October	....	..	68. 58 ·07	4	....	..	69. 3 ·18	4
November	....	..	68. 56 ·35	4	....	..	68. 56 ·90	2
December	68. 59 ·76	6	....	..	68. 54 ·62	3	....	..

All the observations before September 22ᵈ. 21ʰ were taken in the meridian, and all after that date were taken out of the meridian.

In September, before the 22nd day, there were two observations of A 1 at 21ʰ, whose mean was 68°. 59′ ·38
after the 22nd day, there was one observation of A 1 at 21ʰ, whose result was 69 . 9 ·16
from which the monthly dip at 21ʰ was considered to be 69°. 2′ ·64 by needle A 1.

In September, before the 22nd day, there were two observations of A 2 at 21ʰ, whose mean was 68 . 58 ·00
after ,, ,, ,, ,, was 68 . 52 ·18
from which the monthly dip at 21ʰ was considered to be 68°. 55′ ·09 by needle A 2.

In September, before the 22nd day, there was one observation of A 1 at 3ʰ, whose result was 69 . 2 ·25
after ,, ,, ,, ,, was 68 . 44 ·00
omitting the observation taken after the 22nd day, the dip at 3ʰ was considered to be 69°. 2′ ·25 for A 1.

In September there was one observation of A 2 at 3ʰ, before the 22nd day, and one after, whose results were 68°. 57′ ·25 and 68°. 56′ ·50 respectively, from which the monthly dip at 3ʰ was considered to be 68°. 56′ ·88, by needle A 2.

By dividing the numbers into quarterly periods, the next table is formed.

TABLE LXVIII.—Mean Quarterly Magnetic Dip.

1844. Months forming the Quarterly Period.	Mean Quarterly Dip at 21ʰ. By Needle Marked A 1.	No. of Obs.	By Needle Marked A 2.	No. of Obs.	Mean Quarterly Dip at 3ʰ. By Needle Marked A 1.	No. of Obs.	By Needle Marked A 2.	No. of Obs.
	° ′		° ′		° ′		° ′	
Jan., Feb., March	68. 59 ·00	12	69. 0 ·91	12	68. 58 ·75	10	68. 59 ·95	11
April, May, June	69. 0 ·21	14	69. 0 ·50	14	69. 0 ·83	9	69. 1 ·08	10
July, Aug., Sep.	69. 3 ·13	10	69. 0 ·95	11	69. 1 ·67	9	69. 0 ·88	10
Oct., Nov., Dec.	68. 59 ·76	6	68. 57 ·21	8	68. 54 ·62	3	69. 0 ·04	6

And the yearly mean at 21ʰ from A 1, was 69°. 0′ ·68; from A 2, was 69°. 0′ ·14
,, at 3ʰ ,, was 68. 59 ·84 ,, was 69. 0 ·53
Therefore, the Mean Magnetic Dip for the year at 21ʰ from both needles was 69. 0 ·44
,, at 3ʰ ,, was 69. 0 ·19

ROYAL OBSERVATORY, GREENWICH.

ABSTRACTS

OF THE

RESULTS

OF THE

METEOROLOGICAL OBSERVATIONS.

1844.

TABLE I.—Mean Height of the Barometer as deduced from the Twelve Observations taken on every Civil Day of the Year 1844 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Time.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	29·464	29·852	29·273	30·091	30·255	29·843	29·723	29·633	*S*	29·931	29·321	*S*
2	29·532	29·444	29·298	29·960	30·276	*S*	29·717	29·718	30·160	29·595	29·073	29·914
3	29·776	29·798	*S*	29·688	30·069	29·955	29·732	29·347	29·961	29·672	*S*	29·963
4	29·516	*S*	29·285	29·533	29·994	29·984	29·525	*S*	29·849	29·820	29·197	30·100
5	29·458	29·350	29·660	Good Friday	*S*	29·800	29·494	29·674	29·721	29·658	29·096	30·011
6	29·142	29·423	29·698	29·761	29·712	29·636	29·711	29·453	29·772	*S*	29·159	30·124
7	*S*	29·167	30·012	*S*	29·690	29·766	*S*	29·534	29·792	29·814	29·263	30·199
8	29·818	29·221	30·143	30·283	29·820	29·898	29·782	29·527	*S*	29·722	28·953	*S*
9	30·220	29·088	29·907	30·352	29·837	*S*	29·739	29·619	29·612	29·120	28·908	30·004
10	30·167	29·363	*S*	30·193	29·805	29·923	29·808	29·521	29·738	29·161	*S*	29·973
11	30·247	*S*	29·475	29·846	29·847	30·052	29·746	*S*	29·886	29·556	29·211	29·877
12	30·051	29·900	29·430	29·758	*S*	30·016	29·770	29·363	29·936	29·557	29·376	29·776
13	29·903	29·984	29·832	29·609	30·206	29·852	29·654	29·476	30·041	*S*	29·531	29·441
14	*S*	29·939	29·725	*S*	30·188	29·887	*S*	29·257	29·953	29·099	29·953	29·368
15	30·242	29·854	29·367	29·990	30·223	29·915	29·721	29·490	*S*	28·886	29·983	*S*
16	30·149	30·056	29·436	30·074	30·018	*S*	29·845	29·772	29·721	28·894	30·116	29·221
17	30·092	29·974	*S*	30·049	29·784	29·943	29·832	29·715	29·617	29·189	*S*	29·292
18	30·084	*S*	29·901	30·054	29·814	29·608	29·614	*S*	29·786	29·566	30·137	29·548
19	29·878	29·301	29·905	30·220	*S*	29·774	29·662	29·966	29·845	29·593	30·073	29·986
20	29·907	29·657	29·545	30·154	29·832	29·904	29·991	29·727	29·880	*S*	30·056	30·177
21	*S*	29·326	29·866	*S*	29·812	29·790	*S*	29·623	29·960	29·442	30·199	30·205
22	29·804	29·320	29·560	30·029	30·024	29·651	30·017	29·589	*S*	29·699	30·108	*S*
23	29·963	29·474	29·447	30·052	29·984	*S*	29·850	29·578	29·629	29·744	30·041	30·114
24	30·108	29·111	*S*	29·992	29·897	29·538	29·807	29·568	29·832	29·587	*S*	30·179
25	30·117	*S*	29·457	30·037	29·917	29·503	29·808	*S*	30·079	29·677	29·916	Christ. Day.
26	30·136	28·669	29·570	29·894	*S*	29·619	29·878	29·913	30·130	29·883	30·161	29·991
27	30·121	29·273	29·817	30·094	30·033	29·725	30·049	29·969	30·046	*S*	30·206	29·943
28	*S*	29·476	30·217	*S*	29·879	29·851	*S*	30·006	29·894	30·069	29·987	29·845
29	29·797	29·433	30·378	30·148	29·810	29·919	29·829	30·011	*S*	29·909	29·923	*S*
30	29·664		30·246	30·146	29·872	*S*	29·551	30·039	30·188	29·732	29·992	29·878
31	29·682		*S*		29·902		29·478	30·191		29·652		29·989

The letter *S* denotes that the day was Sunday.

TABLE II.—Table exhibiting the Times at which Differences greater than $0^{in}{\cdot}250$ took place between the Mean Heights of the Barometer on Two consecutive Days, with the amounts of the Differences, estimated positive when the Height on the Second Day is the greater.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		June.		July.	
	in.		in.		in.		in.		in.		in.
3 & 4	− 0·260	1 & 2	− 0·408	4 & 5	+ 0·375	2 & 3	− 0·272	17 & 18	− 0·335	19 & 20	+ 0·329
5 & 6	− 0·316	2 & 3	+ 0·354	6 & 7	+ 0·314	10 & 11	− 0·347			29 & 30	− 0·278
8 & 9	+ 0·402	6 & 7	− 0·256	12 & 13	+ 0·402						
		9 & 10	+ 0·275	14 & 15	− 0·358						
		19 & 20	+ 0·356	19 & 20	− 0·360						
		20 & 21	− 0·331	20 & 21	+ 0·321						
		23 & 24	− 0·363	21 & 22	− 0·306						
		26 & 27	+ 0·604	27 & 28	+ 0·400						

TABLE II.—*continued.*

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
August.		September.		October.		November.		December.	
	in.		in.		in.		in.		in.
2 & 3	− 0·371	30 & 31	− 0·257	1 & 2	− 0·336	7 & 8	− 0·310	12 & 13	− 0·335
15 & 16	+ 0·282			8 & 9	− 0·602	13 & 14	+ 0·422	17 & 18	+ 0·256
				10 & 11	+ 0·395			18 & 19	+ 0·438
				16 & 17	+ 0·295				
				17 & 18	+ 0·377				
				21 & 22	+ 0·257				
				31 & 32	− 0·331				

The above table shews, that from observations taken on 312 days there were 39 cases in which the difference in the mean height of the barometer between two consecutive days exceeded a quarter of an inch; of these, 8 took place between April and September, and the remaining 31 in the other months of the year. In the winter half-year there were—

6 instances in which the difference exceeded 0·25 in. and was less than 0·30 in. between two consecutive days.
17 ,, ,, 0·30 ,, 0·40 ,,
6 ,, ,, 0·40 ,, 0·50 ,,
2 ,, ,, 0·60

In the summer half-year there were

4 instances in which the difference exceeded 0·25 and was less than 0·30 between two consecutive days.
4 ,, ,, 0·30 ,, 0·40 ,,

It appears from these numbers that the differences of the heights of the barometer on consecutive days are much larger and more numerous in the winter than in the summer.

TABLE III.—Table exhibiting the Times at which the Greatest and the Least Differences between the Mean Heights of the Barometer on Two consecutive Civil Days took place in each Month, with the amount of the Difference, estimated positive when the Mean Height was greater on the Second Day.

1844, Month.	Difference between the Mean Heights of the Barometer on consecutive Days.		Days of the Month between which the Difference of the Mean Heights of the Barometer took place.	
	Greatest.	Least.	Greatest.	Least.
	in.	in.	d d	d d
January	+ 0·402	− 0·008	8 & 9	17 & 18
February	+ 0·604	− 0·006	26 & 27	21 & 22
March	+ 0·402	+ 0·004	12 & 13	18 & 19
April	− 0·347	− 0·002	10 & 11	29 & 30
May	− 0·234	+ 0·017	16 & 17	8 & 9
June	− 0·335	+ 0·028	17 & 18	14 & 15
July	+ 0·329	+ 0·001	19 & 20	24 & 25
August	− 0·371	+ 0·005	2 & 3	28 & 29
September	− 0·257	+ 0·020	30 & 31	6 & 7
October	− 0·602	+ 0·001	8 & 9	11 & 12
November	+ 0·422	− 0·017	13 & 14	19 & 20
December	+ 0·438	+ 0·028	18 & 19	20 & 21

TABLE IV.—Mean of all the Two-hourly Heights of the Barometer for those Days in each Month, in which (as deduced from the Mean of the Two-hourly Observations) the Barometer was Highest or Lowest.

1844, Month.	Mean Daily Heights of the Barometer in the Month.		Difference.	Day of the Month on which the Mean Height of the Barometer was	
	Highest.	Lowest.		Highest.	Lowest.
	in.	in.	in.	d	d
January	30 ·247	29 ·142	1 ·105	11	6
February	30 ·056	28 ·669	1 ·387	16	26
March	30 ·378	29 ·273	1 ·105	29	1
April	30 ·352	29 ·533	0 ·819	9	4
May	30 ·276	29 ·690	0 ·586	2	7
June	30 ·052	29 ·503	0 ·549	11	25
July	30 ·049	29 ·478	0 ·571	27	31
August	30 ·191	29 ·257	0 ·934	31	14
September	30 ·188	29 ·612	0 ·576	30	9
October	30 ·069	28 ·886	1 ·183	28	15
November	30 ·206	28 ·908	1 ·298	27	9
December	30 ·205	29 ·221	0 ·984	21	16

The highest daily mean was in March, and the lowest was in February; and the difference between them was 1in·709, being the range of the mean daily heights of the barometer for the year.

TABLE V.—The Highest and Lowest Readings of the Barometer in the simple Two-hourly Observations in each Month.

1844, Month.	Reading in the Month.		Range.	The Day and Hour in each Month when the Reading of the Barometer was	
	Highest.	Lowest.		Highest.	Lowest.
	in.	in.	in.	d h	d h
January	30 ·272	29 ·094	1 ·178	10. 22	6. 2
February	30 ·108	28 ·525	1 ·583	16. 10	26. 2
March	30 ·418	29 ·073	1 ·345	28. 22	0. 16
April	30 ·390	29 ·442	0 ·948	8. 22	6. 16
May	30 ·329	29 ·649	0 ·680	1. 20	12. 14
June	30 ·080	29 ·482	0 ·598	{10. 22 11. 0}	24. 18
July	30 ·110	29 ·305	0 ·805	20. 12	30. 14
August	30 ·244	29 ·110	1 ·134	31. 12	14. 4
September	30 ·247	29 ·562	0 ·685	29. 22	23. 4
October	30 ·138	28 ·776	1 ·362	27. 14	15. 18
November	30 ·247	28 ·827	1 ·420	21. 0	8. 8
December	30 ·220	29 ·205	1 ·015	7. 8	15. 20

In every month there have been readings of the barometer above 30 inches:

	in.
In March there were readings greater than	30·4
In April and May ,,	30·3
In January, August, September, November, and December there were readings greater than	30·2
In February, July, and October ,,	30·1
In June ,,	30·0

The lowest reading in the year took place on February 26^{d} at 2^{h}, in the two-hourly observations, being $28^{in.}525$; the highest reading in the year occurred on March $28^{d}.22^{h}$, in the two-hourly observations, being $30^{in.}418$; and the range in the year was $1^{in.}893$.

TABLE VI.—The Mean Height of the Barometer in each Month deduced from the Mean of all the Two-hourly Observations in each Month.

1844, Month.	Mean Height of the Barometer.	1844, Month.	Mean Height of the Barometer.	1844, Month.	Mean Height of the Barometer.
	in.		in.		in.
January	29·891	May	29·945	September	29·881
February	29·498	June	29·814	October	29·562
March	29·710	July	29·753	November	29·690
April	30·000	August	29·677	December	29·885

The mean of all the monthly results is $29^{in.}776$.

TABLE VII.—Daily Range of the Barometer, as deduced from all the Observations taken on every Civil Day of the Year 1844 (except Sundays, Good Friday, and Christmas Day), at the Even Hours of Göttingen Mean Solar Time.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·106	0·183	0·331	0·079	0·117	0·121	0·057	0·097	*S*	0·272	0·388	*S*
2	0·586	0·326	0·159	0·249	0·147	*S*	0·061	0·112	0·143	0·310	0·150	0·152
3	0·270	0·255	*S*	0·213	0·130	0·192	0·072	0·378	0·157	0·123	*S*	0·159
4	0·303	*S*	0·342	0·067	0·059	0·099	0·190	*S*	0·083	0·118	0·183	0·081
5	0·320	0·115	0·204	Good Friday.	*S*	0·207	0·162	0·220	0·117	0·178	0·090	0·075
6	0·128	0·145	0·257	0·218	0·105	0·151	0·169	0·069	0·116	*S*	0·079	0·115
7	*S*	0·262	0·233	*S*	0·106	0·100	*S*	0·112	0·030	0·187	0·104	0·054
8	0·494	0·193	0·094	0·160	0·081	0·101	0·079	0·203	*S*	0·423	0·317	*S*
9	0·124	0·153	0·232	0·065	0·042	*S*	0·059	0·052	0·093	0·465	0·156	0·095
10	0·151	0·443	*S*	0·315	0·041	0·098	0·081	0·142	0·203	0·367	*S*	0·082
11	0·057	*S*	0·550	0·204	0·219	0·069	0·054	*S*	0·054	0·276	0·496	0·072
12	0·312	0·078	0·324	0·383	*S*	0·111	0·086	0·247	0·158	0·261	0·111	0·201
13	0·067	0·067	0·136	0·264	0·046	0·119	0·446	0·146	0·049	*S*	0·370	0·278
14	*S*	0·114	0·270	*S*	0·058	0·079	*S*	0·283	0·102	0·319	0·222	0·153
15	0·079	0·087	0·193	0·076	0·050	0·092	0·145	0·302	*S*	0·100	0·136	*S*
16	0·131	0·165	0·294	0·095	0·348	*S*	0·074	0·134	0·057	0·247	0·158	0·039
17	0·066	0·191	*S*	0·128	0·081	0·301	0·206	0·208	0·089	0·362	*S*	0·147
18	0·088	*S*	0·070	0·193	0·087	0·179	0·109	*S*	0·271	0·258	0·101	0·404
19	0·214	0·298	0·204	0·083	*S*	0·325	0·251	0·162	0·094	0·262	0·034	0·354
20	0·130	0·222	0·428	0·107	0·042	0·099	0·276	0·213	0·071	*S*	0·120	0·068
21	*S*	0·526	0·160	*S*	0·215	0·254	*S*	0·040	0·089	0·142	0·098	0·023
22	0·093	0·528	0·409	0·088	0·103	0·118	0·173	0·041	*S*	0·281	0·127	*S*
23	0·218	0·839	0·169	0·166	0·099	*S*	0·120	0·066	0·168	0·172	0·036	0·108
24	0·101	0·874	*S*	0·161	0·122	0·068	0·093	0·103	0·339	0·090	*S*	0·030
25	0·155	*S*	0·269	0·159	0·157	0·073	0·080	*S*	0·142	0·189	0·213	Christ. Day.
26	0·148	0·373	0·351	0·112	*S*	0·139	0·232	0·085	0·073	0·310	0·184	0·078
27	0·153	0·384	0·238	0·200	0·099	0·099	0·076	0·039	0·104	*S*	0·109	0·048
28	*S*	0·189	0·356	*S*	0·130	0·140	*S*	0·039	0·153	0·136	0·197	0·115
29	0·287	0·323	0·078	0·086	0·048	0·063	0·084	0·042	*S*	0·185	0·114	*S*
30	0·269		0·088	0·100	0·105	*S*	0·483	0·094	0·122	0·083	0·036	0·135
31	0·137		*S*		0·039		0·306	0·148		0·194		0·087

The letter *S* denotes that the day was Sunday.

TABLE VIII.—The Greatest and Least Daily Ranges of the Barometer in each Month, with the Days on which they occurred.

1844, Month.	Daily Range of the Barometer in the Month.		Day on which occurred the	
	Greatest.	Least.	Greatest.	Least.
	in.	in.	d	d
January	0 ·586	0 ·057	2	11
February	0 ·874	0 ·067	24	13
March	0 ·550	0 ·070	11	18
April	0 ·383	0 ·065	12	9
May	0 ·348	0 ·039	16	31
June	0 ·325	0 ·063	19	29
July	0 ·483	0 ·054	30	11
August	0 ·378	0 ·039	3	27 & 28
September	0 ·339	0 ·030	24	7
October	0 ·465	0 ·083	9	30
November	0 ·496	0 ·034	11	19
December	0 ·404	0 ·023	18	21

The greatest daily range of the barometer readings was on February 24^d, being $0^{in.}874$, and the next in order were on January 2^d, March 11^d, and November 11^d, &c. The least daily range was on December 21^d, being $0^{in.}023$, and the next in order were September 7^d, November 19^d, &c.

TABLE IX.—The Mean Daily Range of the Barometer in each Month, in Quarterly Periods, and for the Year.

1844, Month.	Mean Daily Range.	Mean Daily Range in Spring.	Summer.	Autumn.	Winter.	the Year.
	in.	in.	in.	in.	in.	in.
December	0 ·126					
January	0 ·192				0 ·204	
February	0 ·293					
March	0 ·245					
April	0 ·158	0 ·170				
May	0 ·107					
June	0 ·136					0 ·173
July	0 ·156		0 ·144			
August	0 ·140					
September	0 ·123					
October	0 ·234			0 ·175		
November	0 ·167					

TABLE X.—Table exhibiting the number of Cases in each Month, and during the Year, in which the Daily Range of the Barometer was within certain limits.

The Daily Range was	Number of Cases in Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Whole Number of Cases in the Year.
in. in.													
Greater than 0·02 and less than 0·03												1	1
,, 0·03 ,, 0·04					1			2	1		3	2	9
,, 0·04 ,, 0·05					5			3	1			1	10
,, 0·05 ,, 0·06	1				3		3	1	2			1	11
,, 0·06 ,, 0·07	2	1		2		3	1	2				1	12
,, 0·07 ,, 0·08	1	1	2	2		2	4		2		1	3	18
,, 0·08 ,, 0·09	1	1	1	3	3		4	1	3	1		3	21
,, 0·09 ,, 0·10	1		1	1	2	5	1	2	2	1	2	1	19
,, 0·10 ,, 0·11	2			2	4	2	1	1	2	1	3	1	19
,, 0·11 ,, 0·12		2		1	1	3	1	2	2	1	2	2	17
,, 0·12 ,, 0·13	2			1	1	1			1	1	2		9
,, 0·13 ,, 0·14	3		1		2	1		1		1	1	1	11
,, 0·14 ,, 0·15	1	1			1	1	1	3	2	1		1	12
,, 0·15 ,, 0·16	3	1	1	1	1	1			3		3	3	17
,, 0·16 ,, 0·17		1	2	3			2	1	1				10
,, 0·17 ,, 0·18						1	1			2			4
,, 0·18 ,, 0·19		2								3	2		7
,, 0·19 ,, 0·20		2	1	1		1	1			1	1		8
,, 0·20 ,, 0·25	2	1	6	5	2	1	2	5	1	1	2	1	29
,, 0·25 ,, 0·30	3	3	3	1		1	2	1	1	6		1	22
,, 0·30 ,, 0·40	3	4	5	2	1	2	1	2	1	5	3	1	30
,, 0·40 ,, 0·50	1	1	2				2			2	1	1	10
,, 0·50 ,, 0·60	1	2	1										4
,, 0·80 ,, 0·90		2											2

From this table we collect the following particulars: that

				in.		in.
On 101 days out of 312 the daily range of the barometer was less			than	0·1		
114	,,	,,	greater than	0·1	and less than	0·2
51	,,	,,	,,	0·2	,,	0·3
30	,,	,,	,,	0·3	,,	0·4
10	,,	,,	,,	0·4	,,	0·5
4	,,	,,	,,	0·5	,,	0·6
2	,,	,,	,,	0·8	,,	0·9

TABLE XI.—The 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.

1844, 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	29·886	29·482	29·702	30·002	29·953	29·812	29·759	29·689	29·878	29·579	29·682	29·868
16	29·882	29·471	29·694	29·996	29·943	29·807	29·749	29·675	29·869	29·534	29·679	29·869
18	29·868	29·479	29·696	30·004	29·949	29·817	29·754	29·676	29·870	29·561	29 674	29·868
20	29·885	29·493	29·706	30·020	29·956	29·828	29·767	29·680	29·882	29·570	29·680	29·877
22	29·906	29·512	29·714	30·026	29·958	29·829	29·765	29·679	29·894	29·576	29·691	29·895
0	29·908	29·516	29·714	30·022	29·945	29·823	29·761	29·676	29·890	29·573	29·687	29·892
2	29·890	29·503	29·698	30·004	29·939	29·812	29·755	29·672	29·880	29·557	29·676	29·878
4	29·892	29·495	29·692	29·985	29·929	29·802	29·741	29·664	29·869	29·546	29·682	29·882
6	29·893	29·499	29·701	29·977	29·925	29·795	29·735	29·658	29·869	29·552	29·697	29·886
8	29·893	29·505	29·725	29·983	29·936	29·803	29·742	29·674	29·883	29·561	29·703	29·896
10	29·893	29·509	29·736	29·992	29·951	29·819	29·754	29·687	29·894	29·563	29·715	29·901
12	29·889	29·513	29·740	29·992	29·950	29·821	29·756	29·693	29·894	29·568	29·712	29·904

Setting out from that mean height which is the highest about 0^h, and calling it the first maximum; then, calling that mean height following it, which immediately precedes a greater, the first minimum; then, that mean height which follows, and immediately precedes a smaller, the second maximum &c.; the next table is formed.

TABLE XII.—Hours of Göttingen Mean Solar Time (Astronomical Reckoning) at which the Greatest and Least Heights of the Barometer occur in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the actual Heights and the Amounts of the Changes.

1844, Month.	Extreme Mean Corrected Barometer Readings.											
	First Maximum.		First Minimum.		Second Maximum.		Second Minimum.		Third Maximum.		Third Minimum.	
	Hour.	Reading.	Hour.	Reading.	Hour.	Reading.	Hour.	Reading.	Hour.	Reading.	Hour.	Reading.
	h	in.	h	in.	h h h	in.	h	in.	h	in.	h	in.
January	0	29·908	2	29·890	6, 8, & 10	29·893	18	29·868				
February	0	29·516	4	29·495	12	29·513	16	29·471				
March	22 & 0	29·714	4	29·692	12	29·740	16	29·694				
April	22	30·026	6	29·977	14	30·002	16	29·996				
May	22	29·958	6	29·925	10	29·951	12	29·950	14	29·953	16	29·943
June	22	29·829	6	29·795	12	29·821	16	29·817				
July	20	29·767	6	29·735	14	29·759	16	29·749				
August	20	29·680	6	29·658	12	29·693	16	29·675				
September	22	29·894	4 & 6	29·869	10 & 12	29·894	16	29·869				
October	22	29·576	4	29·546	14	29·579	16	29·534				
November	22	29·691	2	29·676	10	29·715	18	29·674				
December	22	29·895	2	29·878	12	29·904	14	29·868	16	29·869	18	29·868

TABLE XII.—*continued.*

1844, Month.	Interval from First Maximum to First Minimum.		Interval from First Minimum to Second Maximum.		Interval from Second Maximum to Second Minimum.		Interval from Second Minimum to Third Maximum.		Interval from Third Maximum to Third Minimum.		Interval between the Last Minimum and First Maximum.		Whole Sums of the Changes.	Greatest Maximum — Smallest Minimum.
	Time Elapsed.	Amount of Change of Reading.	Time Elapsed.	Amount of Change of Reading.	Time Elapsed.	Amount of Change of Reading.	Time Elapsed.	Amount of Change of Reading.	Time Elapsed.	Amount of Change of Reading.	Time Elapsed.	Amount of Change of Reading.		
	h	in.	h h h	in.	h h h	in.	h	in.	h	in.	h	in.	in.	in.
January	2	0·018	4, 6, & 8	0·003	12, 10, & 8	0·025					6	0·040	0·086	0·040
February	4	0·021	8	0·018	4	0·042					8	0·045	0·126	0·045
March	4 & 6	0·022	8	0·048	4	0·046					6	0·020	0·136	0·048
April	8	0·049	8	0·025	2	0·006					6	0·030	0·110	0·049
May	8	0·033	4	0·026	2	0·001	2	0·003	2	0·010	6	0·015	0·088	0·033
June	8	0·034	6	0·026	4	0·004					6	0·012	0·076	0·034
July	10	0·032	8	0·024	2	0·010					4	0·018	0·084	0·032
August	10	0·022	6	0·035	4	0·018					4	0·005	0·080	0·035
September	6 & 8	0·025	6	0·025	4	0·025					6	0·025	0·100	0·025
October	6	0·030	10	0·033	2	0·045					6	0·042	0·150	0·045
November	4	0·015	8	0·039	8	0·041					4	0·017	0·112	0·041
December	4	0·017	10	0·026	2	0·036	2	0·001	2	0·001	4	0·027	0·108	0·036

From the preceding table it appears that the daily motion has consisted of a triple maximum and a triple minimum pressure in two months, viz., in May and December; and of a double maximum and a double minimum in the ten remaining months. No fixed order appears in the successive maxima and minima as to their amounts; sometimes the first maxima has been greater than the second, and sometimes it has been less, and the same remark applies to the minima. The interval of time between the first maximum and the first minimum was about 4^h in the winter months, and from 8^h to 10^h in the summer months; the maximum and the mininum in the latter period occurring earlier and later, respectively, than in the former period.

The means of the numbers in Table XI. 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 XIII.—Mean Height of the Barometer at every Even Hour of Göttingen Mean Time, in Quarterly Periods and for the Year.

1844.	Mean Height of the Barometer.				
	Spring.	Summer.	Autumn.	Winter.	The Year.
h	in.	in.	in.	in.	in.
14	29·886	29·753	29·713	29·745	29·774
16	29·878	29·744	29·694	29·741	29·764
18	29·883	29·749	29·702	29·738	29·768
20	29·894	29·758	29·711	29·752	29·779
22	29·899	29·758	29·720	29·771	29·787
0	29·894	29·753	29·717	29·772	29·784
2	29·880	29·746	29·704	29·757	29·772
4	29·869	29·736	29·699	29·756	29·765
6	29·868	29·729	29·706	29·759	29·766
8	29·881	29·740	29·716	29·765	29·776
10	29·893	29·753	29·724	29·768	29·785
12	29·894	29·757	29·725	29·769	29·786

From this table it appears that a double maximum and a double minimum have taken place in each period of the year.

In spring	the maxima took place at	22^h and 12^h,	the former being	0·005 in.	higher than the latter.
,,	the minima ,,	16 and 6,	,,	0·010	,,
In summer	the maxima ,,	20, 22 and 12,	,,	0·001	,,
,,	the minima ,,	16 and 6,	,,	0·015	,,
In autumn	the maxima ,,	22 and 12,	,,	0·005	lower than the latter.
,,	the minima ,,	16 and 4,	,,	0·005	,,
In winter	the maxima ,,	0 and 12,	,,	0·003	higher than the latter.
,,	the minima ,,	18 and 4,	,,	0·018	lower than the latter.
For the year	the maxima ,,	22 and 12,	,,	0·001	higher than the latter.
,,	the minima ,,	16 and 4,	,,	0·001	lower than the latter.

The range of the heights was different at the different periods.

	in.
In spring it was	0·031
In summer it was	0·029
In autumn it was	0·031
In winter it was	0·034
For the year it was	0·023

The daily motion is different in the different periods of the year.

Between 14^h and 16^h a fall at all periods; large in the autumn.
16 and 18 a moderate rise in spring, in summer, and in autumn; a slight fall in winter.
18 and 20 a rise at all periods.
20 and 22 stationary in summer; a moderate rise in spring and in autumn; a large rise in winter.
22 and 0 a moderate fall in spring, in summer, and in autumn; a tendency to rise in winter.
0 and 2 a fall at all periods; large in spring, autumn, and winter.

Between 2h and 4h	the fall continues at all periods, but is small in autumn, and very small in winter.
4 and 6	a slight fall in spring; a moderate fall in summer; a moderate rise in autumn and in the winter.
6 and 8	a rise throughout.
8 and 10	a rise throughout, but larger in the summer than in the other periods.
10 and 12	a moderate rise in summer, and nearly stationary at the other periods.
12 and 14	a fall at all periods; large in autumn, and very large in winter: in fact, the greatest change in the year.

The mean height of the barometer in	Spring	was 29·885 in.
,,	Summer	was 29·748
,,	Autumn	was 29·711
,,	Winter	was 29·758
,,	for the whole Year	was 29·776

By taking the differences between the mean for the year and the numbers in the last column of Table XIII., the following results are deduced:—

At 14h	the mean height of the barometer was	lower than the mean for the year by		0·002 in.
16	,,	lower	,,	0·012
18	,,	lower	,,	0·008
20	,,	higher	,,	0·003
22	,,	higher	,,	0·011
0	,,	higher	,,	0·008
2	,,	lower	,,	0·004
4	,,	lower	,,	0·011
6	,,	lower	,,	0·010
8	,,	the same as the mean for the year		
10	,,	higher than the mean for the year by		0·009
12	,,	higher	,,	0·010

The mean height deduced from all the observations taken at 2^h is 0^{in}·004 less than the mean height for the year 1844; in the year 1841, and also in the year 1842, the mean of the observations taken at this time agreed precisely with the mean for each year respectively; in the year 1843 the mean of all the observations taken at this time was less than the mean height for the year by 0^{in}·001. If, therefore, this element be determined by an isolated observation each day, the hour indicated as the best is 2^h, and the mean correction to be applied to the observations taken at this time to reduce them to the mean of all the observations taken in the year, as deduced from the four years' observations, from 1841 to 1844, is 0^{in}·001 to be added. The mean height deduced from the observations at 20^h requires 0^{in}·003 to be subtracted to reduce it to the mean of all the observations in the year 1844. In 1841 the correction was 0^{in}·001 to be added; in 1842 it was 0^{in}·003 to be subtracted; and in 1843 it was 0^{in}·002 to be added: therefore from four years' observations the mean correction is insensible. The mean height, as deduced from the observation, is the same as the mean for the year; in 1841 it was 0^{in}·004 too high; in 1842 it was 0^{in}·002 too low; in 1843 it was 0^{in}·004 too high; the mean correction, therefore, to be applied to the observations taken at this time to reduce them to the mean of all the observations taken in the year, from the four years' observations, is 0^{in}·0015 to be subtracted.

TABLE XIV.—Excess of the Mean Height of the Barometer in every Month, at each Even Hour of Göttingen Mean Solar Time (as deduced from the Monthly Means of the Observations at each Hour, Table XI.), above the Mean Height for the Month (as found from the Mean of all the Two-hourly Observations for that Month, Table VI.).

1844, 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	−0·005	−0·016	−0·008	+0·002	+0·008	−0·002	+0·006	+0·012	−0·003	+0·017	−0·008	−0·017
16	−0·009	−0·027	−0·016	−0·004	−0·002	−0·007	−0·004	−0·002	−0·012	−0·028	−0·011	−0·016
18	−0·023	−0·019	−0·014	+0·004	+0·004	+0·003	+0·001	−0·001	−0·011	−0·001	−0·016	−0·017
20	−0·006	−0·005	−0·004	+0·020	+0·011	+0·014	+0·014	+0·003	+0·001	+0·008	−0·010	−0·008
22	+0·015	+0·014	+0·004	+0·026	+0·013	+0·015	+0·012	+0·002	+0·013	+0·014	+0·001	+0·010
0	+0·017	+0·018	+0·004	+0·022	0·000	+0·009	+0·008	−0·001	+0·009	+0·011	−0·003	+0·007
2	−0·001	+0·005	−0·012	+0·004	−0·006	−0·002	+0·002	−0·005	−0·001	−0·005	−0·014	−0·007
4	+0·001	−0·003	−0·018	−0·015	−0·016	−0·012	−0·012	−0·013	−0·012	−0·016	−0·008	−0·003
6	+0·002	+0·001	−0·009	−0·023	−0·020	−0·019	−0·018	−0·019	−0·012	−0·010	+0·007	+0·001
8	+0·002	+0·007	+0·015	−0·017	−0·009	−0·011	−0·011	−0·003	+0·002	−0·001	+0·013	+0·011
10	+0·002	+0·011	+0·026	−0·008	+0·006	+0·005	+0·001	+0·010	+0·013	+0·001	+0·025	+0·016
12	−0·002	+0·015	+0·030	−0·008	+0·005	+0·007	+0·003	+0·016	+0·013	+0·006	+0·022	+0·019

TABLE XV.—Mean Height of the Barometer at each Even Hour of Göttingen Mean Solar Time, during each Month (Table XI.) diminished by the Mean Height for the Month (Table VI.), and by the Mean Diurnal Change at each Hour (Table XIII. and following numbers).

1844, 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	−0·003	−0·014	−0·006	+0·004	+0·010	0·000	+0·008	+0·014	−0·001	+0·019	−0·006	−0·015
16	+0·003	−0·015	−0·004	+0·008	+0·010	+0·005	+0·008	+0·010	0·000	−0·016	+0·001	−0·004
18	−0·015	−0·011	−0·006	+0·012	+0·012	+0·011	+0·009	+0·007	−0·003	+0·007	−0·008	−0·009
20	−0·009	−0·002	−0·001	+0·017	+0·008	+0·001	+0·001	0·000	−0·002	+0·005	−0·013	−0·011
22	+0·004	+0·003	−0·007	+0·015	+0·002	+0·004	+0·001	−0·009	+0·002	+0·003	−0·010	−0·001
0	+0·009	+0·010	−0·004	+0·014	−0·008	+0·001	0·000	−0·009	+0·001	+0·003	−0·011	−0·001
2	+0·003	+0·009	−0·008	+0·008	−0·002	+0·002	+0·006	−0·001	+0·003	−0·001	−0·010	−0·003
4	+0·012	+0·008	−0·007	−0·004	−0·005	−0·001	−0·001	−0·002	−0·001	−0·005	+0·003	+0·008
6	+0·012	+0·011	+0·001	−0·013	−0·010	−0·009	−0·008	−0·009	−0·002	0·000	+0·017	+0·011
8	+0·002	+0·007	+0·015	−0·017	−0·009	−0·011	−0·011	−0·003	+0·002	−0·001	+0·013	+0·011
10	−0·007	+0·002	+0·017	−0·017	−0·003	−0·004	−0·008	+0·001	+0·004	−0·008	+0·016	+0·007
12	−0·012	+0·005	+0·020	−0·018	−0·005	−0·003	−0·007	+0·006	+0·003	−0·004	+0·012	+0·009

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.

TABLE XVI.—Hourly Sums of the Changes of Diurnal Inequality for different Months.

Hour.	Mean Difference.	Sum of the Differences.	Hour.	Mean Difference.	Sum of the Differences.
h	in.	in.	h	in.	in.
14	0·008	0·100	2	0·005	0·056
16	0·007	0·084	4	0·005	0·057
18	0·009	0·110	6	0·009	0·103
20	0·006	0·070	8	0·009	0·102
22	0·005	0·061	10	0·008	0·094
0	0·006	0·071	12	0·009	0·104

These numbers indicate that at 2^h the pressure of the atmosphere in any particular month has departed less from its mean state than at any other hour, and that at 18^h it has departed more from its mean state than at any other hour; and, consequently, the pressure of the atmosphere has been most uniform throughout the year at 2^h, and it has been subject to the greatest irregularity about 18^h.

TABLE XVII.—Monthly Sums of the Changes of Diurnal Inequality at Different Hours.

1844.	Mean Difference.	Sum of the Differences.	1844.	Mean Difference.	Sum of the Differences.
	in.	in.		in.	in.
January	0·008	0·091	July	0·006	0·068
February	0·009	0·107	August	0·006	0·071
March	0·008	0·092	September	0·002	0·024
April	0·012	0·147	October	0·006	0·074
May	0·007	0·084	November	0·010	0·120
June	0·004	0·052	December	0·008	0·090

These numbers indicate that in September the daily motion of the barometer agreed very nearly with its mean yearly motion, and that in April it departed the most from the mean yearly motion.

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 the 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 at 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 XVIII.—Monthly Means of the Corrected Barometer Readings, arranged by Hour-angles of the Moon.

Lunation. Commencing.	Lunation. Ending.	Mean Monthly Corrected Barometer Readings at the Times of Observation. 5th (Before the nearest to the Passage of the Moon.)	4th	3rd	2nd	1st	Nearest to the Passage of the Moon.	1st (After the nearest to the passage of the Moon.)	2nd	3rd	4th	5th	Nearest to the lower Passage of the Moon.
1843. d h	1844. d h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Dec. 19. 0	Jan. 16. 22	30·031	30·033	30·045	30·046	30·050	30·061	30·050	30·041	30·016	30·007	30·020	30·014
1844. Jan. 18. 0	Feb. 14. 22	29·756	29·760	29·760	29·762	29·754	29·740	29·735	29·736	29·738	29·739	29·740	29·747
Feb. 16. 0	Mar. 15. 22	29·526	29·538	29·538	29·538	29·532	29·528	29·520	29·516	29·522	29·506	29·508	29·515
Mar. 17. 0	Apr. 14. 22	29·853	29·865	29·864	29·879	29·869	29·881	29·884	29·880	29·879	29·879	29·878	29·869
Apr. 16. 0	May 13. 22	30·023	30·031	30·033	30·033	30·021	30·019	30·021	30·030	30·027	30·027	30·027	30·027
May 15. 0	June 12. 22	29·910	29·907	29·911	29·905	29·908	29·910	29·910	29·908	29·904	29·901	29·899	29·897
June 14. 0	July 12. 22	29·737	29·740	29·746	29·744	29·745	29·742	29·735	29·733	29·728	29·720	29·715	29·725
July 14. 0	Aug. 10. 22	29·700	29·703	29·702	29·694	29·716	29·714	29·702	29·700	29·702	29·719	29·704	29·705
Aug. 12. 0	Sep. 9. 22	29·769	29·758	29·754	29·748	29·747	29·743	29·749	29·761	29·766	29·773	29·784	29·785
Sep. 11. 0	Oct. 8. 22	29·842	29·842	29·845	29·844	29·852	29·849	29·845	29·835	29·824	29·819	29·807	29·798
Oct. 10. 0	Nov. 7. 22	29·419	29·423	29·418	29·430	29·428	29·457	29·427	29·421	29·402	29·420	29·419	29·412
Nov. 9. 0	Dec. 6. 22	29·907	29·908	29·910	29·912	29·915	29·926	29·930	29·938	29·953	29·948	29·953	29·956
Dec. 8. 0	1845. Jan. 5. 22	29·858	29·857	28·857	29·863	29·864	29·874	29·875	29·867	29·867	29·860	29·858	29·857

The next table is formed from the preceding, by taking the mean of the numbers in each vertical column.

TABLE XIX.—The Mean Height of the Barometer at every Two Hours of the Moon's Hour-Angle in the Year 1844.

Hour-Angle of the Moon.		Mean Height of the Barometer.	Mean of the Heights corresponding to the Hour-Angles, 10^h to 2^h East. / 2^h to 10^h West.	8^h West to 8^h East. / 4^h East to 4^h West.
	h	in.	in.	in.
East	12	29 ·7928		
	10	29 ·7947		29 ·7943
	8	29 ·7973		
	6	29 ·7987	29 ·7981	
	4	29 ·7999		
	2	29 ·8001		
	0	29 ·8034		29 ·7999
West	2	29 ·7987		
	4	29 ·7974		
	6	29 ·7945	29 ·7955	
	8	29 ·7937		
	10	29 ·7932		

The general fact of a daily lunar tide is here indicated, the mean readings increasing from 12^h to 0^h, and diminishing from 0^h to 12^h.

The following table is based upon the mean daily results in Table I. The mean heights on all the days when the Moon's North declination was the greatest have been collected, and their mean taken; then the mean heights on all the days next following them, and so on.

TABLE XX.—Mean Daily Heights of the Barometer, arranged with reference to the Moon's Declination, 1844.

Days after the Moon's greatest North Declination.	Mean Height of the Barometer.	No. of Obs.	Days after the Moon was in the Equator, the Moon going South.	Mean Height of the Barometer.	No. of Obs.	Days after the Moon's greatest South Declination.	Mean Height of the Barometer.	No. of Obs.	Days after the Moon was in the Equator, the Moon going North.	Mean Height of the Barometer.	No. of Obs.
d	in.		d	in.		d	in.		d	in.	
0	29·7346	12	0	29·7068	12	0	29·7117	11	0	29·7543	12
1	29·7639	13	1	29·8087	13	1	29·7950	12	1	29·8554	12
2	29·7163	11	2	29·7538	12	2	29·8737	11	2	29·8221	11
3	29·6756	13	3	29·7469	13	3	29·8767	12	3	29·9109	11
4	29·8339	10	4	29·8330	11	4	29·7699	11	4	29·9354	12
5	29·7327	12	5	29·7340	10	5	29·6253	10	5	29·8607	11
6	29·7298	11	6	(29·6470)	4	6	(29·7552)	5	6	29·8573	9
									7	29·6266	7

The mean of the numbers in each column respectively gives the mean height of the barometer when the

	in.
Moon's declination was North, and going South,	29·7410
Moon's declination was South, and going South,	29·7639
Moon's declination was South, and going North,	29·7754
Moon's declination was North, and going North,	29·8278

The numbers in brackets have not been used, in consequence of the few observations on which they depend.

Combining the mean height of the barometer when the Moon was in the equator, or at her extreme North or South declination, with the height of the barometer on the three preceding and three following days, we find that

	in.
The mean height of the barometer, when the Moon was at or near her greatest North declination,	was 29·7479
in or near the Equator, and moving Southward,	was 29·7589
at or near her greatest South declination,	was 29·7959
in or near the Equator, and moving Northward,	was 29·8021

From these numbers it seems that the mean height of the barometer is increased by the Moon's position in South declination, and this agrees with the results deduced from the observations of the years 1841 and 1842. In 1843 the mean height of the barometer appeared to be increased by the Moon's position when she was at or near the equator.

The following table is also based upon the daily results in 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 XXI.—Mean Daily Heights of the Barometer, with reference to the Moon's Parallax.

Days after Perigee.	Mean Height of the Barometer.	No. of Observations.	Days after Apogee.	Mean Height of the Barometer.	No. of Observations.
d	in.		d	in.	
0	29·805	13	0	29·830	14
1	29·791	13	1	29·856	10
2	29·718	10	2	29·663	12
3	29·756	11	3	29·666	12
4	29·743	13	4	29·752	10
5	29·789	13	5	29·752	13
6	29·762	10	6	29·697	12
7	29·758	13	7	29·661	14
8	29·741	14	8	29·709	10
9	29·838	10	9	29·734	13
10	29·881	11	10	29·793	12
11	29·921	12	11	29·734	10
12	29·849	10	12	29·926	9
13	29·830	6	13	29·811	5
14	29·900	5	14	29·864	5
15	(29·853)	3	15	(29·808)	1

The variation of the distance of the Moon seems to have but little effect: the numbers increase and decrease from day to day without any order. Dividing each of the above columns into two groups of seven days, and taking the mean of each group, we have the mean height of the barometer—

	in.
$3\frac{1}{2}$ days after the Moon was in Perigee,	29 ·7662
$10\frac{1}{2}$ days after the Moon was in Perigee,	29 ·8313
$3\frac{1}{2}$ days after the Moon was in Apogee,	29 ·7452
$10\frac{1}{2}$ days after the Moon was in Apogee,	29 ·7673
The mean of all between Perigee and Apogee, was	29 ·7987
,, Apogee and Perigee, was	29 ·7632

Combining the mean height of the barometer when the Moon was at or near her mean distance, and at her greatest and least distances, with the heights of the barometer on the three preceding and three following days, we find that

	in.
The mean height of the barometer when the Moon was at or near Perigee, was	29 ·8102
,, ,, at or near her mean distance and going from the Earth, was	29 ·7875
,, ,, at or near Apogee, was	29 ·7991
,, ,, at or near her mean distance and coming nearer to the Earth, was	29 ·7283

These numbers seem to indicate, that when the Moon is nearest to the Earth, the mean height of the barometer is the greatest, and that it is the least when the Moon is at the greatest distance from the Earth.

In deducing these results, the numbers in brackets have not been used, in consequence of the few observations on which they depend.

The following table is formed in the same manner as the last two :—

TABLE XXII.—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.	No. of Observations.	Days after the Moon enters First Quarter.	Mean Height of the Barometer.	No. of Observations.	Days after Full Moon.	Mean Height of the Barometer.	No. of Observations.	Days after the Moon enters Third Quarter.	Mean Height of the Barometer.	No. of Observations.
d	in.		d	in.		d	in.		d	in.	
0	29 ·838	10	0	29 ·750	11	0	29 ·868	11	0	29 ·860	10
1	29 ·784	12	1	29 ·783	11	1	29 ·757	12	1	29 ·773	13
2	29 ·777	11	2	29 ·865	12	2	29 ·846	10	2	29 ·752	10
3	29 ·634	11	3	29 ·770	10	3	29 ·818	11	3	29 ·829	12
4	29 ·612	10	4	29 ·784	11	4	29 ·837	10	4	29 ·790	11
5	29 ·818	12	5	29 ·884	13	5	29 ·799	13	5	29 ·726	10
6	29 ·835	10	6	29 ·892	9	6	29 ·649	9	6	29 ·734	11
7	(29 ·899)	4	7	(29 ·776)	4	7	(29 ·583)	4	7	29 ·828	7
									8	(29 ·915)	1

The mean of the numbers in each column, omitting those in brackets, on account of the small number of observations on which they depend, gives the mean height of the barometer—

	in.
When the Moon was between new and first quarter,	29 ·7569
first quarter and full,	29 ·8182
full and third quarter,	29 ·7963
third quarter and new,	29 ·7866

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 ·7602
at or near first quarter, was	29 ·7760
at or near full Moon,	29 ·8357
at or near third quarter, was	29 ·7857

It would seem, therefore, that the mean pressure was greatest when the Moon was about 14 days old.

Results of the Observations of the Thermometers.

TABLE XXIII.—Mean Daily Temperature, as deduced from the Mean of the Twelve 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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	37·3	31·0	46·4	48·7	52·8	56·0	61·0	54·5	*S*	53·9	45·9	*S*
2	30·6	31·6	41·6	51·9	53·5	*S*	58·4	56·3	59·6	58·4	42·9	36·0
3	29·9	33·7	*S*	52·8	51·6	54·0	58·9	57·7	60·9	59·0	*S*	35·2
4	45·2	*S*	38·1	53·1	51·7	59·5	60·0	*S*	64·0	53·6	41·0	34·3
5	50·6	30·8	34·4	Good Fri.	*S*	61·4	57·5	59·2	64·1	55·8	40·2	29·8
6	46·7	32·5	32·8	48·2	56·3	59·8	57·3	62·2	63·5	*S*	41·2	26·4
7	*S*	39·0	35·9	*S*	58·8	60·6	*S*	57·4	63·9	46·9	44·9	28·2
8	37·0	35·5	36·8	46·2	56·8	62·0	60·9	58·0	*S*	45·3	48·1	*S*
9	34·8	35·4	45·8	52·6	60·7	*S*	61·8	58·0	58·8	53·4	47·4	28·3
10	40·5	34·6	*S*	54·0	53·7	61·8	62·3	57·2	57·9	55·8	*S*	30·1
11	40·1	*S*	45·0	49·5	54·1	61·5	65·1	*S*	55·3	53·1	42·2	28·2
12	40·4	30·4	38·6	49·1	*S*	64·6	59·3	60·2	57·4	55·0	50·1	27·8
13	39·7	26·0	38·0	50·1	57·8	67·7	59·7	58·5	58·5	*S*	51·9	25·7
14	*S*	31·6	38·5	*S*	59·5	61·7	*S*	55·0	60·8	52·3	48·5	29·2
15	31·5	41·3	43·4	51·1	51·0	58·9	61·7	56·1	*S*	52·4	54·2	*S*
16	30·5	38·8	43·0	52·8	53·5	*S*	56·7	59·1	64·8	48·4	52·7	37·1
17	38·4	39·8	*S*	53·9	47·2	60·2	56·9	60·3	62·7	48·5	*S*	38·6
18	41·5	*S*	38·2	49·8	43·7	58·9	58·6	*S*	54·4	44·6	50·7	40·4
19	42·4	41·7	41·1	50·8	*S*	54·4	54·9	58·5	50·7	45·5	49·7	39·9
20	37·9	33·1	39·4	55·3	50·9	58·7	58·8	64·5	53·7	*S*	48·9	32·9
21	*S*	33·4	36·0	*S*	51·0	65·8	*S*	56·7	52·5	45·6	38·1	33·2
22	39·2	31·8	41·4	55·8	54·7	66·5	67·5	56·7	*S*	45·3	38·9	*S*
23	37·6	33·3	42·3	55·2	54·3	*S*	69·2	57·5	53·0	43·0	40·6	30·8
24	35 8	39·9	*S*	52·0	54·6	71·3	68·9	56·8	54·1	48·6	*S*	31·5
25	38·0	*S*	45·5	53·0	52·0	57·0	70·7	*S*	50·9	48·0	40·3	Christ. Day.
26	42·2	41·0	49·3	57·9	*S*	56·2	65·1	56·8	50·5	46·1	36·1	32·8
27	42·6	32·7	51·2	51·7	46·7	56·3	65·4	56·5	51·1	*S*	34·8	31·1
28	*S*	38·8	48·6	*S*	50·1	58·7	*S*	53·8	52·3	41·6	38·4	41·0
29	43·8	41·3	44·4	45·2	49·7	63·5	62·7	56·4	*S*	45·0	39·1	*S*
30	45·8		44·4	51·0	51·4	*S*	58·6	56·6	46·7	44·0	36·8	38·9
31	35·7		*S*		51·2		60·2	58·6		45·9		38·4

The letter *S* denotes that the day was Sunday.

TABLE XXIV.—Table exhibiting the Times at which Differences greater than 5° took place between the Mean Temperatures on Two consecutive Days, with the amount of the Differences, estimated positive when the Temperature on the Second Day is the higher.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		May.		June.	
	°		°		°		°		°		°
1 & 2	— 6·7	6 & 7	+ 6·5	8 & 9	+ 9·0	8 & 9	+ 6·4	9 & 10	— 7·0	3 & 4	+ 5·5
3 & 4	+ 15·3	13 & 14	+ 5·6	11 & 12	— 6·4	26 & 27	— 6·2	14 & 15	— 8·5	13 & 14	— 6·0
4 & 5	+ 5·4	14 & 15	+ 9·7	21 & 22	+ 5·4	29 & 30	+ 5·8	16 & 17	— 6·3	20 & 21	+ 7·1
9 & 10	+ 5·7	19 & 20	— 8·6							24 & 25	— 14·3
16 & 17	+ 7·9	23 & 24	+ 6·6								
30 & 31	— 10·1	26 & 27	— 8·3								
		27 & 28	+ 6·1								
		29 & 30	+ 5·1								

TABLE XXIV.—*continued.*

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
July.		August.		September.		October.		November.		December.	
	°		°		°		°		°		°
11 & 12	− 5·8	19 & 20	+ 6·0	17 & 18	− 8·3	3 & 4	− 5·4	11 & 12	+ 7·9	19 & 20	− 7·0
15 & 16	− 5·0	20 & 21	− 7·8	30 & 31	+ 7·2	8 & 9	+ 8·1	14 & 15	+ 5·7	27 & 28	+ 9·9
25 & 26	− 5·6					23 & 24	+ 5·6	20 & 21	− 10·8		
31 & 32	− 5·7										

The above table shews from observations on 312 days, taken consecutively, six and six together (excepting in four instances, in two of which two observations only were taken consecutively, and in the remaining ones three and five respectively were taken), that there were 43 cases out of 257 in which the difference in the mean temperature, between two consecutive days, exceeded 5°; of these there were

14 instances in which the difference exceeded	5°	and was less than	6°
10 ,,	,,	6	,,	7
7 ,,	,,	7	,,	8
5 ,,	,,	8	,,	9
3 ,,	,,	9	,,	10
2 ,,	,,	10	,,	11
1 ,,	,,	14	,,	15
1 ,,	,,	15	,,	16

TABLE XXV.—Mean of all the Two-hourly Readings of the Dry Thermometer, for those Days in each Month, in which (as deduced from the Mean of the Two-hourly Observations) the Thermometer was Highest or Lowest.

1844, Month.	Mean Daily Temperature of the Month.		Greatest Difference between the Highest and Lowest Mean Daily Temperature in the Month.	Day of the Month on which the Mean Temperature of the Day was	
	Highest.	Lowest.		Highest.	Lowest.
	°	°	°	d	d
January	50·6	29·9	20·7	5	3
February	41·7	26·0	15·7	19	13
March	51·2	32·8	18·4	27	6
April	57·9	45·2	12·7	26	29
May	60·7	43·7	17·0	9	18
June	71·3	54·0	17·3	24	3
July	70·7	54·9	15·8	25	19
August	64·5	53·8	10·7	20	28
September	64·8	46·7	18·1	16	30
October	59·0	41·6	17·4	3	28
November	54·2	34·8	19·4	15	27
December	41·0	25·7	15·3	28	13

The yearly mean daily range was 45°·6, being the difference between the lowest daily mean in the year, viz., 25°·7, on December 13, and the highest daily mean in the year, viz., 71°·3, on June 3.

TABLE XXVI.—The Highest and Lowest Readings of the Dry Thermometer in each Month, from the Two-hourly Observations.

1844, Month.	Dry Thermometer.		Range.	Day and Hour at which occurred	
	Greatest.	Least.		Greatest.	Least.
	°	°	°	d h	d h
January	52 ·8	18 ·6	34 ·2	5. 2	2. 18
February	48 ·3	21 ·2	27 ·1	{23. 14; 23. 16}	{13. 16; 13. 18}
March	57 ·6	24 ·3	33 ·3	29. 2	5. 20
April	74 ·6	34 ·0	40 ·6	26. 4	7. 16
May	74 ·6	34 ·6	40 ·0	14. 2	17. 16
June	83 ·3	43 ·6	39 ·7	24. 0	2. 16
July	85 ·1	47 ·2	37 ·9	25. 2	16. 16
August	72 ·5	43 ·1	29 ·4	20. 4	27. 18
September	73 ·1	35 ·2	37 ·9	2. 0	29. 18
October	65 ·9	31 ·5	34 ·4	3. 0	22. 20
November	57 ·4	28 ·8	28 ·6	16. 2	26. 18
December	46 ·0	21 ·6	24 ·4	28. 2	6. 14

TABLE XXVII.—The Highest and Lowest Readings shewn by the Self-Registering Maximum and Minimum Thermometer.

1844, Month.	Reading of the Thermometer in the Month.		Range of the Thermometer in the Month.	Day of the Month on which the Thermometer was	
	Highest.	Lowest.		Highest.	Lowest.
	°	°	°	d	d
January	53 ·7	18 ·8	34 ·9	6	3
February	50 ·4	20 ·0	30 ·4	24	14
March	60 ·2	24 ·1	36 ·1	30	6
April	74 ·9	33 ·4	41 ·5	27	8
May	77 ·4	33 ·9	43 ·5	15	18
June	87 ·6	43 ·4	44 ·2	25	3
July	87 ·4	47 ·1	40 ·3	26	17
August	75 ·4	42 ·8	32 ·6	21	28
September	78 ·0	34 ·8	43 ·2	2	30
October	67 ·4	30 ·8	36 ·6	4	23
November	58 ·1	27 ·4	30 ·7	17	27
December	49 ·3	21 ·1	28 ·2	30	7

The range of the thermometer was large in April, May, June, July, and September, being in each month greater than 40°. The yearly range was 68°·8, being the difference between the minimum reading on January 3 and the maximum reading on June 25.

TABLE XXVIII.—Mean Heights of the Dry Thermometer in each Month deduced from the Mean of all the Two-hourly Observations in each Month.

1844, Month.	Mean Temperature.	1844, Month.	Mean Temperature.
	°		°
January	39 ·1	July	61 ·4
February	35 ·2	August	57 ·7
March	41 ·5	September	56 ·9
April	51 ·7	October	49 ·5
May	52 ·9	November	44 ·0
June	60 ·7	December	33 ·0

The mean of all the monthly results is 48°·6.

TABLE XXIX.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	17 ·0	7 ·7	9 ·5	25 ·7	23 ·9	26 ·1	18 ·6	11 ·2	*S*	22 ·0	4 ·0	*S*
2	10 ·3	3 ·2	9 ·5	29 ·5	26 ·8	*S*	8 ·8	17 ·5	24 ·6	11 ·8	3 ·2	4 ·1
3	19 ·4	5 ·9	*S*	23 ·7	21 ·2	20 ·9	13 ·1	11 ·2	17 ·1	15 ·8	*S*	5 ·5
4	9 ·3	*S*	2 ·5	18 ·7	10 ·0	26 ·0	12 ·2	*S*	13 ·6	14 ·5	9 ·0	6 ·4
5	5 ·7	9 ·0	10 ·3	Good Friday.	*S*	24 ·7	8 ·9	17 ·5	9 ·4	15 ·3	6 ·8	9 ·1
6	7 ·4	11 ·3	15 ·3	17 ·0	23 ·3	13 ·2	12 ·3	13 ·6	15 ·7	*S*	6 ·2	10 ·3
7	*S*	8 ·8	7 ·9	*S*	25 ·9	15 ·1	*S*	14 ·1	14 ·5	15 ·2	8 ·6	11 ·5
8	8 ·0	9 ·1	12 ·3	26 ·0	22 ·2	21 ·8	16 ·1	16 ·2	*S*	21 ·3	9 ·0	*S*
9	3 ·7	7 ·8	17 ·4	27 ·3	26 ·1	*S*	10 ·5	17 ·5	6 ·9	14 ·0	5 ·5	4 ·2
10	8 ·9	6 ·2	*S*	23 ·9	12 ·8	20 ·1	17 ·9	19 ·5	7 ·8	12 ·2	*S*	1 ·2
11	7 ·0	*S*	14 ·4	18 ·2	20 ·0	27 ·0	13 ·6	*S*	19 ·8	14 ·5	6 ·5	4 ·9
12	5 ·1	7 ·6	10 ·8	17 ·9	*S*	29 ·5	10 ·6	9 ·6	13 ·7	14 ·7	11 ·3	5 ·1
13	6 ·2	8 ·0	9 ·8	8 ·7	25 ·4	26 ·0	12 ·6	8 ·6	13 ·3	*S*	8 ·2	4 ·1
14	*S*	18 ·9	8 ·5	*S*	28 ·4	17 ·2	*S*	5 ·6	15 ·2	8 ·3	9 ·0	3 ·8
15	6 ·2	9 ·1	8 ·6	16 ·2	17 ·7	17 ·1	21 ·2	11 ·0	*S*	12 ·9	3 ·7	*S*
16	8 ·1	11 ·5	11 ·6	13 ·6	17 ·9	*S*	16 ·5	17 ·3	7 ·7	10 ·3	8 ·6	1 ·5
17	9 ·1	13 ·0	*S*	25 ·1	19 ·6	24 ·3	18 ·4	11 ·8	12 ·4	12 ·9	*S*	5 ·3
18	3 ·5	*S*	12 ·2	15 ·3	18 ·4	14 ·7	16 ·2	*S*	11 ·7	12 ·0	3 ·5	3 ·3
19	7 ·3	12 ·9	9 ·7	24 ·0	*S*	4 ·8	14 5	21 ·6	18 ·6	15 ·2	2 ·1	4 ·9
20	8 ·8	8 ·3	16 ·8	15 ·7	17 ·2	21 ·2	22 ·9	16 ·0	12 ·7	*S*	6 ·5	5 ·8
21	*S*	9 ·9	15 ·6	*S*	15 ·6	22 ·6	*S*	11 ·8	15 ·1	6 ·1	14 ·0	3 ·8
22	9 ·5	6 ·9	17 ·0	21 ·6	19 ·6	22 ·7	25 ·6	10 ·0	*S*	13 ·2	10 ·0	*S*
23	8 ·2	23 ·4	12 ·2	18 ·2	19 ·0	*S*	26 ·5	20 ·4	8 ·4	21 ·7	7 ·4	3 ·1
24	9 ·9	16 ·1	*S*	20 ·8	21 ·7	23 ·8	19 ·7	17 ·8	15 ·9	2 ·8	*S*	2 ·6
25	12 ·0	*S*	10 ·8	28 ·1	21 ·0	12 ·1	28 ·8	*S*	19 ·0	5 ·5	4 ·6	Christ. Day.
26	5 ·5	14 ·0	11 ·3	33 ·0	*S*	15 ·2	12 ·0	9 ·6	21 ·6	7 ·0	10 ·2	3 ·7
27	11 ·3	8 ·8	9 ·3	19 ·8	8 ·1	9 ·5	14 ·6	12 ·1	23 ·0	*S*	14 ·3	5 ·0
28	*S*	11 ·3	14 ·6	*S*	14 ·4	16 ·0	*S*	22 ·4	24 ·5	11 ·7	10 ·5	12 ·5
29	11 ·7	15 ·0	23 ·9	17 ·3	9 ·1	26 ·6	12 ·5	25 ·4	*S*	10 ·2	3 ·0	*S*
30	10 ·9		12 ·9	18 ·7	4 ·0	*S*	18 ·2	20 ·7	21 ·9	4 ·1	6 ·3	6 ·5
31	5 ·3		*S*		12 ·4		13 ·4	25 ·4		10 ·8		7 ·3

The letter *S* denotes that the day was Sunday.

TABLE XXX.—Greatest and Least Daily Ranges of the Dry Thermometer in each Month, as deduced from the Two-hourly Observations.

1844, Month.	Daily Range of the Thermometer. Greatest.	Least.	Difference of Greatest and Least.	Day on which occurred Greatest.	Least.
	°	°	°	d	d
January	19·4	3·5	15·9	3	18
February	23·4	3·2	20·2	23	2
March	23·9	2·5	21·4	29	4
April	33·0	8·7	24·3	26	13
May	28·4	4·0	24·4	14	30
June	29·5	4·8	24·7	12	19
July	28·8	8·8	20·0	25	2
August	25·4	5·6	19·8	29 & 31	14
September	24·6	6·9	17·7	2	9
October	22·0	2·8	19·2	1	24
November	14·3	2·1	12·2	27	19
December	12·5	1·2	11·3	28	10

TABLE XXXI.—Mean Daily Range of the Dry Thermometer in each Month, in Quarterly Periods and for the Year.

1844, Month.	Mean Daily Range for each Month.	Mean Daily Range in Spring.	Summer.	Autumn.	Winter.	the Year.
	°	°	°	°	°	°
December	5·4					
January	8·7				8·2	
February	10·5					
March	12·1					
April	21·0	17·2				
May	18·6					13·6
June	19·9					
July	16·2		17·2			
August	15·4					
September	15·3					
October	12·4			11·7		
November	7·4					

TABLE XXXII.—Table exhibiting the Number of Cases in each Month, and during the Year, in which the Daily Range of the Dry Thermometer was within certain Limits.

The Daily Range was				Number of Cases in												Whole Number of Cases in the Year.
				Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	
	°		°													
Greater than	1	and less than	2												2	2
,,	2	,,	3			1							1	1	1	4
,,	3	,,	4	2	1									4	5	12
,,	4	,,	5					1	1				1	2	5	10
,,	5	,,	6	4	1						1		1	1	5	13
,,	6	,,	7	2	2							1	1	5	2	13
,,	7	,,	8	3	3	1						2	1	1	1	12
,,	8	,,	9	5	4	2	1	1		2	1	1	1	3		21
,,	9	,,	10	4	4	5		1	1		2	1		3	1	22
,,	10	,,	11	2		3		1		2	1		3	3	1	16
,,	11	,,	12	2	3	2					5	1	2	1	1	17
,,	12	,,	13	1	1	4		2	1	5	1	2	4		1	22
,,	13	,,	14		1		1		1	3	1	3	1			11
,,	14	,,	15		1	2		1	1	2	1	1	4	2		15
,,	15	,,	16		1	2	2	1	2			4	4			16
,,	16	,,	17		1	1	1		1	3	2					9
,,	17	,,	18	1		2	3	3	2	1	5	1				18
,,	18	,,	19		1		4	1		3		1				10
,,	19	,,	20	1			1	3		1	1	2				9
,,	20	,,	21				1	1	2		2					6
,,	21	,,	22				1	3	2	1	1	2	2			12
,,	22	,,	25		1	1	3	3	5	1	1	3	1			19
,,	25	,,	30				6	5	6	3	2					22
,,	30	,,	35				1									1

From the last column of this table we find, that on

28 days out of 312 the daily range of the thermometer was			less than	° 5		°
81	,,	,,	greater than	5	and less than	10
81	,,	,,	,,	10	,,	15
62	,,	,,	,,	15	,,	20
37	,,	,,	,,	20	,,	25
22	,,	,,	,,	25	,,	30
1	,,	,,	,,	30	,,	35

TABLE XXXIII.—The 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.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	38 ·1	33 ·7	38 ·3	44 ·9	46 ·2	53 ·0	55 ·5	52 ·7	52 ·5	46 ·1	42 ·8	31 ·7
16	37 ·9	33 ·2	38 ·1	43 ·1	45 ·1	52 ·1	54 ·6	51 ·8	51 ·8	46 ·0	42 ·6	31 ·7
18	37 ·8	32 ·4	37 ·5	42 ·1	45 ·1	53 ·1	55 ·0	51 ·1	51 ·3	45 ·2	42 ·3	31 ·9
20	37 ·6	32 ·2	38 ·4	47 ·0	50 ·4	58 ·6	59 ·5	55 ·3	52 ·8	45 ·8	42 ·1	32 ·1
22	38 ·0	34 ·5	42 ·0	53 ·6	55 ·9	63 ·4	64 ·4	60 ·5	57 ·9	49 ·8	43 ·3	32 ·8
0	40 ·5	37 ·5	45 ·4	58 ·7	59 ·4	67 ·4	67 ·4	63 ·0	62 ·3	53 ·3	45 ·7	34 ·4
2	41 ·9	39 ·1	47 ·0	61 ·9	61 ·6	70 ·4	68 ·0	64 ·4	64 ·5	54 ·9	46 ·9	34 ·9
4	41 ·5	39 ·2	46 ·6	61 ·4	61 ·4	69 ·3	68 ·1	63 ·7	64 ·1	54 ·5	46 ·4	34 ·5
6	40 ·2	36 ·5	44 ·1	58 ·5	58 ·6	66 ·7	66 ·3	62 ·2	60 ·7	51 ·8	45 ·2	33 ·8
8	39 ·2	34 ·9	41 ·6	52 ·7	53 ·9	62 ·1	62 ·1	58 ·4	56 ·5	49 ·8	44 ·2	33 ·4
10	38 ·4	34 ·5	40 ·1	49 ·2	49 ·8	57 ·2	58 ·7	55 ·8	54 ·7	49 ·0	43 ·4	32 ·9
12	38 ·2	33 ·8	39 3	47 ·1	47 ·9	54 ·7	57 ·3	54 ·2	53 ·3	47 ·7	43 ·0	32 ·3

The highest temperature has happened in every month nearer to the observation at 2^h than to any other, excepting in the months of February and July, in which months the temperature at 4^h is one-tenth of a degree higher than than at 2^h. The times when the lowest temperatures have taken place are more variable. In every month the temperature has passed uninterruptedly from one extreme to the other.

To ascertain the times and the amounts of the changes the next table is formed.

TABLE XXXIV.—Hours of Göttingen Mean Time (Astronomical Reckoning) at which the Greatest and Least Heights of the Dry Thermometer occur in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the actual Heights and the Amounts of the Changes.

1844, Month.	Even Hour at which the Mean Temperature was Highest.	Even Hour at which the Mean Temperature was Lowest.	Interval of Time between the Highest and Lowest.	Mean Temperature Highest.	Mean Temperature Lowest.	Difference.
	h	h	h	°	°	°
January	2	20	18	41 ·9	37 ·6	4 ·3
February	4	20	16	39 ·2	32 ·2	7 ·0
March	2	18	16	47 ·0	37 ·5	9 ·5
April	2	18	16	61 ·9	42 ·1	19 ·8
May	2	16 & 18	14 & 16	61 ·6	45 ·1	16 ·5
June	2	16	14	70 ·4	52 ·1	18 ·3
July	4	16	12	68 ·1	54 ·6	13 ·5
August	2	18	16	64 ·4	51 ·1	13 ·3
September	2	18	16	64 ·5	51 ·3	13 ·2
October	2	18	16	54 ·9	45 ·2	9 ·7
November	2	20	18	46 ·9	42 ·1	4 ·8
December	2	14 & 16	12 & 14	34 ·9	31 ·7	3 ·2

From this table it appears that the maximum temperature in the months of February and July was nearer to the observation at 4^h, and in the remaining ten months nearer to that at 2^h than to any other. In July, 1843, the maximum reading took place nearer to 4^h than to any other, and this instance with the above two are the only ones since the establishment of the Meteorological Observatory of such maxima taking place so far from the observation at 2^h. The minimum temperature has happened at about that hour of observation which was the nearest to the time of sun rising, except in December.

The numbers in the last column exhibit the greatest differences between the mean temperatures at any two even hours in the month. This difference was the largest in April, and the smallest in January and December.

The differences from April to September are very much larger than they are in the months immediately preceding April and following September.

In the following table Spring means the months of March, April, and May.
,, Summer ,, June, July, and August.
,, Autumn ,, September, October, and November.
,, Winter ,, January, February, and December.

TABLE XXXV.—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.	For the Year.
h	°	°	°	°	°
14	43 ·1	53 ·7	47 ·1	34 ·5	44 ·6
16	42 ·1	52 ·8	46 ·8	34 ·3	44 ·0
18	41 ·6	53 ·1	46 ·3	34 ·0	43 ·8
20	45 ·3	57 ·8	46 ·9	34 ·0	46 ·0
22	50 ·5	62 ·8	50 ·3	35 ·1	49 ·6
0	54 ·5	65 ·9	53 ·8	37 ·5	52 9
2	56 ·8	67 ·6	55 ·4	38 ·6	54 ·6
4	56 ·5	67 ·0	55 ·0	38 ·4	54 ·2
6	53 ·7	65 ·1	52 ·6	36 ·8	52 ·1
8	49 ·4	60 ·9	50 ·2	35 ·8	49 ·0
10	46 ·4	57 ·2	49 ·0	35 ·3	47 ·0
12	44 ·8	55 ·4	48 ·0	34 ·8	45 ·8

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 Spring, at 16^h in Summer, at 18^h in Autumn, at 18^h and at 20^h in Winter, and at 18^h for the year.

The difference between the maximum and minimum temperature in		Spring was	$15^\circ \cdot 2$
,,	,,	Summer was	14 ·8
,,	,,	Autumn was	9 ·1
,,	,,	Winter was	4 ·6
,,	,,	for the Year was	10 ·8

The mean temperature for	Spring was	$48^\circ \cdot 7$
,,	Summer was	59 ·9
,,	Autumn was	50 ·1
,,	Winter was	35 ·8
,,	the Year was	48 ·6

By taking the difference between the mean temperature for the year, and the mean temperature at each even hour for the year, as contained in the last column of the above table, the following results are deduced :—

The mean temperature at	14^h	was below the mean temperature of the year by	$4^\circ \cdot 0$
,,	16	,,	4 ·6
,,	18	,,	4 ·8
,,	20	,,	2 ·6
,,	22	was above the mean temperature of the year by	1 ·0
,,	0	,,	4 ·3
,,	2	,,	6 ·0
,,	4	,,	5 ·6
,,	6	,,	3 ·5
,,	8	,,	0 ·4
,,	10	was below the mean temperature of the year by	1 ·6
,,	12	,,	2 ·8

The mean temperature from all the observations at 8^h is higher by $0^\circ \cdot 4$ than the mean of the year; in the years 1842 and 1843 it was $0^\circ \cdot 2$ higher in each year, and in 1841 it was the same as the mean of the year. If, therefore, this element were to be determined by an isolated observation daily, the hour indicated is 8^h, and the mean correction from four years' observations is $0^\circ \cdot 2$, to be subtracted. If the mean temperature be determined from two observations taken daily, the hours, as shewn above, are 14^h and 0^h, the means requiring to be diminished by $0^\circ \cdot 15$; or 16^h and 0^h, the mean requiring to be increased by $0^\circ \cdot 15$; or 18^h and 0^h, the mean requiring to be increased by $0^\circ \cdot 25$; or 6^h and 12^h, the mean requiring to be diminished by $0^\circ \cdot 35$; from four years' observations the above correction to the means of each pair of hours is insensible. The same element as deduced from 22^h and 10^h, as exhibited above, is $0^\circ \cdot 30$ too low; in 1841 it was $0^\circ \cdot 25$ too low; in 1842 it was $0^\circ \cdot 20$ too low; and in 1843 it was $0^\circ \cdot 25$ too low; therefore, from the four years' observations, the correction to the mean of observations taken at 22^h and 10^h is $0^\circ \cdot 25$ to be added.

In the following table the mean temperature is deduced from the maximum and minimum readings of the self-registering thermometer by taking a simple arithmetical mean. The mean maximum and minimum readings are found from the daily maximum and minimum readings, by taking the mean of each month :—

TABLE XXXVI.—Mean Temperature of each Month, deduced from the Maximum and Minimum Self-Registering Thermometer.

1844, Month.	Mean of all the Maximum Readings in each Month.	Mean of all the Minimum Readings in each Month.	Mean Temperature deduced from Self-Registering Thermometer.	1844, Month.	Mean of all the Maximum Readings in each Month.	Mean of all the Minimum Readings in each Month.	Mean Temperature deduced from Self-Registering Thermometer.
	°	°	°		°	°	°
January	43 ·9	34 ·1	39 ·0	July	72 ·8	54 ·1	63 ·5
February	41 ·6	30 ·9	36 ·3	August	67 ·9	50 ·3	59 ·1
March	48 ·9	35 ·7	42 ·3	September	67 ·5	50 ·2	58 ·9
April	63 ·6	41 ·8	52 ·7	October	56 ·7	44 ·4	50 ·6
May	65 ·9	45 ·1	55 ·5	November	48 ·1	39 ·6	43 ·9
June	74 ·1	51 ·6	62 ·9	December	36 ·8	30 ·4	33 ·6

And the mean of the Monthly Results is $49^\circ \cdot 9$.

TABLE XXXVII.—Approximations to the Mean Temperature of each Month from various combinations.

1844, Month.	Mean Temperature in each Month, obtained						True Mean for each Month.	Errors of the Mean Temperature in each Month, obtained					
	From Self-Registering Thermometer.	from combining observations taken at						From Self-Registering Thermometer.	from observations taken at				
		16ʰ & 0ʰ.	18ʰ & 0ʰ.	22ʰ & 10ʰ.	6ʰ & 12ʰ	8ʰ			16ʰ & 0ʰ.	18ʰ & 0ʰ.	22ʰ & 10ʰ.	6ʰ & 12ʰ.	8ʰ.
	°	°	°	°	°	°	°	°	°	°	°	°	°
January	39 ·0	39 ·2	39 ·2	38 ·2	39 ·2	39 ·2	39 ·1	− 0 ·1	+0 ·1	+0 ·1	−0 ·9	+0 ·1	+0 ·1
February	36 ·3	35 ·4	35 ·0	34 ·5	35 ·2	34 ·9	35 ·2	+ 1 ·1	+0 ·2	−0 ·2	−0 ·7	0 ·0	−0 ·3
March	42 ·3	41 ·8	41 ·5	41 ·1	41 ·7	41 ·6	41 ·5	+ 0 ·8	+0 ·3	0 ·0	−0 ·4	+0 ·2	+0 ·1
April	52 ·7	50 ·9	50 ·4	51 ·4	52 ·8	52 ·7	51 ·7	+ 1 ·0	−0 ·8	−1 ·3	−0 ·3	+1 ·1	+1 ·0
May	55 ·5	52 ·3	52 ·3	52 ·9	53 ·3	53 ·9	52 ·9	+ 2 ·6	−0 ·6	−0 ·6	0 ·0	+0 ·4	+1 ·0
June	62 ·9	59 ·8	60 ·3	60 ·3	60 ·7	62 ·1	60 ·7	+ 2 ·2	−0 ·9	−0 ·4	−0 ·4	0 ·0	+1 ·4
July	63 ·5	61 ·0	61 ·2	61 ·6	61 ·8	62 ·1	61 ·4	+ 2 ·1	−0 ·4	−0 ·2	+0 ·2	+0 ·4	+0 ·7
August	59 ·1	57 ·4	57 ·1	58 ·2	58 ·2	58 ·4	57 ·7	+ 1 ·3	−0 ·3	−0 ·6	+0 ·5	+0 ·5	+0 ·7
September	58 ·9	57 ·1	56 ·8	56 ·3	57 ·0	56 ·5	56 ·9	+ 2 ·0	+0 ·2	−0 ·1	−0 ·6	+0 ·1	−0 ·4
October	50 ·6	49 ·7	49 ·3	49 ·4	49 ·8	49 ·8	49 ·5	+ 1 ·1	+0 ·2	−0 ·2	−0 ·1	+0 ·3	+0 ·3
November	43 ·9	44 ·2	44 ·0	43 ·4	44 ·1	44 ·2	44 ·0	− 0 ·1	+0 ·2	0 ·0	−0 ·6	+0 ·1	+0 ·2
December	33 ·6	33 ·1	33 ·2	32 ·9	33 ·1	33 ·4	33 ·0	+ 0 ·6	+0 ·1	+0 ·2	−0 ·1	+0 ·1	+0 ·4

By taking the means of the errors in each column we obtain :—

That the mean temperature of the year, derived from the self-registering thermometer, is too high by 1°·2

,,	obtained from observations	at 16ʰ and 0ʰ	is too low by	0 ·14
,,	,,	at 18 and 0	is too low by	0 ·28
,,	,,	at 22 and 10	is too low by	0 ·28
,,	,,	at 6 and 12	is too high by	0 ·28
,,	,,	at 8	is too high by	0 ·43

And thus it would appear, that the result obtained from the self-registering thermometer departs more from the true mean than that obtained by any of the above combinations, the approximate mean of its departure from the four years' observations being 1°·1.

The mean yearly temperature deduced from the four years' observations	at 16ʰ and 0ʰ	is the true mean	
,,	at 18 and 0	is the true mean	
,,	at 22 and 10	is too low by	0°·25
,,	at 6 and 12	is too high by	0 ·08
,,	at 8	is too high by	0 ·23

TABLE XXXVIII.—Excess of the Monthly Mean Temperature at each Even Hour, above the Mean Temperature for the Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	− 1 ·0	− 1 ·5	− 3 ·2	− 6 ·8	− 6 ·7	− 7 ·7	− 5 ·9	− 5 ·0	− 4 ·4	− 3 ·4	− 1 ·2	− 1 ·3
16	− 1 ·2	− 2 ·0	− 3 ·4	− 8 ·6	− 7 ·8	− 8 ·6	− 6 ·8	− 5 ·9	− 5 ·1	− 3 ·5	− 1 ·4	− 1 ·3
18	− 1 ·3	− 2 ·8	− 4 ·0	− 9 ·6	− 7 ·8	− 7 ·6	− 6 ·4	− 6 ·6	− 5 ·6	− 4 ·3	− 1 ·7	− 1 ·1
20	− 1 ·5	− 3 ·0	− 3 ·1	− 4 ·7	− 2 ·5	− 2 ·1	− 1 ·9	− 2 ·4	− 4 ·1	− 3 ·7	− 1 ·9	− 0 ·9
22	− 1 ·1	− 0 ·7	+ 0 ·5	+ 1 ·9	+ 3 ·0	+ 2 ·7	+ 3 ·0	+ 2 ·8	+ 1 ·0	+ 0 ·3	− 0 ·7	− 0 ·2
0	+ 1 ·4	+ 2 ·3	+ 3 ·9	+ 7 ·0	+ 6 ·5	+ 6 ·7	+ 6 ·0	+ 5 ·3	+ 5 ·4	+ 3 ·8	+ 1 ·7	+ 1 ·4
2	+ 2 ·8	+ 3 ·9	+ 5 ·5	+10 ·2	+ 8 ·7	+ 9 ·7	+ 6 ·6	+ 6 ·7	+ 7 ·6	+ 5 ·4	+ 2 ·9	+ 1 ·9
4	+ 2 ·4	+ 4 ·0	+ 5 ·1	+ 9 ·7	+ 8 ·5	+ 8 ·6	+ 6 ·7	+ 6 ·0	+ 7 ·2	+ 5 ·0	+ 2 ·4	+ 1 ·5
6	+ 1 ·1	+ 1 ·3	+ 2 ·6	+ 6 ·8	+ 5 ·7	+ 6 ·0	+ 4 ·9	+ 4 ·5	+ 3 ·8	+ 2 ·3	+ 1 ·2	+ 0 ·8
8	+ 0 ·1	− 0 ·3	+ 0 ·1	+ 1 ·0	+ 1 ·0	+ 1 ·4	+ 0 ·7	+ 0 ·7	− 0 ·4	+ 0 ·3	+ 0 ·2	+ 0 ·4
10	− 0 ·7	− 0 ·7	− 1 ·4	− 2 ·5	− 3 ·1	− 3 ·5	− 2 ·7	− 1 ·9	− 2 ·2	− 0 ·5	− 0 ·6	− 0 ·1
12	− 0 ·9	− 1 ·4	− 2 ·2	− 4 ·6	− 5 ·0	− 6 ·0	− 4 ·1	− 3 ·5	− 3 ·6	− 1 ·8	− 1 ·0	− 0 ·7

TABLE XXXIX.—Mean Temperature at each Even Hour during each Month (Table XXXIII.), diminished by the Mean Temperature for the Month (Table XXVIII.), and by the Mean Diurnal Change at each Hour (Table XXXV. and following Numbers).

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	+ 3·0	+ 2·5	+ 0·8	− 2·8	− 2·7	− 3·7	− 1·9	− 1·0	− 0·4	+ 0·6	+ 2·8	+ 2·7
16	+ 3·4	+ 2·6	+ 1·2	− 4·0	− 3·2	− 4·0	− 2·2	− 1·3	− 0·5	+ 1·1	+ 3·2	+ 3·3
18	+ 3·5	+ 2·0	+ 0·8	− 4·8	− 3·0	− 2·8	− 1·6	− 1·8	− 0·8	+ 0·5	+ 3·1	+ 3·7
20	+ 1·1	− 0·4	− 0·5	− 2·1	+ 0·1	+ 0·5	+ 0·7	+ 0·2	− 1·5	− 1·1	+ 0·7	+ 1·7
22	− 2·1	− 1·7	− 0·5	+ 0·9	+ 2·0	+ 1·7	+ 2·0	+ 1·8	0·0	− 0·7	− 1·7	− 1·2
0	− 2·9	− 2·0	− 0·4	+ 2·7	+ 2·2	+ 2·4	+ 1·7	+ 1·0	+ 1·1	− 0·5	− 2·6	− 2·9
2	− 3·2	− 2·1	− 0·5	+ 4·2	+ 2·7	+ 3·7	+ 0·6	+ 0·7	+ 1·6	− 0·6	− 3·1	− 4·1
4	− 3·2	− 1·6	− 0·5	+ 4·1	+ 2·9	+ 3·0	+ 1·1	+ 0·4	+ 1·6	− 0·6	− 3·2	− 4·1
6	− 2·4	− 2·2	− 0·9	+ 3·3	+ 2·2	+ 2·5	+ 1·4	+ 1·0	+ 0·3	− 1·2	− 2·3	− 2·7
8	− 0·3	− 0·7	− 0·3	+ 0·6	+ 0·6	+ 1·0	+ 0·3	+ 0·3	− 0·8	− 0·1	− 0·2	0·0
10	+ 0·9	+ 0·9	+ 0·2	− 0·9	− 1·5	− 1·9	− 1·1	− 0·3	− 0·6	+ 1·1	+ 1·0	+ 1·5
12	+ 1·9	+ 1·4	+ 0·6	− 1·8	− 2·2	− 3·2	− 1·3	− 0·7	− 0·8	+ 1·0	+ 1·8	+ 2·1

From the circumstance of the order of the signs contained in this table being different at different times of the year, it is shewn that the daily change of temperature is different at different times of the year.

By taking the sum of all the numbers hour by hour, without regard to the signs, the following table is formed, in which those hours which have the smallest numbers opposite to them will shew the hours at which the relation of the temperature to the mean daily temperature is the most uniform throughout the year, and the largest numbers will shew those hours subject to the greatest irregularity.

TABLE XL.—Hourly Sums of the Changes of Diurnal Inequality for different Months.

Hour, Göttingen Mean Time.	Sum of the Differences.	Hour, Göttingen Mean Time.	Sum of the Differences.
h	°	h	°
14	24·9	2	27·1
16	30·0	4	26·3
18	28·4	6	22·4
20	10·6	8	5·2
22	16·3	10	11·9
0	22·4	12	18·8

These numbers shew that at 20^h and 8^h, the relation of the temperature to the mean temperature of the day was subject to less irregularity than at any other hours. Those at 16^h, 18^h, 2^h, and 4^h, are the most irregular. To ascertain the months subject to the greatest and the least irregularity, the sums of all the numbers in each Month (Table XXXIX.) are taken, without regard to their signs, and the following table is formed:—

TABLE XLI.—Monthly Sums of the Changes of Diurnal Inequality for different Hours.

1844, Month.	Sum of the Differences.	1844, Month.	Sum of the Differences.
	°		°
January	27·9	July	15·9
February	20·1	August	10·5
March	7·2	September	10·0
April	32·2	October	9·1
May	25·3	November	25·7
June	30·4	December	30·0

These numbers indicate that March and October were the most uniform; and that January, April, June, and December were subject to the greatest irregularity, or departed the most from the mean of the year.

TABLE XLII.—Abstract of the Results of the Observations of Radiation.

1844, Month.	Monthly Mean of the Observations of the Thermometer whose Bulb is in the full Rays of the Sun.	Monthly Mean of the Observations of the Thermometer whose Bulb is in the Focus of a Metallic Reflector exposed to the Sky.	1844, Month.	Monthly Mean of the Observations of the Thermometer whose Bulb is in the full Rays of the Sun.	Monthly Mean of the Observations of the Thermometer whose Bulb is in the Focus of a Metallic Reflector exposed to the Sky.
	°	°		°	°
January	46·7	30·9	July	94·1	48·1
February	49·1	26·6	August	87·2	43·6
March	61·7	31·5	September	87·0	41·0
April	84·2	35·0	October	68·3	39·3
May	87·5	38·4	November	50·1	33·9
June	95·0	45·6	December	38·0	25·5

The mean of all the observations of the thermometer, whose bulb was in the full rays of the Sun, is 70°·7; and the mean of all the observations of the other thermometer is 36°·6. The mean for the same time of all the observations of the maximum temperature is 57°·3, and that for the minimum temperature is 42°·4.

Abstracts of the Results of the Temperature of Evaporation.

TABLE XLIII.—Mean Daily Temperature of Evaporation, as deduced from the Mean of the Twelve 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 Difference 0°·2, between the Readings of the Dry and Wet Thermometers, when under the same circumstances.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	36·6	29·2	43·7	45·6	47·3	50·8	56·9	51·5	*S*	50·4	44·4	*S*
2	29·6	30·8	39·1	47·1	48·2	*S*	56·4	52·7	56·2	53·9	42·2	34·8
3	28·8	32·3	*S*	47·2	46·3	48·6	55·9	54·6	58·3	55·9	*S*	33·2
4	44·7	*S*	37·1	48·0	49·7	53·0	57·8	*S*	62·0	50·2	39·6	32·5
5	49·8	30·0	32·5	Good Friday.	*S*	55·3	56·2	56·8	62·1	53·5	39·4	28·4
6	45·0	31·6	30·7	44·6	51·9	56·2	54·9	58·8	60·8	*S*	40·2	25·7
7	*S*	38·0	33·5	*S*	52·7	55·9	*S*	53·7	62·0	44·6	44·0	27·3
8	36·0	33·9	34·3	42·3	52·7	55·4	56·1	53·5	*S*	42·4	46·8	*S*
9	32·5	34·2	43·5	46·5	54·4	*S*	55·7	53·2	57·8	50·3	46·4	27·4
10	39·7	33·3	*S*	48·2	50·1	54·9	57·1	53·3	55·7	53·2	*S*	29·1
11	39·6	*S*	43·0	44·6	49·8	54·2	58·6	*S*	52·5	50·6	39·6	27·2
12	39·9	29·7	35·7	45·3	*S*	55·6	55·4	58·5	54·6	53·5	49·2	26·5
13	38·7	26·1	35·1	47·5	53·5	60·3	57·4	57·3	54·6	*S*	51·5	24·6
14	*S*	30·4	37·6	*S*	55·3	54·2	*S*	53·9	57·3	51·0	48·1	28·5
15	30·4	40·3	41·1	48·9	46·6	50·9	55·5	53·8	*S*	50·4	52·9	*S*
16	29·6	36·9	41·3	50·9	48·9	*S*	53·3	55·4	62·2	47·5	52·0	36·5
17	37·3	38·2	*S*	50·2	44·4	53·1	53·8	56·0	61·1	46·2	*S*	38·4
18	39·8	*S*	35·4	46·3	40·2	54·7	53·9	*S*	53·2	43·0	49·6	40·2
19	40·1	39·9	38·5	45·7	*S*	51·7	51·7	53·3	49·1	43·3	48·4	38·9
20	35·1	30·4	36·8	51·8	45·8	55·0	54·3	60·0	51·8	*S*	47·9	30·6
21	*S*	32·4	32·4	*S*	49·3	59·0	*S*	52·5	50·8	44·7	37·8	31·2
22	38·5	30·7	39·0	51·3	52·2	59·0	61·5	53·6	*S*	44·2	38·2	*S*
23	36·3	31·8	39·9	50·4	51·7	*S*	62·4	53·7	50·4	42·0	39·1	29·4
24	34·1	38·1	*S*	47·2	49·9	63·6	64·3	53·8	51·0	47·9	*S*	30·4
25	36·8	*S*	43·9	48·0	46·8	55·7	64·7	*S*	48·9	47·0	38·3	Christ. Day.
26	39·9	39·4	45·8	51·2	*S*	52·8	61·2	52·8	49·4	45·2	34·7	32·4
27	41·1	30·5	49·5	47·5	44·2	53·0	59·9	51·6	48·5	*S*	33·8	30·9
28	*S*	36·2	45·2	*S*	45·7	53·8	*S*	50·9	49·6	40·2	37·2	40·3
29	42·0	39·7	41·9	42·2	47·2	57·6	56·8	53·0	*S*	42·6	37·9	*S*
30	42·2		41·4	46·1	48·3	*S*	55·2	54·1	44·0	43·2	34·8	38·4
31	33·8		*S*		48·2		55·8	55·6		44·5		37·8

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 XXIII., the next table is formed.

TABLE XLIV.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	0·7	1·8	2·7	3·1	5·5	5·2	4·1	3·0	*S*	3·5	1·5	*S*
2	1·0	0·8	2·5	4·8	5·3	*S*	2·0	3·6	3·4	4·5	0·7	1·2
3	1·1	1·4	*S*	5·6	5·3	5·4	3·0	3·1	2·6	3·1	*S*	2·0
4	0·5	*S*	1·0	5·1	2·0	6·5	2·2	*S*	2·0	3·4	1·4	1·8
5	0·8	0·8	1·9	Good Friday.	*S*	6·1	1·3	2·4	2·0	2·3	0·8	1·4
6	1·7	0·9	2·1	3·6	4·9	3·6	2·4	3·4	2·7	*S*	1·0	0·7
7	*S*	1·0	2·4	*S*	6·1	4·7	*S*	3·7	1·9	2·3	0·9	0·9
8	1·0	1·6	2·5	3·9	4·1	6·6	4·8	4·5	*S*	2·9	1·3	*S*
9	2·3	1·2	2·3	6·5	6·3	*S*	6·1	4·8	1·0	3·1	1·0	0·9
10	0·8	1·3	*S*	5·8	3·6	6·9	5·2	3·9	2·2	2·6	*S*	1·0
11	0·9	*S*	2·0	4·9	4·3	7·3	6·5	*S*	2·8	2·5	2·6	1·0
12	0·5	0·7	2·9	3·8	*S*	9·0	3·9	1·7	2·8	1·5	0·9	1·3
13	1·0	− 0·1	2·9	2·6	4·3	7·4	2·3	1·2	3·9	*S*	0·4	1·1
14	*S*	1·2	0·9	*S*	4·2	7·5	*S*	1·1	3·5	1·3	0·4	0·7
15	1·1	1·0	2·3	2·2	4·4	8·0	6·2	2·3	*S*	2·0	1·3	*S*
16	0·9	1·9	1·7	1·9	4·6	*S*	3·4	3·7	2·6	0·9	0·7	0·6
17	1·1	1·6	*S*	3·7	2·8	7·1	3·1	4·3	1·6	2·3	*S*	0·2
18	1·7	*S*	2·8	3·5	3·5	4·2	4·7	*S*	1·2	1·6	1·1	0·2
19	2·3	1·8	2·6	5·1	*S*	2·7	3·2	5·2	1·6	2·2	1·3	1·0
20	2·8	2·7	2·6	3·5	5·1	3·7	4·5	4·5	1·9	*S*	1·0	2·3
21	*S*	1·0	3·6	*S*	1·7	6·8	*S*	4·2	1·7	0·9	0·3	2·0
22	0·7	1·1	2·4	4·5	2·5	7·5	6·0	3·1	*S*	1·1	0·7	*S*
23	1·3	1·5	2·4	4·8	2·6	*S*	6·8	3·8	2·6	1·0	1·5	1·4
24	1·7	1·8	*S*	4·8	4·7	7·7	4·6	3·0	3·1	0·7	*S*	1·1
25	1·2	*S*	1·6	5·0	5·2	1·3	6·0	*S*	2·0	1·0	2·0	Christ. Day.
26	2·3	1·6	3·5	6·7	*S*	3·4	3·9	4·0	1·1	0·9	1·4	0·4
27	1·5	2·2	1·7	4·2	2·5	3·3	5·5	4·9	2·6	*S*	1·0	0·2
28	*S*	2·6	3·4	*S*	4·4	4·9	*S*	2·9	2·7	1·4	1·2	0·7
29	1·8	1·6	2·5	3·0	2·5	5·9	5·9	3·4	*S*	2·4	1·2	*S*
30	3·6		3·0	4·9	3·1	*S*	3·4	2·5	2·7	0·8	2·0	0·5
31	1·9		*S*		3·0		4·4	3·0		1·4		0·6

The letter *S* denotes that the day was Sunday.

The number ranging with February 13ᵈ has a negative sign prefixed, as the mean reading of the Wet-bulb Thermometer was higher on that day than the mean reading of the Dry-bulb Thermometer. It is considered that the air was saturated with moisture during that day, and all the results dependent on it are so treated in the subsequent calculations.

The greatest observed excess of the reading of the Dry-bulb Thermometer above that of the Wet-bulb Thermometer,

In January, was	6°·1	on the	30th day; and the greatest mean daily excess was	3°·6	on the	30th day.
February	5·0	,,	27th	,,	2·7	,,	20th day.
March	7·4	,,	29th	,,	3·6	,,	21st day.
April	15·5	,,	26th	,,	6·7	,,	26th day.
May	13·2	,,	7th	,,	6·3	,,	9th day.
June	15·3	,,	5th	,,	9·0	,,	12th day.
July	13·3	,,	23rd	,,	6·8	,,	23rd day.
August	10·3	,,	19th	,,	5·2	,,	19th day.
September	9·4	,,	2nd	,,	3·9	,,	13th day.
October	8·7	,,	2nd	,,	4·5	,,	2nd day.
November	5·7	,,	11th	,,	2·6	,,	11th day.
December	3·5	,,	20th	,,	2·3	,,	20th day.

The next table contains the sums of the excesses of the temperature of the air above the temperature of evaporation and of the dew-point, in each month. All the observations of the temperature of the dew-point, at times when the temperature of the air has been less than 35°, have been collected between 1841, March 1, and the end of March, 1845, and divided into groups for every degree of air-temperature, and the corresponding mean excesses of the air-temparature above those of evaporation and of the dew-point have been deduced. All the observations at times when the air-temperature has been at least 35° during the year 1844, have been divided into groups of 5° of air-temperature. The yearly sums of these numbers have been taken and combined with similar results deduced from the observations of 1841, 1842, and 1843, and the mean excess of the air-temperature above those of evaporation and dew-point have been deduced.

TABLE XLV.—Excess of the Air Temperature above Evaporation Temperature and above the Temperature of the Dew-Point, for all Temperatures included between 20° and 90°, divided into Groups for every Degree of Air Temperature between 20° and 35°, from all the Observations taken between 1841, March 1, and 1845, March 31; and separated into Groups of 5° for all Temperatures included between 35° and 90°, from the Observations of 1844, combined with those of the Three preceding Years, which were separated into Groups of 5°, between the same Limits of Temperature.

1841 to 1845, Month.	Between what Temperatures of the Air. Below 20°			20° to 21°			21° to 22°			22° to 23°			23° to 24°		
	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.
		°	°		°	°		°	°		°	°		°	°
January															
February	2	0·9	7·5	1	0·6	4·8				1	0·5	4·2	6	3·3	28·7
March	2	0·5	4·4	1	0·3	2·7	5	2·6	23·3	5	3·2	27·2	4	2·7	21·0
April															
May															
June															
July															
August															
September															
October															
November															
December													2	1·2	9·6
Sums.....	4	1·4	11·9	2	0·9	7·5	5	2·6	23·3	6	3·7	31·4	12	7·2	59·3
Means....		0·35	2·98		0·45	3·75		0·52	4·66		0·62	5·23		0·60	4·94

TABLE XLV.—*continued.*

1841 to 1845, Month.	Between what Temperatures of the Air.														
	24° to 25°			25° to 26°			26° to 27°			27° to 28°			28° to 29°		
	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.
		°	°		°	°		°	°		°	°		°	°
January	1	0·4	3·6	1	0·3	2·5	3	1·8	7·7	2	1·7	10·0	10	5·5	35·1
February	7	5·4	42·8	6	4·5	28·5	11	7·7	46·6	11	10·8	72·3	8	4·7	26·5
March	6	2·9	25·4	5	4·1	27·9	10	8·4	42·8	8	6·5	38·4	8	8·4	39·3
April													1	0·1	0·4
May															
June															
July															
August															
September															
October															
November													2	1·7	4·8
December	9	7·1	44·2	10	8·1	50·1	10	8·0	46·9	17	10·5	59·9	16	11·6	75·1
Sums.....	23	15·8	116·0	22	17·0	109·0	34	25·9	144·0	38	29·5	180·6	45	32·0	181·2
Means....		0·69	5·04		0·77	4·95		0·77	4·24		0·78	4·75		0·71	4·03

TABLE XLV—*continued.*

Between what Temperatures of the Air.

1841 to 1845, Month.	29° to 30°			30° to 31°			31° to 32°			32° to 33°			33° to 34°			34° to 35°		
	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.
		°	°		°	°		°	°		°	°		°	°		°	°
January	10	9·5	41·6	14	12·5	40·4	18	11·6	38·2	30	27·7	81·6	27	34·2	84·8	25	21·0	57·9
February	6	5·9	31·1	14	7·5	48·0	14	8·4	41·8	24	20·2	63·3	18	26·2	87·1	37	44·4	115·7
March	6	5·1	24·9	2	0·2	2·8	11	9·4	26·2	14	12·0	45·1	6	8·8	21·2	9	13·6	33·1
April				1	0·3	1·2							3	2·2	8·0	8	8·9	24·9
May																		
June																		
July																		
August																		
September																		
October	2	0·5	3·5	3	1·4	3·9				1	0·5	1·7	4	3·2	8·9	1	0·2	1·0
November				3	0·6	2·2				5	4·0	12·5	9	10·0	28·2	10	9·2	22·4
December	24	24·9	126·5	27	23·0	108·8	16	13·9	58·3	14	13·3	39·6	12	10·4	30·8	5	5·3	11·4
Sums....	48	45·9	227·6	64	45·5	207·3	59	43·1	164·5	88	77·1	243·8	79	95·0	269·0	95	102·6	266·4
Means..		0·96	4·74		0·71	3·24		0·73	2·79		0·88	2·77		1·20	3·41		1·08	2·81

TABLE XLV.—*continued.*

1844, Month.	Between what Temperatures of the Air.														
	35° to 40°			40° to 45°			45° to 50°			50° to 55°			55° to 60°		
	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.
		°	°		°	°		°	°		°	°		°	°
January	25	35·5	76·9	25	28·7	61·7	14	32·3	68·4	3	2·2	5·3	35	70·5	161·4
February	25	48·1	122·2	16	36·8	79·8	5	13·5	28·6						
March	35	70·5	161·4	26	55·2	119·1	21	54·7	120·0	7	25·3	56·5	3	17·7	34·9
April	2	2·0	4·6	16	24·1	52·6	21	46·9	102·3	22	84·8	189·7	15	89·1	188·7
May				11	14·7	30·1	29	66·6	165·2	21	55·8	121·3	21	105·7	237·4
June				1	1·6	3·6	8	10·1	22·1	15	27·0	58·1	27	95·3	186·9
July							5	5·5	12·9	14	14·7	35·8	24	49·6	95·3
August							6	3·4	9·0	17	30·8	55·5	32	85·0	162·1
September	1	0·6	2·2	1	0·1	0·7	2	3·2	5·1	14	18·1	42·0	23	51·3	99·5
October	4	1·9	4·8	11	7·4	14·2	25	32·5	55·2	19	47·9	92·5	14	44·2	66·2
November	12	15·2	33·6	10	16·9	32·6	4	3·1	5·7	7	7·9	14·0			
December	15	19·8	44·4	4	3·6	6·5									
Sums.......	119	193·6	450·1	121	189·1	400·9	140	271·8	594·5	139	314·5	670·7	194	608·4	1232·4
Sums of 1841, 1842, and 1843.	311	370·0	928·5	491	641·7	1486·1	572	831·3	1779·4	561	979·7	2006·4	476	1274·2	2276·7
Whole Sums	430	563·6	1378·6	612	830·8	1887·0	712	1103·1	2373·9	700	1294·2	2677·1	670	1882·6	3509·1
Means......		1·31	3·21		1·36	3·08		1·55	3·33		1·85	3·83		2·81	5·24

TABLE XLV.— *concluded.*

1844. Month.	Between what Temperatures of the Air. 60° to 65°			65° to 70°			70° to 75°			75° to 80°			80° to 85°			85° to 90°		
	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.	Number of Observations.	Sums and Mean Value of the Excess of Air Temperature above Evaporation Temperature.	Sums and Mean Value of the Excess of Air Temperature above Dew-Point Temperature.
		°	°		°	°		°	°		°	°		°	°		°	°
January																		
February																		
March																		
April	12	105·6	228·8	5	50·3	104·7	1	15·5	35·6									
May	8	60·8	130·9	7	59·0	135·6	4	41·9	87·7									
June	19	108·4	209·8	16	144·2	290·6	6	65·1	121·5	6	75·4	143·4	2	25·4	43·3			
July	35	148·4	255·7	12	91·1	170·7	8	74·5	142·0	6	50·8	93·8	1	12·4	20·3			
August	27	118·1	230·4	14	101·6	210·8	1	8·8	15·5									
September	21	72·0	148·3	11	51·6	97·2	4	29·1	55·6									
October	5	28·6	47·7	1	5·6	7·6												
November																		
December																		
Sums.....	127	641·9	1251·6	66	503·4	1017·2	24	234·9	457·9	12	126·2	237·2	3	37·8	63·6			
Sums of 1841, 1842, and 1843.	349	1286·3	2282·0	190	1136·9	1915·6	66	509·3	784·8	32	315·3	499·7	10	123·8	200·4	3	29·3	51·5
Whole Sums	476	1928·2	3533·6	256	1640·3	2932·8	90	744·2	1242·7	44	441·5	736·9	13	161·6	264·0	3	29·3	51·5
Means.....		4·05	7·42		6·41	11·46		8·27	13·81		10·03	16·75		12·43	20·31		9·77	17·17

These results are contained in the following table, and also the deduced value of the fraction:—

$$\frac{\text{Air-temperature—dew-point temperature}}{\text{Air-temperature—evaporation-temperature,}}$$

or every group.

TABLE XLVI.—Deduction of the Factors by which it is necessary to multiply the Excess of the Air Temperature above Evaporation Temperature, to find the Excess of the Air Temperature above the Dew-Point Temperature at different Temperatures of the Air.

The Observations were made between		The Reading of the Dry-Bulb Thermometer.	Number of Observations.	Mean Excess of the Reading of the Dry Thermometer above that of the Wet Thermometer.	Mean Excess of the Reading of the Dry Thermometer above that of the Dew-Point.	Factor.
		° °		°	°	
1841, March 1, and 1845, March 31		Below 20	4	0·35	2·98	8·5
,,	,,	Between 20 and 21	2	0·45	3·75	8·3
,,	,,	,, 21 ,, 22	5	0·52	4·66	9·0
,,	,,	,, 22 ,, 23	6	0·62	5·23	8·4
,,	,,	,, 23 ,, 24	12	0·60	4·94	8·2
,,	,,	,, 24 ,, 25	23	0·69	5·04	7·3
,,	,,	,, 25 ,, 26	22	0·77	4·95	6·4
,,	,,	,, 26 ,, 27	34	0·77	4·24	5·7
,,	,,	,, 27 ,, 28	38	0·78	4·75	6·1
,,	,,	,, 28 ,, 29	45	0·71	4·03	5·7
,,	,,	,, 29 ,, 30	48	0·96	4·74	5·0
,,	,,	,, 30 ,, 31	64	0·71	3·24	4·6
,,	,,	,, 31 ,, 32	59	0·73	2·61	3·6
,,	,,	,, 32 ,, 33	88	0·88	2·76	3·1
,,	,,	,, 33 ,, 34	79	1·21	3·42	2·8
,,	,,	,, 34 ,, 35	95	1·08	2·81	2·6
1841, March 1, and 1844, December 31		,, 35 ,, 40	430	1·31	3·21	2·4
,,	,,	,, 40 ,, 45	612	1·36	3·08	2·3
,,	,,	,, 45 ,, 50	712	1·55	3·33	2·2
,,	,,	,, 50 ,, 55	700	1·85	3·83	2·1
,,	,,	,, 55 ,, 60	670	2·81	5·24	1·9
,,	,,	,, 60 ,, 65	476	4·05	7·42	1·8
,,	,,	,, 65 ,, 70	256	6·41	11·46	1·8
,,	,,	,, 70 ,, 75	90	8·27	13·81	1·7
,,	,,	,, 75 ,, 80	44	10·03	16·75	1·7
,,	,,	,, 80 ,, 85	13	12·43	20·31	1·6
,,	,,	,, 85 ,, 90	3	9·77	17·17	1·8

The next table is formed by taking for each day the mean of the products of the true differences between the readings of the Dry and Wet Thermometers into the corresponding factors in the above table, at every even hour of Göttingen mean time.

TABLE XLVII.—The true Difference between the Mean Daily Temperature of the Air and the Mean Daily Temperature of the deduced Dew-Point.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	1·4	5·9	5·1	5·2	9·5	8·4	6·1	5·1	*S*	5·7	2·7	*S*
2	2·7	2·1	5·1	8·1	8·8	*S*	3·1	6·0	5·1	7·3	1·1	2·6
3	3·5	3·4	*S*	9·7	9·2	9·3	4·8	5·2	4·0	5·1	*S*	4·7
4	0·8	*S*	2·1	9·0	3·5	10·6	3·3	*S*	4·4	6·6	2·6	4·2
5	1·3	2·2	4·6	Good Friday.	*S*	9·6	2·0	3·6	2·9	3·8	1·3	4·0
6	3·2	2·0	5·7	6·7	7·1	5·6	3·8	5·4	3·9	*S*	1·7	3·2
7	*S*	1·7	5·8	*S*	9·6	7·7	*S*	6·0	2·6	5·1	1·5	3·3
8	2·1	3·4	5·5	6·9	6·6	10·5	7·6	7·3	*S*	5·5	2·2	*S*
9	5·7	2·4	4·2	10·8	9·8	*S*	9·7	7·7	1·5	5·2	1·8	5·0
10	1·3	2·8	*S*	9·9	6·3	10·9	8·2	5·2	3·6	4·2	*S*	4·4
11	0·7	*S*	3·9	9·2	7·3	11·3	10·0	*S*	5·2	4·2	5·2	5·2
12	0·7	2·0	6·5	6·8	*S*	14·1	6·3	2·7	4·7	2·2	1·5	5·6
13	2·2	0·9	6·5	4·7	6·9	11·3	3·8	1·9	6·6	*S*	0·5	4·6
14	*S*	3·1	1·8	*S*	6·5	12·1	*S*	1·7	5·4	2·2	0·4	2.9
15	3·8	1·9	4·6	3·7	7·6	13·4	9·8	3·7	*S*	3·3	2·1	*S*
16	2·1	4·0	3·2	3·2	8·0	*S*	5·8	5·9	3·9	1·6	1·1	0·9
17	2·3	3·2	*S*	6·0	5·5	11·2	4·8	6·9	2·2	4·4	*S*	0·1

The letter *S* denotes that the day was Sunday.

TABLE XLVII.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
18	3·4	*S*	6·1	6·5	7·0	6·7	7·6	*S*	1·8	3·1	1·7	0·0
19	4·7	3·2	5·4	9·0	*S*	4·6	5·4	8·3	2·5	4·1	2·2	2·0
20	6·3	7·1	6·0	5·8	9·2	5·9	7·1	6·8	3·0	*S*	1·7	6·7
21	*S*	2·7	9·0	*S*	2·7	10·3	*S*	7·1	2·7	1·4	0·4	5·5
22	1·2	2·7	5·0	7·3	3·9	11·4	9·2	5·1	*S*	1·8	1·1	*S*
23	2·7	4·1	4·6	8·2	4·2	*S*	9·8	6·1	4·3	1·7	3·0	4·8
24	4·0	3·7	*S*	8·5	7·9	11·5	6·6	4·7	4·8	1·0	*S*	3·3
25	2·4	*S*	2·9	8·8	9·4	1·9	8·8	*S*	3·2	1·7	4·1	Christ. Day.
26	4·7	3·1	6·5	10·3	*S*	5·5	6·1	6·6	2·3	1·5	3·1	0·7
27	2·9	5·8	2·9	7·4	4·8	5·4	8·4	8·5	3·5	*S*	2·0	0·5
28	*S*	5·8	6·2	*S*	8·0	7·9	*S*	4·7	4·5	2·6	2·3	1·2
29	3·6	3·5	4·2	5·8	4·6	9·0	10·3	5·3	*S*	4·7	2·4	*S*
30	7·2		5·8	8·4	5·3	*S*	5·5	3·9	4·9	1·3	4·5	0·6
31	4·5		*S*	...	5·4		7·2	4·6		2·4		0·8

The letter *S* denotes that the day was Sunday.

Taking the differences between the numbers contained in the above table and the numbers contained in Table XXIII., the next table is formed.

TABLE XLVIII.—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, by means of the Factors in Table XLVI.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	35·9	25·1	41·3	43·5	43·3	47·6	54·9	49·4	*S*	48·2	43·2	*S*
2	27·9	29·5	36·5	43·8	44·7	*S*	55·3	50·3	54·5	51·1	41·8	33·4
3	26·4	30·3	*S*	43·1	42·4	44·7	54·1	52·5	56·9	53·9	*S*	30·5
4	44·4	*S*	36·0	44·1	48·2	48·9	56·7	*S*	59·6	47·0	38·4	30·1
5	49·3	28·6	29·8	Good Friday.	*S*	51·8	55·5	55·6	61·2	52·0	38·9	25·8
6	43·5	30·5	27·1	41·5	49·2	54·2	53·5	56·8	59·6	*S*	39·5	23·2
7	*S*	37·3	30·1	*S*	49·2	52·9	*S*	51·4	61·3	41·8	43·4	24·9
8	34·9	32·1	31·3	39·3	50·2	51·5	53·3	50·7	*S*	39·8	45·9	*S*
9	29·1	33·0	41·6	41·8	50·9	*S*	52·1	50·3	57·3	48·2	45·6	23·3
10	39·2	31·8	*S*	44·1	47·4	50·9	54·1	52·0	54·3	51·6	*S*	25·7
11	39·4	*S*	41·1	40·3	46·8	50·2	55·1	*S*	50·1	48·9	37·0	23·0
12	39·7	28·4	32·1	42·3	*S*	50·5	53·0	57·5	52·7	52·8	48·6	22·2
13	37·5	25·1	31·5	45·4	50·9	56·4	55·9	56·6	51·9	*S*	51·4	21·1
14	*S*	28·5	36·7	*S*	53·0	49·6	*S*	53·3	55·4	50·1	48·1	26·3
15	27·7	39·4	38·8	47·4	43·4	45·5	51·9	52·4	*S*	49·1	52·1	*S*
16	28·4	34·8	39·8	49·6	45·5	*S*	50·9	53·2	60·9	46·8	51·6	36·2
17	36·1	36·6	*S*	47·9	41·7	49·0	52·1	53·4	60·5	44·1	*S*	38·5
18	38·1	*S*	32·1	43·3	36·7	52·2	51·0	*S*	52·6	41·5	49·0	40·4
19	37·7	38·5	35·7	41·8	*S*	49·8	49·5	59·2	48·2	41·4	47·5	37·9
20	31·6	26·0	33·4	49·5	41·7	52·8	51·7	57·7	50·7	*S*	47·2	26·2
21	*S*	30·7	27·0	*S*	48·3	55·5	*S*	49·6	49·8	44·2	37·7	27·7
22	38·0	29·1	36·4	48·5	50·8	55·1	58·3	51·6	*S*	43·5	37·8	*S*
23	34·9	29·2	37·7	47·0	50·1	*S*	59·4	51·4	48·7	41·3	37·6	26·0
24	31·8	36·2	*S*	43·5	46·7	59·8	62·3	52·1	49·3	47·6	*S*	28·2
25	35·6	*S*	42·6	44·2	42·6	55·1	61·9	*S*	47·7	46·3	36·2	Christ. Day.
26	37·5	37·9	42·8	47·6	*S*	50·7	59·0	50·2	48·2	44·6	33·0	32·1
27	39·7	26·9	48·3	44·3	41·9	50·9	57·0	48·0	47·6	*S*	32·8	30·6
28	*S*	33·0	42·4	*S*	42·1	50·8	*S*	49·1	47·8	39·0	36·1	39·8
29	40·2	37·8	40·2	39·4	45·1	54·5	52·4	51·1	*S*	40·3	36·7	*S*
30	38·6		38·6	42·6	46·1	*S*	53·1	52·7	41·8	42·7	32·3	38·3
31	31·2		*S*		45·8		53·0	54·0		43·5		37·6

The letter *S* denotes that the day was Sunday.

The numbers in the next table are immediately formed from those in Table XLVII.

TABLE XLIX.—The Greatest and Least Differences between the Mean Daily Temperature of the Air and that of the deduced Dew-Point in each Month, taken from Table XLVII.

1844, Month.	Excess of the Mean Daily Temperature of the Air above that of the Dew-Point.		Day on which occurred the	
	Greatest.	Least.	Greatest.	Least.
	°	°	d	d d
January	7·2	0·7	30	11 & 12
February	7·1	0·9	20	13
March	9·0	1·8	21	14
April	10·8	3·2	9	16
May	9·8	2·7	9	21
June	14·1	1·9	12	25
July	10·3	2·0	29	5
August	8·5	1·7	27	14
September	6·6	1·5	13	9
October	7·3	1·0	2	24
November	5·2	0·4	11	14 & 21
December	6·7	0·0	20	18

The greatest deduced excess in	January was	12°·8	on the	30th day.
,,	February	13·0	,,	27th day.
,,	March	13·8	,,	30th day.
,,	April	23·3	,,	26th day.
,,	May	20·2	,,	25th day.
,,	June	23·0	,,	5th day.
,,	July	20·0	,,	23rd day.
,,	August	16·5	,,	19th day.
,,	September	14·1	,,	2nd day.
,,	October	14·8	,,	2nd day.
,,	November	12·0	,,	11th day.
,,	December	9·8	,,	20th day.

TABLE L.—Table exhibiting the Times at which Differences greater than 5° took place between the Mean Temperatures of the deduced Dew-Point on Two consecutive Days, with the Amounts of the Differences, estimated positive when the Temperature on the Second Day is the higher.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		May.		June.	
	°		°		°		°		°		°
1 & 2	− 8·0	6 & 7	+ 6·8	4 & 5	− 6·2	19 & 20	+ 7·7	3 & 4	+ 5·8	12 & 13	+ 5·9
3 & 4	+ 18·0	7 & 8	− 5·2	8 & 9	+ 10·3			14 & 15	− 9·6	13 & 14	− 6·8
5 & 6	− 5·8	14 & 15	+ 10·9	11 & 12	− 9·0			17 & 18	− 5·0		
8 & 9	− 5·8	19 & 20	− 12·5	13 & 14	+ 5·2			20 & 21	+ 6·6		
9 & 10	+ 10·1	23 & 24	+ 7·0	20 & 21	− 6·4						
16 & 17	+ 7·7	26 & 27	− 11·0	21 & 22	+ 9·4						
19 & 20	− 6·1	27 & 28	+ 6·1	26 & 27	+ 5·5						
30 & 31	− 7·4			27 & 28	− 5·9						
31 & 32	− 6·1										
August.		September.		October.		November.		December.			
6 & 7	− 5·4	17 & 18	− 7·9	3 & 4	− 6·9	11 & 12	+ 11·6	13 & 14	+ 5·2		
19 & 20	+ 7·5	30 & 31	− 6·4	4 & 5	− 5·0	20 & 21	− 9·5	19 & 20	− 11·7		
20 & 21	− 8·1			8 & 9	+ 8·4			27 & 28	+ 9·2		
				23 & 24	+ 6·3						

The table contains 45 instances out of 257 cases, in which the mean temperature of the dew-point differed at least 5° on two consecutive days; of these there were

2	instances in which the difference was 5°					
10	,,	,,	exceeded	5°	and was less than	6°
11	,,	,,	,,	6	,,	7
6	,,	,,	,,	7	,,	8
3	,,	,,	,,	8	,,	9
5	,,	,,	,,	9	,,	10
3	,,	,,	,,	10	,,	11
3	,,	,,	,,	11	,,	12
1	instance in which the difference		exceeded	12	,,	13
1	,,	,,	,,	18	,,	19

TABLE LI.—Mean of all the Two-hourly Temperatures of the deduced Dew-Point, for those Days in each Month, in which (as deduced from the Mean of the Two-hourly Results) the Temperature of the Dew-Point was Highest or Lowest.

1844, Month.	Mean Daily Temperature of the Dew-Point in the Month. Highest.	Lowest.	Greatest Difference between the Highest and Lowest Mean Daily Temperature in the Month.	Day on which the Mean Temperature of the Dew-Point for the Day was Highest.	Lowest.
	°	°	°	d	d d
January	49 ·3	26 ·4	22 ·9	5	3
February	39 ·4	25 ·1	14 ·3	15	1 & 13
March	48 ·3	27 ·0	21 ·3	27	21
April	49 ·6	39 ·3	10 ·3	16	8
May	53 ·0	36 ·7	16 ·3	14	18
June	59 ·8	44 ·7	15 ·1	24	3
July	62 ·3	49 ·5	12 ·8	24	19
August	57 ·7	48 ·0	9 ·7	20	27
September	61 ·3	41 ·8	19 ·5	7	30
October	53 ·9	39 ·0	14 ·9	3	28
November	52 ·1	32 ·3	19 ·8	15	30
December	40 ·4	21 ·1	19 ·3	18	13

The yearly mean daily range was 41° ·2, being the difference between the lowest daily mean in the year, viz. 21° ·1, on December 13^d, and the highest daily mean in the year, viz. 62° ·3, on July 24^d.

TABLE LII.—The Highest and Lowest Readings of the Temperature of the deduced Dew-Point in each Month, from the Six-hourly Observations.

1844, Month.	Temperature of the Dew-Point. Highest.	Lowest.	Range.	Day on which occurred Highest.	Lowest.
	°	°	°	d h	d h
January	50 ·0	18 ·0	32 ·0	5. 4	2. 16
February	47 ·5	19 ·5	28 ·0	23. 16	13. 16
March	51 ·5	24 ·5	27 ·0	27. 4	{ 5. 22 21. 10 }
April	51 ·0	33 ·2	17 ·8	21. 22	7. 16
May	58 ·0	30 ·0	28 ·0	23. 4	17. 4
June	62 ·0	37 ·0	25 ·0	23. 22	15. 4
July	66 ·0	44 ·0	22 ·0	24. 22	29. 10
August	61 ·6	45 ·0	16 ·6	19. 22	{ 23. 4 26. 16 27. 16 }
September	63 ·8	37 ·5	26 ·3	6. 22	29. 16
October	58 ·0	34 ·8	23 ·2	{ 3. 4 3. 10 }	22. 22
November	39 ·5	29 ·0	10 ·5	20. 4	26. 22
December	44 ·5	18 ·0	26 ·5	28. 10	5. 22

TABLE LIII.—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.

1844, Month.	Mean Temperature of the Dew-Point.	1844, Month.	Mean Temperature of the Dew-Point.
	°		°
January	36·1	July	54·7
February	31·8	August	52·3
March	36·6	September	53·2
April	44·2	October	46·0
May	46·1	November	41·9
June	51·6	December	30·0

The mean of all the monthly results is 43°·7.

TABLE LIV.—Mean Temperature of Evaporation, deduced from the Two-hourly Observations of the Wet-bulb Thermometer, at every Even Hour of Göttingen Mean Time in every Month. (The Difference 0°·2, between the Readings of the Dry and Wet Thermometers when under the same circumstances, has been applied.) (This diff does not appear ... been applied in all cases.)

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	37·2	32·9	37·1	43·3	44·9	50·8	53·9	51·6	52·1	45·3	42·1	31·2
16	37·0	32·4	36·8	42·0	44·1	50·3	53·5	50·9	51·5	44·2	42·0	31·1
18	36·9	31·8	36·5	41·3	44·3	51·2	54·0	50·5	51·1	44·6	41·7	31·3
20	36·7	31·4	37·3	45·3	48·3	54·6	56·7	53·5	52·3	44·9	41·5	31·5
22	37·1	33·4	39·9	49·2	51·6	56·8	59·0	56·5	55·9	48·1	42·5	32·0
0	39·0	35·6	42·1	51·9	53·2	58·6	60·4	57·7	58·5	50·1	44·4	33·3
2	39·8	36·8	43·0	53·5	54·4	59·9	60·9	58·1	59·2	51·8	45·3	33·6
4	39·6	36·7	42·6	52·8	54·1	59·5	60·8	57·9	58·5	50·7	44·9	33·3
6	38·6	35·1	41·2	51·5	52·3	57·8	60·0	56·9	56·8	49·4	44·0	32·9
8	38·0	34·3	39·6	48·4	49·6	55·6	58·0	54·9	54·6	48·2	43·4	32·6
10	37·5	33·8	38·5	46·6	47·0	53·0	56·0	53·6	53·7	47·6	42·6	32·2
12	37·3	33·2	37·8	45·2	45·9	51·6	54·7	52·6	52·5	46·7	42·2	31·7

By taking the differences between the numbers contained in this table and those contained in Table XXXIII., the next table is formed.

TABLE LV.—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 corrected Readings of the Wet-bulb Thermometer, at every Even Hour of Göttingen Mean Time, in each Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	0·9	0·8	1·2	1·6	1·3	2·2	1·6	1·1	0·4	0·8	0·7	0·5
16	0·9	0·8	1·3	1·1	1·0	1·8	1·1	0·9	0·3	1·8	0·6	0·6
18	0·9	0·6	1·0	0·8	0·8	1·9	1·0	0·6	0·2	0·6	0·6	0·6
20	0·9	0·8	1·1	1·7	2·1	4·0	2·8	1·8	0·5	0·9	0·6	0·6
22	0·9	1·1	2·1	4·4	4·3	6·6	5·4	4·0	2·0	1·7	0·8	0·8
0	1·5	1·9	3·3	6·8	6·2	8·8	7·0	5·3	3·8	3·2	1·3	1·1
2	2·1	2·3	4·0	8·4	7·2	10·5	7·1	6·3	5·3	3·1	1·6	1·3
4	1·9	2·5	4·0	8·6	7·3	9·8	7·3	5·8	5·6	3·8	1·5	1·2
6	1·6	1·4	2·9	7·0	6·3	8·9	6·3	5·3	3·9	2·4	1·2	0·9
8	1·2	0·6	2·0	4·3	4·3	6·5	4·1	3·5	1·9	1·6	0·8	0·8
10	0·9	0·7	1·6	2·6	2·8	4·2	2·7	2·2	1·0	1·4	0·8	0·7
12	0·9	0·6	1·5	1·9	2·0	3·1	2·6	1·6	0·8	1·0	0·8	0·6

The next table is formed by multiplying the above numbers by the factors contained in Table XLVI.

TABLE LVI.—The 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 each Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	2 ·5	2 ·6	3 ·2	3 ·4	2 ·8	3 ·7	2 ·9	2 ·1	0 ·9	1 ·7	1 ·7	2 ·9
16	2 ·3	2 ·5	3 ·3	2 ·6	2 ·1	3 ·1	2 ·1	1 ·8	0 ·7	1 ·7	1 ·5	2 ·8
18	2 ·3	2 ·4	2 ·9	1 ·9	1 ·9	3 ·3	1 ·9	1 ·4	0 ·6	1 ·3	1 ·4	2 ·5
20	2 ·4	2 ·8	2 ·8	3 ·6	4 ·2	6 ·6	4 ·6	3 ·3	1 ·0	1 ·8	1 ·4	2 ·4
22	2 ·3	3 ·3	5 ·0	8 ·1	7 ·6	10 ·5	8 ·8	6 ·8	3 ·4	3 ·4	1 ·8	3 ·2
0	3 ·7	4 ·8	7 ·0	11 ·7	10 ·6	13 ·7	11 ·3	8 ·9	6 ·4	5 ·8	2 ·9	3 ·6
2	5 ·0	5 ·2	8 ·3	14 ·1	11 ·9	16 ·1	11 ·2	10 ·2	8 ·8	7 ·1	3 ·2	4 ·1
4	4 ·4	6 ·0	8 ·4	14 ·6	12 ·0	15 ·0	11 ·4	9 ·5	9 ·1	7 ·0	3 ·2	3 ·6
6	3 ·8	3 ·7	6 ·4	12 ·1	11 ·0	13 ·8	10 ·3	8 ·8	6 ·5	4 ·6	2 ·6	3 ·1
8	3 ·0	2 ·1	4 ·9	8 ·2	8 ·3	10 ·5	6 ·9	6 ·0	3 ·4	3 ·1	1 ·8	3 ·1
10	2 ·2	2 ·2	4 ·0	5 ·3	5 ·6	7 ·0	5 ·0	3 ·9	2 ·1	2 ·6	1 ·9	2 ·9
12	2 ·3	2 ·7	3 ·7	4 ·0	4 ·1	5 ·3	4 ·3	2 ·9	1 ·6	1 ·9	1 ·8	2 ·7

By subtracting the numbers contained in this table from those contained in Table XXXIII., the next table is formed.

TABLE LVII.—The Mean Temperature of the deduced Dew-Point at every Even Hour of Göttingen Mean Time in each Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h	°	°	°	°	°	°	°	°	°	°	°	°
14	35 ·6	31 ·1	35 ·1	41 ·5	43 ·4	49 ·3	52 ·6	50 ·6	51 ·6	44 ·4	41 ·1	28 ·8
16	35 ·6	30 ·7	34 ·8	40 ·5	43 ·0	49 ·0	52 ·5	50 ·0	51 ·1	44 ·3	41 ·1	28 ·9
18	35 ·5	30 ·0	34 ·6	40 ·2	43 ·2	49 ·8	53 ·1	49 ·7	50 ·7	43 ·9	40 ·9	29 ·4
20	35 ·2	29 ·4	35 ·6	43 ·4	46 ·2	52 ·0	54 ·9	52 ·0	51 ·8	44 ·0	40 ·7	29 ·7
22	35 ·7	31 ·2	37 ·0	45 ·5	48 ·3	52 ·9	55 ·6	53 ·7	54 ·5	46 ·4	41 ·5	29 ·6
0	36 ·8	32 ·7	38 ·4	47 ·0	48 ·8	53 ·7	56 ·1	54 ·1	55 ·9	47 ·5	42 ·8	30 ·8
2	36 ·9	33 ·9	38 ·7	47 ·8	49 ·7	54 ·3	56 ·8	54 ·2	55 ·7	47 ·8	43 ·7	30 ·8
4	37 ·1	33 ·2	38 ·2	46 ·8	49 ·4	54 ·3	56 ·7	54 ·2	55 ·0	47 ·5	43 ·2	30 ·9
6	36 ·4	32 ·8	37 ·7	46 ·4	47 ·6	52 ·9	56 ·2	53 ·4	54 ·2	47 ·2	42 ·6	30 ·7
8	36 ·2	32 ·8	36 ·7	44 ·5	45 ·6	51 ·6	55 ·2	52 ·4	53 ·1	46 ·7	42 ·4	30 ·3
10	36 ·2	32 ·3	36 ·1	43 ·9	44 ·2	50 ·2	53 ·7	51 ·9	52 ·6	46 ·4	41 ·5	30 ·0
12	35 ·9	31 ·1	35 ·6	43 ·1	43 ·8	49 ·4	53 ·0	51 ·3	51 ·7	45 ·8	41 ·2	29 ·6

The highest temperature of the dew-point has been at 2^h or 4^h; the time at which the lowest temperature has taken place has been more variable. In January neither the circumstance of a rise from 6^h to 10^h in the temperature, nor of a fall of 2° between 12^h and 14^h, as shewn in both the years 1842 and 1843, and which was thought worthy of remark in those years, has taken place.

The next table is formed from Table LVII., to ascertain the times and the amounts of the changes contained in it.

TABLE LVIII.—Hours of Göttingen Mean Time (Astronomical Reckoning) at which occurred the Greatest and Least Heights of the Temperature of the deduced Dew-Point, as inferred from the Monthly Means of the Two-hourly Results, with the actual Heights and the Amounts of the Changes.

1844, Month.	Even Hour at which the Mean Temperature of the Dew-Point was		Interval of time between the Highest and Lowest.	Mean Temperature of the Dew-Point.		Difference.
	Highest.	Lowest.		Highest.	Lowest.	
	h	h	h	°	°	°
January	4	20	16	37 ·1	35 ·2	1 ·9
February	2	20	18	33 ·9	29 ·4	4 ·5
March	2	18	16	38 ·7	34 ·6	4 ·1
April	2	18	16	47 ·8	40 ·2	7 ·6
May	2	16	14	49 ·7	43 ·0	6 ·7
June	2 and 4	16	14 and 12	54 ·3	49 ·0	5 ·3

TABLE LVIII.—*continued.*

1844, Month.	Even Hour at which the Mean Temperature of the Dew-Point was Highest.	Lowest.	Interval of Time between the Highest and Lowest.	Mean Temperature of the Dew-Point. Highest.	Lowest.	Difference.
	h	h	h	°	°	°
July	2	16	14	56 ·8	52 ·5	4 ·3
August	2 & 4	18	16 & 14	54 ·2	49 ·7	4 ·5
September	0	18	18	55 ·9	50 ·7	5 ·2
October	2	18	16	47 ·8	43 ·9	3 ·9
November	2	20	18	43 ·7	40 ·7	3 ·0
December	4	14	10	30 ·9	28 ·8	2 ·1

From this table it appears that the maximum generally happens near to the observation at 2^h or 4^h, and that the minimum happens near to that hour of observation that is nearest to the rising of the Sun, except in December.

From Table LVI. the next table is formed, Spring, Summer, Autumn, and Winter being defined as before.

TABLE LIX.—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.	1844. Spring.	Summer.	Autumn.	Winter.	For the Year.
h	°	°	°	°	°
14	40 ·0	50 ·8	45 ·7	31 ·8	42 ·1
16	39 ·4	50 ·5	45 ·5	31 ·7	41 ·8
18	39 ·3	50 ·9	45 ·2	31 ·6	41 ·8
20	41 ·7	53 ·0	45 ·5	31 ·4	42 ·9
22	43 ·6	54 ·1	47 ·5	32 ·2	44 ·3
0	44 ·7	54 ·6	48 ·7	33 ·4	45 ·4
2	45 ·4	55 ·1	49 ·1	33 ·9	45 ·9
4	44 ·8	55 ·1	48 ·6	33 ·7	45 ·5
6	43 ·9	54 ·2	48 ·0	33 ·3	44 ·8
8	42 ·3	53 ·1	47 ·4	33 ·1	44 ·0
10	41 ·4	51 ·9	46 ·8	32 ·8	43 ·3
12	40 ·8	51 ·2	46 ·2	32 ·2	42 ·6

From this table it appears that in Spring		the maximum took place at	h 2	and the minimum at	h 18
,,	Summer	,,	2 and 4	,,	16
,,	Autumn	,,	2	,,	18
,,	Winter	,,	2	,,	20
,,	for the Year	,,	2	,,	16 and 18

The difference between the maximum and the minimum was in	Spring	° 6 ·1
,,	Summer	4 ·6
,,	Autumn	3 ·9
,,	Winter	2 ·5
,,	for the Year	4 ·1

The mean temperature for	Spring was	° 42 ·3
,,	Summer was	52 ·9
,,	Autumn was	47 ·0
,,	Winter was	32 ·6
,,	the Year was	43 ·7

And the mean temperature at 8^h is in every period nearly the mean for that period.

TABLE LX.—Comparison of the observed Dew-Point with the Dew-Point deduced by the use of the Factors contained in Table XLVI., and also with the Dew-Point deduced from Dr. Apjohn's Formulæ. (In every month the observations of the dew-point have been divided into groups for every degree of air temperature below 35°, and for every five degrees of air temperature above 35°; at every observation of the dew-point, the observations of the dry thermometer, the wet thermometer, and the barometer, were copied, and then their respective means were taken in each group, and in this way the first division of the table was formed: the headings of the other columns explain themselves. The auxiliary tables, by which the "Elastic Force of Vapour" and the "Dew-Point by Dr. Apjohn's Formulæ" are obtained, will be found in the Introduction.)

1844, Month.	Between what Tempera-tures.	Mean Temperature of Air.	Mean Temperature of Evapo-ration.	Mean Temperature of Observed Dew-Point.	Mean Height of the Barometer.	Number of Obs.	Evapora-tion Tempera-ture below Air Tempe-rature.	Factor.	Product.	Dew-Point as deduced by using the Greenwich Factors.	Error of Dew-Point deduced by using the Greenwich Factors.	Mean Error giving Weight ac-cording to the Number of Observations	Elastic Force of Vapour at Temperature of Evaporation.	$\frac{d}{96}\times\frac{h}{30}$	Deduced Elastic Force of Vapour at Tempera-ture of Dew-Point.	Dew-Point deduced from Dr. Ap-john's Formula	Error of Dew-Point deduced from Dr. Ap-john's Formula.	Mean Error giving Weight ac-cording to the Number of Observations.
	° °	°	°	°	in.		°		°	°	°	°	in.	in.	in.	°	°	°
Dec.	21 to 22	21 ·9	21 ·8	21 ·0	30 ·103	1	0 ·1	8 ·9	0 ·9	21 ·0	0 ·0	0 ·0	0 ·138	0 ·001	0 ·137	21 ·5	+ 0 ·5	+ 0 ·5
Dec.	22 to 23	22 ·3	22 ·2	18 ·0	30 ·143	1	0 ·1	8 ·5	0 ·9	21 ·4	+ 3 ·4	+ 3 ·4	0 ·140	0 ·001	0 ·139	21 ·9	+ 3 ·9	+ 3 ·9
Feb.	23 to 24	23 ·5	23 ·2	19 ·5	29 ·686	1	0 ·3	8 ·2	2 ·5	21 ·0	+ 1 ·5	+ 0 ·4	0 ·145	0 ·003	0 ·142	22 ·5	+ 3 ·0	+ 3 ·0
Dec.		23 ·3	22 ·7	18 ·5	29 ·842	2	0 ·6		4 ·9	18 ·4	− 0 ·1		0 ·143	0 ·006	0 ·137	21 ·5	+ 3 ·0	
Feb.	24 to 25	24 ·5	24 ·0	20 ·3	29 ·678	2	0 ·5	7 ·3	3 ·7	20 ·8	+ 0 ·5	− 0 ·6	0 ·150	0 ·005	0 ·145	23 ·2	+ 2 ·9	+ 2 ·7
Dec.		24 ·4	23 ·7	19 ·5	29 ·788	9	0 ·8		5 ·8	18 ·6	− 0 ·9		0 ·148	0 ·008	0 ·140	22 ·1	+ 2 ·6	
Jan.	25 to 26	25 ·5	25 ·2	23 ·0	29 ·806	1	0 ·3	6 ·4	1 ·9	23 ·6	+ 0 ·6	+ 0 ·6	0 ·156	0 ·003	0 ·153	24 ·7	+ 1 ·7	+ 3 ·0
Dec.		25 ·3	24 ·6	20 ·2	29 ·647	12	0 ·7		4 ·5	20 ·8	+ 0 ·6		0 ·153	0 ·007	0 ·146	23 ·3	+ 3 ·1	
Jan.	26 to 27	26 ·8	26 ·7	25 ·0	30 ·196	1	0 ·1	5 ·7	0 ·6	26 ·2	+ 1 ·2	+ 0 ·3	0 ·165	0 ·001	0 ·164	26 ·5	+ 1 ·5	+ 2 ·2
Feb.		26 ·1	25 ·8	23 ·8	29 ·965	2	0 ·3		1 ·7	24 ·4	+ 0 ·6		0 ·160	0 ·003	0 ·157	25 ·3	+ 1 ·5	
March		26 ·5	26 ·4	25 ·0	29 ·598	1	0 ·1		0 ·6	25 ·9	+ 0 ·9		0 ·163	0 ·001	0 ·162	26 ·2	+ 1 ·2	
Dec.		26 ·4	25 ·6	21 ·7	29 ·730	10	0 ·8		4 ·6	21 ·8	+ 0 ·1		0 ·158	0 ·007	0 ·151	24 ·2	+ 2 ·5	
Feb.	27 to 28	27 ·5	26 ·7	23 ·5	29 ·643	1	0 ·8	6 ·1	4 ·9	22 ·6	− 0 ·9	− 0 ·4	0 ·165	0 ·008	0 ·157	25 ·3	+ 1 ·8	+ 2 ·1
Dec.		27 ·3	26 ·7	23 ·4	29 ·596	15	0 ·7		4 ·3	23 ·0	− 0 ·4		0 ·165	0 ·007	0 ·158	25 ·5	+ 2 ·1	
Jan.	28 to 29	28 ·6	28 ·0	25 ·0	29 ·731	1	0 ·6	5 ·7	3 ·4	25 ·2	+ 0 ·2	+ 0 ·7	0 ·173	0 ·006	0 ·167	27 ·1	+ 2 ·1	+ 2 ·8
Feb.		28 ·3	27 ·7	24 ·8	29 ·572	6	0 ·6		3 ·4	24 ·9	+ 0 ·1		0 ·171	0 ·006	0 ·165	26 ·8	+ 2 ·0	
Dec.		28 ·5	27 ·8	23 ·5	29 ·922	16	0 ·7		4 ·0	24 ·5	+ 1 ·0		0 ·172	0 ·007	0 ·165	26 ·7	+ 3 ·2	
Jan.	29 to 30	29 ·5	29 ·1	26 ·0	29 ·677	1	0 ·4	5 ·0	2 ·0	27 ·5	+ 1 ·5	− 0 ·1	0 ·180	0 ·004	0 ·176	28 ·5	+ 2 ·5	+ 2 ·3
Feb.		29 ·5	28 ·4	23 ·0	29 ·304	1	1 ·1		5 ·5	24 ·0	+ 1 ·0		0 ·175	0 ·011	0 ·164	26 ·6	+ 3 ·6	
March		29 ·2	28 ·5	27 ·2	29 ·672	1	0 ·7		3 ·5	25 ·7	− 1 ·5		0 ·176	0 ·007	0 ·169	27 ·4	+ 0 ·2	
Dec.		29 ·3	28 ·4	24 ·4	30 ·000	26	1 ·0		5 ·0	24 ·3	− 0 ·1		0 ·175	0 ·010	0 ·165	26 ·7	+ 2 ·3	
Jan.	30 t0 31	30 ·3	28 ·8	25 ·0	29 ·707	3	1 ·5	4 ·6	6 ·9	23 ·4	− 1 ·6	0 ·0	0 ·178	0 ·015	0 ·163	26 ·4	+ 1 ·4	+ 1 ·8
Feb.		30 ·2	29 ·6	26 ·3	29 ·498	4	0 ·6		2 ·8	27 ·4	+ 1 ·1		0 ·183	0 ·006	0 ·177	28 ·7	+ 2 ·4	
Nov.		30 ·2	30 ·0	29 ·0	30 ·239	1	0 ·2		0 ·9	29 ·3	+ 0 ·3		0 ·186	0 ·002	0 ·184	29 ·7	+ 0 ·7	
Dec.		30 ·4	29 ·5	26 ·3	29 ·808	21	0 ·9		4 ·1	26 ·3	0 ·0		0 ·182	0. 009	0 ·173	28 ·1	+ 1 ·8	
Jan.	31 to 32	31 ·3	30 ·0	28 ·9	29 ·850	2	1 ·3	3 ·7	4 ·8	26 ·5	− 2 ·4	− 0 ·1	0 ·186	0 ·013	0 ·173	28 ·1	− 0 ·8	+ 1 ·1
Feb.		31 ·3	30 ·7	28 ·5	29 ·588	7	0 ·6		2 ·2	29 ·1	+ 0 ·6		0 ·190	0 ·006	0 ·184	29 ·8	+ 1 ·3	
March		31 ·5	29 ·9	26 ·8	29 ·777	2	1 ·6		5 ·9	25 ·6	− 1 ·2		0 ·185	0 ·016	0 ·169	27 ·4	+ 0 ·6	
Dec.		31 ·5	30 ·4	27 ·3	30 ·172	12	1 ·1		4 ·1	27 ·4	+ 0 ·1		0 ·188	0 ·011	0 ·177	28 ·6	+ 1 ·3	

TABLE LX.—*continued.*

1844, Month.	Between what Tempera-tures.	Mean Temperature of Air.	Mean Temperature of Evapo-ration.	Mean Temperature of Observed Dew-Point.	Mean Height of the Barometer.	Number of Obs.	Evapora-tion Tempera-ture below Air Tempe-rature.	Factor.	Product.	Dew-Point as deduced by using the Greenwich Factors.	Error of Dew-Point deduced by using the Greenwich Factors.	Mean Error giving Weight ac-cording to the Number of Observations.	Elastic Force of Vapour at Temperature of Evaporation.	$\frac{d}{88} \times \frac{h}{30}$	Deduced Elastic Force of Vapour at Tempera-ture of Dew-Point.	Dew-Point deduced from Dr. Ap-john's Formula	Error of Dew-Point deduced from Dr. Ap-john's Formula.	Mean Error giving Weight ac-cording to the Number of Observations.
	° °	°	°	°	in.		°		°	°	°	°	in.	in.	in.	°	°	°
Jan.	32 to 33	32 ·4	31 ·6	29 ·7	29 ·904	6	0 ·8	3 ·1	2 ·5	29 ·9	+ 0 ·2		0 ·197	0 ·008	0 ·189	30 ·5	+ 0 ·8	
Feb.		32 ·5	31 ·7	30 ·6	29 ·322	7	0 ·8		2 ·5	30 ·0	— 0 ·6		0 ·197	0 ·008	0 ·189	30 ·5	— 0 ·1	
March		32 ·0	31 ·1	30 ·5	30 ·135	1	0 ·9		1 ·8	29 ·2	— 1 ·3	— 0 ·5	0 ·193	0 ·009	0 ·184	29 ·7	— 0 ·8	+ 0 ·2
Dec.		32 ·3	30 ·9	28 ·7	30 ·094	10	1 ·4		4 ·3	28 ·0	— 0 ·7		0 ·192	0 ·014	0 ·178	28 ·8	+ 0 ·1	
Jan.	33 to 34	33 ·6	31 ·2	26 ·0	30 ·252	2	2 ·4	2 ·8	6 ·7	26 ·9	+ 0 ·9		0 ·194	0 ·024	0 ·170	27 ·5	+ 1 ·5	
Feb.		33 ·4	32 ·4	29 ·7	29 ·469	7	1 ·0		2 ·8	30 ·6	+ 0 ·9		0 ·202	0 ·010	0 ·192	31 ·0	+ 1 ·3	
Nov.		33 ·5	32 ·8	32 ·0	30 ·196	2	0 ·8		2 ·2	31 ·3	— 0 ·7	+ 0 ·4	0 ·205	0 ·009	0 ·196	31 ·5	— 0 ·5	+ 0 ·7
Dec.		33 ·4	32 ·4	30 ·7	30 ·113	5	1 ·0		2 ·8	30 ·6	— 0 ·1		0 ·202	0 ·011	0 ·191	30 ·8	+ 0 ·1	
Jan.	34 to 35	34 ·4	33 ·5	32 ·2	29 ·719	6	0 ·9	2 ·6	2 ·3	32 ·1	— 0 ·1		0 ·210	0 ·010	0 ·200	32 ·1	— 0 ·1	
Feb.		34 ·4	33 ·2	31 ·4	29 ·648	20	1 ·2		3 ·1	31 ·3	— 0 ·1		0 ·208	0 ·012	0 ·196	31 ·5	+ 0 ·1	
March		34 ·6	32 ·9	30 ·9	29 ·802	3	1 ·7		4 ·4	30 ·2	— 0 ·7		0 ·206	0 ·019	0 ·187	30 ·2	— 0 ·7	
April		34 ·0	33 ·7	33 ·2	30 ·204	1	0 ·3		0 ·8	33 ·2	0 ·0	— 0 ·2	0 ·212	0 ·003	0 ·209	33 ·3	+ 0 ·1	— 0 ·1
May		34 ·6	33 ·7	32 ·0	29 ·784	1	0 ·9		2 ·3	32 ·3	+ 0 ·3		0 ·212	0 ·010	0 ·202	32 ·4	+ 0 ·4	
Nov.		34 ·0	32 ·6	30 ·5	29 ·986	1	1 ·4		3 ·6	30 ·4	— 0 ·1		0 ·204	0 ·016	0 ·188	30 ·3	— 0 ·2	
Dec.		34 ·6	33 ·1	31 ·3	30 ·045	5	1 ·5		3 ·9	30 ·7	— 0 ·6		0 ·207	0 ·017	0 ·190	30 ·6	— 0 ·7	
Jan.	35 to 40	37 ·9	36 ·5	34 ·8	30 ·007	25	1 ·4	2 ·5	3 ·5	34 ·4	— 0 ·4		0 ·234	0 ·016	0 ·218	34 ·5	— 0 ·3	
Feb.		37 ·1	35 ·2	32 ·2	29 ·573	25	1 ·9		4 ·8	32 ·3	+ 0 ·1		0 ·223	0 ·021	0 ·202	32 ·4	+ 0 ·2	
March		37 ·8	35 ·8	33 ·2	29 ·762	35	2 ·0		5 ·0	32 ·8	— 0 ·4		0 ·228	0 ·023	0 ·205	32 ·8	— 0 ·4	
April		39 ·8	38 ·8	37 ·5	30 ·137	2	1 ·0		2 ·5	37 ·3	— 0 ·2		0 ·253	0 ·011	0 ·242	37 ·5	0 ·0	
Sep.		39 ·7	39 ·1	37 ·5	30 ·187	1	0 ·6		1 ·5	38 ·2	+ 0 ·7	— 0 ·3	0 ·256	0 ·007	0 ·249	38 ·3	+ 0 ·8	— 0 ·2
Oct.		37 ·8	37 ·3	36 ·6	29 ·966	4	0 ·5		1 ·3	36 ·5	— 0 ·1		0 ·240	0 ·006	0 ·234	36 ·5	— 0 ·1	
Nov.		38 ·0	36 ·7	35 ·2	30 ·010	12	1 ·3		3 ·3	34 ·7	— 0 ·5		0 ·235	0 ·015	0 ·220	34 ·8	— 0 ·4	
Dec.		36 ·9	35 ·6	34 ·0	29 ·745	15	1 ·3		3 ·3	33 ·6	— 0 ·4		0 ·227	0 ·015	0 ·212	33 ·7	— 0 ·3	
Jan.	40 to 45	41 ·7	40 ·6	39 ·3	29 ·987	25	1 ·1	2 ·3	2 ·5	39 ·2	— 0 ·1		0 ·270	0 ·013	0 ·257	39 ·2	— 0 ·1	
Feb.		42 ·4	40 ·1	37 ·4	29 ·282	16	2 ·3		5 ·3	37 ·1	— 0 ·3		0 ·265	0 ·025	0 ·240	37 ·3	— 0 ·1	
March		42 ·5	40 ·3	37 ·9	29 ·595	26	2 ·1		4 ·8	37 ·7	— 0 ·2		0 ·267	0 ·024	0 ·243	37 ·6	— 0 ·3	
April		42 ·3	40 ·9	39 ·0	30 ·028	16	1 ·5		3 ·5	38 ·8	— 0 ·2		0 ·273	0 ·017	0 ·256	39 ·1	+ 0 ·1	
May		42 ·6	41 ·2	39 ·8	29 ·972	11	1 ·3		3 ·0	39 ·6	— 0 ·2		0 ·276	0 ·015	0 ·261	39 ·6	— 0 ·2	
June		43 ·6	42 ·0	40 ·0	29 ·882	1	1 ·6		3 ·7	39 ·9	— 0 ·1	— 0 ·2	0 ·283	0 ·018	0 ·265	40 ·1	+ 0 ·1	— 0 ·2
Sep.		42 ·0	41 ·9	41 ·3	30 ·080	1	0 ·1		0 ·2	41 ·8	+ 0 ·5		0 ·282	0 ·001	0 ·281	41 ·7	+ 0 ·4	
Oct.		43 ·0	42 ·4	41 ·8	29 ·702	11	0 ·7		1 ·6	41 ·4	— 0 ·4		0 ·287	0 ·008	0 ·279	41 ·5	— 0 ·3	
Nov.		41 ·7	40 ·0	38 ·4	30 ·041	10	1 ·7		3 ·9	37 ·8	— 0 ·6		0 ·264	0 ·019	0 ·245	37 ·8	— 0 ·6	
Dec.		42 ·2	41 ·3	40 ·6	29 ·917	4	0 ·9		2 ·1	40 ·1	— 0 ·5		0 ·277	0 ·010	0 ·267	40 ·3	— 0 ·3	
Jan.	45 to 50	46 ·9	44 ·6	42 ·1	29 ·647	14	2 ·3	2 ·1	4 ·8	42 ·1	0 ·0		0 ·310	0 ·026	0 ·284	42 ·1	0 ·0	
Feb.		46 ·9	44 ·2	41 ·2	29 ·490	5	2 ·7		5 ·7	41 ·2	0 ·0		0 ·306	0 ·030	0 ·276	41 ·2	0 ·0	
March		47 ·5	44 ·9	41 ·8	29 ·685	21	2 ·6		5 ·5	42 ·0	+ 0 ·2		0 ·313	0 ·029	0 ·284	42 ·1	+ 0 ·3	
April		47 ·7	45 ·5	42 ·8	29 ·917	21	2 ·2		4 ·6	43 ·1	+ 0 ·3		0 ·320	0 ·025	0 ·295	43 ·1	+ 0 ·3	
May		47 ·2	44 ·9	41 ·5	29 ·952	29	2 ·3		4 ·8	42 ·4	+ 0 ·9		0 ·313	0 ·026	0 ·287	42 ·4	+ 0 ·9	
June		47 ·7	46 ·5	44 ·9	29 ·915	8	1 ·3		2 ·7	45 ·0	+ 0 ·1	+ 0 ·2	0 ·331	0 ·015	0 ·316	45 ·1	+ 0 ·2	+ 0 ·2
July		48 ·1	47 ·0	45 ·5	29 ·783	5	1 ·1		2 ·3	45 ·8	+ 0 ·3		0 ·337	0 ·013	0 ·324	45 ·9	+ 0 ·4	
Aug.		48 ·3	47 ·7	46 ·8	29 ·752	6	0 ·6		1 ·3	47 ·0	+ 0 ·2		0 ·345	0 ·007	0 ·338	47 ·1	+ 0 ·3	
Sep.		48 ·1	46 ·5	45 ·5	30 ·065	2	1 ·6		3 ·4	44 ·7	— 0 ·8		0 ·331	0 ·018	0 ·313	44 ·9	— 0 ·6	
Oct.		47 ·6	46 ·3	45 ·4	29 ·586	25	1 ·3		2 ·7	44 ·9	— 0 ·5		0 ·329	0 ·015	0 ·314	45 ·0	— 0 ·4	
Nov.		48 ·2	47 ·4	46 ·8	29 ·923	4	0 ·8		1 ·7	46 ·5	— 0 ·3		0 ·342	0 ·009	0 ·333	46 ·7	— 0 ·1	

TABLE LX.—*concluded.*

1844, Month.	Between what Temperatures.	Mean Temperature of Air.	Mean Temperature of Evaporation.	Mean Temperature of Observed Dew-Point.	Mean Height of the Barometer.	Number of Obs.	Evaporation Temperature below Air Temperature.	Factor.	Product.	Dew-Point as deduced by using the Greenwich Factors.	Error of Dew-Point deduced by using the Greenwich Factors.	Mean Error giving Weight according to the Number of Observations.	Elastic Force of Vapour at Temperature of Evaporation.	$\frac{d}{88} \times \frac{h}{30}$	Deduced Elastic Force of Vapour at Temperature of Dew-Point.	Dew-Point deduced from Dr. Apjohn's Formula.	Error of Dew-Point deduced from Dr. Apjohn's Formula.	Mean Error giving Weight according to the Number of Observations.
	° °	°	°	°	in.		°		°	°	°	°	in.	in.	in.	°	°	°
Jan.	50 to 55	51 ·2	50 ·5	49 ·4	29 ·424	3	0 ·7	2 ·1	1 ·5	49 ·7	+ 0 ·3		0 ·380	0 ·008	0 ·372	49 ·1	− 0 ·3	
March		51 ·9	48 ·3	43 ·8	29 ·716	7	3 ·6		7 ·6	44 ·3	+ 0 ·5		0 ·352	0 ·041	0 ·311	44 ·7	+ 0 ·9	
April		52 ·7	48 ·9	44 ·1	30 ·055	22	3 ·8		8 ·0	44 ·7	+ 0 ·6		0 ·360	0 ·043	0 ·317	45 ·2	+ 1 ·1	
May		52 ·3	49 ·6	46 ·5	29 ·913	21	2 ·7		5 ·7	46 ·6	+ 0 ·1		0 ·368	0 ·030	0 ·338	47 ·1	+ 0 ·6	
June		52 ·3	50 ·5	48 ·4	29 ·819	15	1 ·8		3 ·8	48 ·5	+ 0 ·1		0 ·380	0 ·020	0 ·360	48 ·9	+ 0 ·5	
July		53 ·1	52 ·1	50 ·5	29 ·759	14	1 ·0		2 ·1	51 ·0	+ 0 ·5	+ 0 ·1	0 ·401	0 ·011	0 ·390	51 ·3	+ 0 ·8	+ 0 ·5
Aug.		52 ·9	51 ·1	49 ·7	29 ·689	17	1 ·8		3 ·8	49 ·1	− 0 ·6		0 ·388	0 ·020	0 ·368	49 ·6	− 0 ·1	
Sep.		51 ·6	50 ·3	48 ·6	29 ·946	14	1 ·3		2 ·7	48 ·9	+ 0 ·3		0 ·377	0 ·015	0 ·362	49 ·1	+ 0 ·5	
Oct.		52 ·4	49 ·8	47 ·5	29 ·407	19	2 ·5		5 ·3	47 ·1	− 0 ·4		0 ·371	0 ·028	0 ·343	47 ·5	0 ·0	
Nov.		51 ·2	50 ·1	49 ·2	30 ·106	7	1 ·1		2 ·3	48 ·9	− 0 ·3		0 ·375	0 ·013	0 ·362	49 ·1	− 0 ·1	
March	55 to 60	55 ·5	49 ·6	43 ·8	30 ·157	3	5 ·9	1 ·9	11 ·2	44 ·3	+ 0 ·5		0 ·368	0 ·067	0 ·301	43 ·7	− 0 ·1	
April		57 ·4	51 ·5	44 ·8	29 ·992	15	5 ·9		11 ·2	46 ·2	+ 1 ·4		0 ·393	0 ·067	0 ·326	46 ·0	+ 1 ·2	
May		57 ·3	52 ·2	46 ·0	29 ·983	21	5 ·0		9 ·5	47 ·8	+ 1 ·8		0 ·402	0 ·057	0 ·345	47 ·7	+ 1 ·7	
June		57 ·1	53 ·6	50 ·2	29 ·787	27	3 ·5		6 ·7	50 ·4	+ 0 ·2		0 ·422	0 ·039	0 ·383	50 ·8	+ 0 ·6	
July		57 ·3	55 ·3	53 ·4	29 ·706	24	2 ·1		4 ·0	53 ·3	− 0 ·1	+ 0 ·3	0 ·447	0 ·023	0 ·424	53 ·7	+ 0 ·3	+ 0 ·5
Aug.		57 ·0	54 ·3	51 ·9	29 ·651	32	2 ·7		5 ·1	51 ·9	0 ·0		0 ·432	0 ·030	0 ·402	52 ·2	+ 0 ·3	
Sep.		57 ·3	55 ·1	53 ·0	29 ·846	23	2 ·2		4 ·2	53 ·1	+ 0 ·1		0 ·444	0 ·025	0 ·419	53 ·4	+ 0 ·4	
Oct.		57 ·1	53 ·9	52 ·3	29 ·464	14	3 ·2		6 ·1	51 ·0	− 1 ·3		0 ·426	0 ·036	0 ·390	51 ·3	− 1 ·0	
April	60 to 65	61 ·9	53 ·1	42 ·9	29 ·976	12	8 ·8	1 ·8	15 ·8	46 ·1	+ 3 ·2		0 ·415	0 ·100	0 ·315	45 ·0	+ 2 ·1	
May		62 ·9	55 ·4	46 ·6	30 ·000	8	7 ·6		13 ·7	49 ·2	+ 2 ·6		0 ·449	0 ·086	0 ·363	49 ·2	+ 2 ·6	
June		62 ·3	56 ·6	51 ·2	29 ·770	19	5 ·7		10 ·3	52 ·0	+ 0 ·8		0 ·467	0 ·064	0 ·403	52 ·2	+ 1 ·0	
July		62 ·4	58 ·2	55 ·1	29 ·743	35	4 ·2		7 ·6	54 ·8	− 0 ·3	+ 0 ·8	0 ·493	0 ·047	0 ·446	55 ·3	+ 0 ·2	+ 0 ·9
Aug.		62 ·0	57 ·6	53 ·4	29 ·664	27	4 ·4		7 ·9	54 ·1	+ 0 ·7		0 ·483	0 ·050	0 ·433	54 ·3	+ 0 ·9	
Sep.		62 ·8	59 ·3	55 ·7	29 ·905	21	3 ·4		6 ·1	56 ·7	+ 1 ·0		0 ·511	0 ·039	0 ·472	56 ·9	+ 1 ·2	
Oct.		61 ·4	55 ·7	51 ·9	29 ·712	5	5 ·7		10 ·3	51 ·1	− 0 ·8		0 ·453	0 ·064	0 ·389	51 ·2	− 0 ·7	
April	65 to 70	66 ·1	56 ·1	45 ·2	30 ·000	5	10 ·1	1 ·8	18 ·2	47 ·9	+ 2 ·7		0 ·459	0 ·115	0 ·344	47 ·6	+ 2 ·4	
May		66 ·5	58 ·1	47 ·1	29 ·875	7	8 ·4		15 ·1	51 ·4	+ 4 ·3		0 ·491	0 ·095	0 ·396	51 ·7	+ 4 ·6	
June		67 ·6	58 ·6	49 ·4	29 ·878	16	9 ·0		16 ·2	51 ·4	+ 2 ·0		0 ·499	0 ·102	0 ·397	51 ·8	+ 2 ·4	
July		67 ·0	59 ·4	52 ·8	29 ·728	12	7 ·6		13 ·7	53 ·3	+ 0 ·5	+ 1 ·7	0 ·513	0 ·086	0 ·427	54 ·0	+ 1 ·2	+ 2 ·2
Aug.		66 ·7	59 ·4	51 ·6	29 ·757	14	7 ·3		13 ·1	53 ·6	+ 2 ·0		0 ·513	0 ·083	0 ·430	54 ·2	+ 2 ·6	
Sept.		67 ·3	62 ·6	58 ·4	29 ·756	11	4 ·7		8 ·5	58 ·8	+ 0 ·4		0 ·570	0 ·053	0 ·517	59 ·6	+ 1 ·2	
Oct.		65 ·6	60 ·0	58 ·0	29 ·608	1	5 ·6		10 ·1	55 ·5	− 2 ·5		0 ·523	0 ·063	0 ·460	56 ·2	− 1 ·8	
April	70 to 75	74 ·6	59 ·1	39 ·0	29 ·846	1	15 ·5	1 ·7	26 ·4	48 ·2	+ 9 ·2		0 ·508	0 ·175	0 ·333	46 ·7	+ 7 ·7	
May		71 ·4	60 ·9	49 ·5	29 ·966	4	10 ·5		17 ·9	53 ·5	+ 4 ·0		0 ·539	0 ·119	0 ·420	53 ·5	+ 4 ·0	
June		71 ·7	60 ·8	51 ·4	29 ·890	6	10 ·9		18 ·5	53 ·2	+ 1 ·8		0 ·537	0 ·123	0 ·414	53 ·0	+ 1 ·6	
July		71 ·3	61 ·9	53 ·5	29 ·876	8	9 ·3		15 ·8	55 ·5	+ 2 ·0	+ 2 ·4	0 ·557	0 ·105	0 ·452	55 ·6	+ 2 ·1	+ 2 ·5
Aug.		72 ·5	63 ·7	57 ·0	29 ·655	1	8 ·8		15 ·0	57 ·5	+ 0 ·5		0 ·591	0 ·099	0 ·492	58 ·2	+ 1 ·2	
Sept.		70 ·9	63 ·7	57 ·0	29 ·994	4	7 ·3		12 ·4	58 ·5	+ 1 ·5		0 ·591	0 ·083	0 ·508	59 ·1	+ 2 ·1	
June	75 to 80	77 ·7	65 ·1	53 ·8	29 ·797	6	12 ·6	1 ·7	21 ·4	56 ·3	+ 2 ·5		0 ·619	0 ·142	0 ·477	57 ·2	+ 3 ·4	
July		76 ·8	68 ·3	61 ·2	29 ·855	6	8 ·5		14 ·6	62 ·2	+ 1 ·0	+ 1 ·7	0 ·688	0 096	0 ·592	63 ·7	+ 2 ·5	+ 3 ·0
June	80 to 85	81 ·2	68 ·5	59 ·5	29 ·529	2	12 ·7	1 ·6	20 ·3	60 ·9	+ 1 ·4		0 ·692	0 ·142	0 ·550	61 ·5	+ 2 ·0	
July		81 ·3	68 ·9	61 ·0	29 ·788	1	12 ·4		19 ·8	61 ·5	+ 0 ·5	+ 1 ·1	0 ·701	0 ·140	0 ·561	62 ·1	+ 1 ·1	+ 1 ·7

For the " evaporation-temperature below air-temperature" the means of all the differences of the dry and wet thermometer-readings were taken independently ; and, therefore, these quantities may sometimes differ 0°·1 from the differences of the mean values of the air-temperature and evaporation-temperature.

TABLE LXI.—Mean Daily Elastic Force of Vapour for every Civil Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·229	0·156	0·277	0·299	0·297	0·344	0·441	0·366	*S*	0·351	0·296	*S*
2	0·172	0·182	0·234	0·302	0·311	*S*	0·447	0·377	0·435	0·388	0·282	0·210
3	0·163	0·188	*S*	0·295	0·287	0·311	0·429	0·407	0·472	0·426	*S*	0·189
4	0·308	*S*	0·230	0·305	0·351	0·360	0·469	*S*	0·516	0·337	0·250	0·186
5	0·365	0·177	0·184	Good Friday.	*S*	0·397	0·450	0·452	0·544	0·400	0·254	0·160
6	0·299	0·189	0·167	0·279	0·363	0·431	0·421	0·470	0·516	*S*	0·260	0·145
7	*S*	0·240	0·186	*S*	0·363	0·412	*S*	0·392	0·546	0·282	0·298	0·155
8	0·221	0·200	0·194	0·258	0·376	0·393	0·418	0·382	*S*	0·263	0·324	*S*
9	0·180	0·207	0·280	0·282	0·385	*S*	0·401	0·377	0·478	0·351	0·321	0·146
10	0·257	0·198	*S*	0·305	0·342	0·385	0·429	0·400	0·432	0·394	*S*	0·159
11	0·259	*S*	0·275	0·267	0·335	0·376	0·444	*S*	0·375	0·360	0·238	0·144
12	0·262	0·175	0·200	0·286	*S*	0·380	0·414	0·481	0·409	0·411	0·356	0·140
13	0·242	0·156	0·196	0·319	0·385	0·464	0·456	0·467	0·398	*S*	0·392	0·135
14	*S*	0·176	0·235	*S*	0·414	0·368	*S*	0·418	0·449	0·375	0·350	0. 163
15	0·171	0·259	0·253	0·342	0·298	0·320	0·398	0·405	*S*	0·362	0·401	*S*
16	0·175	0·220	0 263	0·368	0·320	*S*	0·385	0·416	0·539	0·335	0·394	0·231
17	0·231	0·235	*S*	0·348	0·281	0·361	0·401	0·419	0·532	0·305	*S*	0·251
18	0·247	*S*	0·200	0·297	0·235	0·402	0·386	*S*	0·408	0·279	0·361	0·268
19	0·244	0·251	0·227	0·282	*S*	0·371	0·367	0·376	0·351	0·278	0·343	0·246
20	0·197	0·161	0·210	0·367	0·281	0·411	0·396	0·485	0·382	*S*	0·339	0·162
21	*S*	0·190	0·167	*S*	0·352	0·450	*S*	0·368	0·371	0·306	0·244	0·171
22	0·246	0·180	0·233	0·355	0·383	0·444	0·494	0·394	*S*	0·299	0·245	*S*
23	0·221	0·180	0·244	0·337	0·375	*S*	0·513	0·392	0·357	0·277	0·243	0·161
24	0·198	0·231	*S*	0·299	0·333	0·520	0·565	0·401	0·365	0·344	*S*	0·174
25	0·227	*S*	0·289	0·306	0·289	0·444	0·557	*S*	0·345	0·329	0·231	Christ. Day.
26	0·242	0·246	0·291	0·344	*S*	0·382	0·506	0·376	0·351	0·310	0·207	0·200
27	0·262	0·166	0·352	0·307	0·282	0·385	0·473	0·349	0·344	*S*	0·205	0·190
28	*S*	0·207	0·287	*S*	0·284	0·383	*S*	0·362	0·346	0·255	0·231	0·263
29	0·266	0·245	0·266	0·259	0·316	0·435	0·405	0·388	*S*	0·267	0·235	*S*
30	0·252		0·252	0·289	0·327	*S*	0·415	0·409	0·282	0·290	0·201	0·249
31	0·194		*S*		0·323		0·414	0·428		0·299		0·243

The letter *S* denotes that the day was Sunday.

TABLE LXII.—Mean Elastic Force of Vapour for those Days in each Month in which the Force was the Greatest and the Least.

1844, Month.	Mean Elastic Force of Vapour.		Days of the Month when the Mean Elastic Force was		1844, Month.	Mean Elastic Force of Vapour.		Days of the Month when the Mean Elastic Force was	
	Greatest.	Least.	Greatest.	Least.		Greatest.	Least.	Greatest.	Least.
	in.	in.	d	d		in.	in.	d	d
January	0·365	0·163	5	3	July	0·565	0·367	24	19
February	0·259	0·156	15	1 & 13	August	0·485	0·349	20	27
March	0·352	0·167	27	6 & 21	September	0·546	0·282	7	30
April	0·368	0·258	16	8	October	0·426	0·255	3	28
May	0·414	0·235	14	18	November	0·401	0·201	15	30
June	0·520	0·311	24	3	December	0·268	0·135	18	13

The mean elastic force was greater on July 24^{d} than on any other day in the year, being 0$^{in.}$·565 ; and it was less on December 13^{d} than on any other day, being 0$^{in.}$·135.

TABLE LXIII.—Mean Elastic Force of Vapour in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1844, Month.	Mean Elastic Force of Vapour.	1844, Month.	Mean Elastic Force of Vapour.
	in.		in.
January	0·234	July	0·441
February	0·201	August	0·406
March	0·238	September	0·422
April	0·308	October	0·329
May	0·329	November	0·289
June	0·397	December	0·190

The mean of all the monthly results is $0^{in.}315$.

The diminution of the force from November to December is larger than the change between any other two consecutive months; the change between September and October is nearly as large.

TABLE LXIV.—Mean Elastic Force of Vapour at every even Hour of Göttingen Mean Time in each Month.

1844, 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	0·227	0·193	0·223	0·279	0·298	0·365	0·408	0·381	0·394	0·308	0·275	0·178
16	0·227	0·190	0·220	0·269	0·293	0·361	0·407	0·373	0·388	0·307	0·275	0·178
18	0·226	0·186	0·219	0·266	0·296	0·371	0·415	0·370	0·382	0·303	0·273	0·182
20	0·223	0·182	0·227	0·298	0·328	0·400	0·441	0·400	0·397	0·304	0·271	0·184
22	0·227	0·194	0·238	0·320	0·352	0·412	0·452	0·423	0·435	0·330	0·279	0·183
0	0·236	0·204	0·250	0·337	0·358	0·423	0·459	0·429	0·456	0·343	0·291	0·191
2	0·237	0·213	0·253	0·346	0·370	0·432	0·470	0·431	0·453	0·346	0·301	0·191
4	0·239	0·208	0·248	0·335	0·366	0·432	0·469	0·431	0·442	0·343	0·296	0·192
6	0·233	0·205	0·244	0·330	0·344	0·412	0·461	0·419	0·431	0·339	0·289	0·190
8	0·231	0·205	0·235	0·309	0·321	0·394	0·445	0·405	0·415	0·333	0·287	0·188
10	0·231	0·201	0·231	0·303	0·306	0·376	0·423	0·398	0·408	0·330	0·279	0·186
12	0·229	0·193	0·227	0·295	0·302	0·366	0·414	0·390	0·396	0·323	0·276	0·183

The difference between the numbers contained in this table for any hour in November and for the same hour in December is larger than the difference between those for the same hour in any other two consecutive months (except between September and October at 20^h, 22^h, and 0^h). The hours in each month, at which the force exceeded the mean force for the month, were—

	h	h	h	h	h	h	h	h
In January			0,	2,	4,			
February			0,	2,	4,	6, and 8.		
March			0,	2,	4,	6.		
April		22,	0,	2,	4,	6, and 8.		
May		22,	0,	2,	4,	6.		
June	20,	22,	0,	2,	4,	6.		
July		22,	0,	2,	4,	6.		
August		22,	0,	2,	4,	6.		
September		22,	0,	2,	4,	6.		
October		22,	0,	2,	4,	6,	8, and 10.	
November			0,	2,	4.			
December			0,	2,	4.			

And at the remaining hours in each month the force was less than or equal to the mean force for the month.

The times at which the force was about the same as the mean force for the month are, in the winter months at 8^h and 10^h; in the summer months, at 20^h or after 20^h, and at or before 8^h.

TABLE LXV.—Hours of Göttingen Mean Time at which the Greatest and the Least Values of the Elastic Force of Vapour occurred in different Months, as inferred from the Monthly Means of the Two-hourly Observations; with the Forces and the Amounts of the Changes.

1844. Month.	First Maximum.		First Minimum.		Second Maximum.		Second Minimum.		Interval from First Maximum to First Minimum.		Interval from First Minimum to Second Maximum.		Interval from Second Maximum to Second Minimum.		Interval from Last Minimum to First Maximum.		Sums of the Changes.	Difference between the Greatest and the Least Elastic Force of Vapour.
	Hour.	Elastic Force of Vapour.	Hour.	Elastic Force of Vapour.	Hour.	Elastic Force of Vapour.	Hour.	Elastic Force of Vapour.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.		
	h	in.	h	in.	h	in.	h	in.	h	in.	h	in.	h	in.	h	in.	in.	in.
January	4	0·239	20	0·223					16	0·016					8	0·016	0·032	0·016
February	2	0·213	20	0·182					18	0·031					6	0·031	0·062	0·031
March	2	0·253	18	0·219					16	0·034					8	0·034	0·068	0·034
April	2	0·346	16	0·266					16	0·080					10	0·080	0·160	0·080
May	2	0·370	16	0·293					14	0·077					10	0·077	0·154	0·077
June	2 & 4	0·432	16	0·361					14 & 12	0·071					10 & 12	0·071	0·142	0·071
July	2	0·470	16	0·407					14	0·063					10	0·063	0·126	0·063
August	2 & 4	0·431	18	0·370					16 & 14	0·061					8 & 10	0·061	0·122	0·061
Septem.	0	0·456	18	0·382					18	0·074					6	0·074	0·148	0·074
October	2	0·346	18	0·303					16	0·043					8	0·043	0·086	0·043
Novem.	2	0·301	20	0·271					18	0·030					6	0·030	0·060	0·030
Decem.	4	0·192	14 & 16	0·178	20	0·184	22	0·183	10 & 12	0·014	4 +	0·006	2	0·001	6	0·009	0·030	0·014

This table shows that in every month a maximum force has taken place at 2^h or 4^h generally, and a minimum force at 16^h, 18^h, or 20^h generally, and that in one month only, viz., December, a double maximum and minimum took place, in every other month a single maximum and minimum having taken place.

The numbers in Table LXIV. are taken for March, April, and May, for Spring;
,, ,, June, July, and August, for Summer;
,, ,, September, October, and November, for Autumn;
,, ,, December, January, and February, for Winter.

and thus the following table is formed:—

TABLE LXVI.—Mean Elastic Force of Vapour at every Even Hour of Göttingen Mean Time in Quarterly Periods and for the Year.

1844, Hour of Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	in.	in.	in.	in.	in.
14	0·267	0·385	0·326	0·199	0·294
16	0·261	0·380	0·323	0·198	0·291
18	0·260	0·385	0·319	0·198	0·291
20	0·284	0·414	0·324	0·196	0·304
22	0·303	0·429	0·348	0·201	0·320
0	0·315	0·437	0·363	0·210	0·331
2	0·323	0·444	0·367	0·214	0·337
4	0·316	0·444	0·360	0·213	0·333
6	0·306	0·431	0·353	0·209	0·325
8	0·288	0·415	0·345	0·208	0·314
10	0·280	0·399	0·339	0·206	0·306
12	0·275	0·390	0·332	0·202	0·300

From this table it appears that the force is nearly constant at all periods between 0^h and 4^h, at which time the maximum force has taken place; the times at which the minimum force has taken place are 16^h in summer, 18^h in spring and autumn, and 20^h in winter; the force varies but little between 16^h and 20^h, except in the Summer period.

		in.
The mean force in Spring,	is	0·290
,, Summer,	is	0·413
,, Autumn,	is	0·342
,, Winter,	is	0·205
,, for the Year,	is	0·312

	h		in.
And the force at	14	is less than the mean force for the year by	0·018
,,	16	,,	0·021
,,	18	,,	0·021
,,	20	,,	0·008
,,	22	is greater than the mean force for the year by	0·008
,,	0	,,	0·019
,,	2	,,	0·025
,,	4	,,	0·021
,,	6	,,	0·013
,,	8	,,	0·002
,,	10	is less than the mean force for the year by	0·006
,,	12	,,	0·012

The mean elastic force of vapour at 8^h is, therefore, nearly the same as the mean elastic force for the year.

TABLE LXVII.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
1	2·7	1·9	3·2	3·4	3·4	3·9	4·9	4·2	*S*	4·0	3·4	*S*
2	2·1	2·2	2·7	3·4	3·5	*S*	5·0	4·3	4·9	4·4	3·3	2·5
3	2·0	2·2	*S*	3·4	3·3	3·6	4·8	4·6	5·3	4·8	*S*	2·2
4	3·6	*S*	2·7	3·5	4·0	4·0	5·3	*S*	5·8	3·8	2·9	2·2
5	4·2	2·1	2·2	Good Friday.	*S*	4·4	5·1	5·1	6·1	4·5	3·0	1·9
6	3·5	2·2	2·0	3·2	4·1	4·8	4·8	5·3	5·8	*S*	3·0	1·8
7	*S*	2·8	2·2	*S*	4·1	4·6	*S*	4·4	6·1	3·3	3·4	1·9
8	2·6	2·4	2·3	3·0	4·3	4·4	4·7	4·3	*S*	3·0	3·7	*S*
9	2·1	2·4	3·2	3·2	4·3	*S*	4·5	4·3	5·4	4·0	3·7	1·8
10	3·0	2·3	*S*	3·5	3·9	4·3	4·8	4·5	4·9	4·5	*S*	1·9
11	3·0	*S*	3·2	3·1	3·8	4·2	4·9	*S*	4·3	4·1	2·8	1·7
12	3·1	2·1	2·4	3·3	*S*	4·2	4·7	5·4	4·6	4·7	4·1	1·7
13	2·8	1·9	2·3	3·7	4·4	5·1	5·1	5·3	4·5	*S*	4·5	1·6
14	*S*	2·1	2·8	*S*	4·7	4·1	*S*	4·8	5·0	4·3	4·0	1·9
15	2·0	3·0	2·9	3·9	3·4	3·6	4·5	4·6	*S*	4·1	4·6	*S*
16	2·1	2·6	3·1	4·2	3·6	*S*	4·4	4·7	6·0	3·9	4·5	2·7
17	2·7	2·7	*S*	4·0	3·2	4·1	4·5	4·7	6·0	3·5	*S*	2·9
18	2·9	*S*	2·4	3·4	2·7	4·5	4·4	*S*	4·6	3·2	4·1	3·1
19	2·8	2·9	2·7	3·2	*S*	4·2	4·2	4·2	4·0	3·2	3·9	2·9
20	2·3	1·9	2·5	4·2	3·2	4·6	4·5	5·4	4·4	*S*	3·9	1·9
21	*S*	2·3	2·0	*S*	4·0	5·0	*S*	4·2	4·2	3·5	2·8	2·0
22	2·9	2·1	2·7	4·0	4·4	4·9	5·5	4·5	*S*	3·5	2·8	*S*
23	2·6	2·1	2·8	3·8	4·3	*S*	5·6	4·4	4·1	3·2	2·8	1·9
24	2·3	2·7	*S*	3·4	3·8	5·7	6·2	4·5	4·1	4·0	*S*	2·1
25	2·7	*S*	3·4	3·5	3·3	5·0	6·1	*S*	4·0	3·8	2·7	Christ. Day.
26	2·8	2·9	3·4	3·9	*S*	4·3	5·6	4·3	4·0	3·6	2·4	2·4
27	3·0	2·0	4·0	3·5	3·3	4·4	5·3	3·9	3·9	*S*	2·4	2·3
28	*S*	2·4	3·3	*S*	3·3	4·3	*S*	4·1	3·9	3·0	2·7	3·1
29	3·1	2·9	3·1	3·0	3·6	4·9	4·5	4·4	*S*	3·1	2·8	*S*
30	2·9		2·9	3·3	3·7	*S*	4·7	4·6	3·3	3·4	2·4	2·9
31	2·3		*S*		3·7		4·6	4·8		3·5		2·9

The letter *S* denotes that the day was Sunday.

TABLE LXVIII.—Mean Weight in Grains of Vapour in a Cubic Foot of Air, for those Days in each Month when the Mean Weight was the Greatest or the Least.

1844, Month.	Mean Weight in Grains of a Cubic Foot of Vapour. Greatest.	Mean Weight in Grains of a Cubic Foot of Vapour. Least.	Difference.	Days of the Month when the Mean Weight was Greatest.	Days of the Month when the Mean Weight was Least.
	gr.	gr.	gr.	d	d d
January	4·2	2·0	2·2	5	3 & 15
February	3·0	1·9	1·1	15	1, 13, & 20
March	4·0	2·0	2·0	27	6 & 21
April	4·2	3·0	1·2	16 & 20	8 & 29
May	4·7	2·7	2·0	14	18
June	5·7	3·6	2·1	24	3 & 15
July	6·2	4·2	2·0	24	19
August	5·4	3·9	1·5	12 & 20	27
September	6·1	3·3	2·8	5 & 7	30
October	4·8	3·0	1·8	3	8 & 28
November	4·6	2·4	2·2	15	26, 27, & 30
December	3·1	1·6	1·5	18 & 28	13

The mean weight of vapour in a cubic foot of air was greater on July 24^{d} than on any other day in the year, being $6^{gr.}2$; and it was less on December 13^{d} than on any other day, being $1^{gr.}6$.

TABLE LXIX.—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.

1844, Month.	Mean Weight of Vapour.	1844, Month.	Mean Weight of Vapour.	1844, Month.	Mean Weight of Vapour.
	gr.		gr.		gr.
January	2·7	May	3·8	September	4·8
February	2·4	June	4·4	October	3·8
March	2·8	July	4·9	November	3·3
April	3·5	August	4·6	December	2·2

The mean of all the monthly results is 3·6 grains.

TABLE LXX.—Mean Weight in Grains of Vapour in a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time in each Month.

1844, 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	2·66	2·29	2·61	3·23	3·43	4·15	4·62	4·34	4·50	3·56	3·19	2·12
16	2·66	2·26	2·58	3·12	3·40	4·12	4·62	4·27	4·43	3·55	3·19	2·12
18	2·66	2·20	2·56	3·10	3·42	4·22	4·71	4·23	4·38	3·50	3·17	2·16
20	2·63	2·16	2·65	3·43	3·75	4·50	4·95	4·53	4·53	3·51	3·15	2·18
22	2·67	2·29	2·77	3·64	3·99	4·60	5·03	4·75	4·91	3·78	3·24	2·17
0	2·76	2·41	2·89	3·79	4·02	4·71	5·08	4·79	5·09	3·90	3·37	2·25
2	2·76	2·49	2·91	3·87	4·14	4·75	5·19	4·79	5·04	3·92	3·47	2·25
4	2·78	2·44	2·86	3·75	4·10	4·76	5·17	4·80	4·93	3·89	3·41	2·26
6	2·73	2·41	2·82	3·72	3·87	4·57	5·11	4·68	4·83	3·87	3·35	2·26
8	2·71	2·42	2·74	3·52	3·65	4·41	4·98	4·56	4·70	3·82	3·33	2·22
10	2·72	2·38	2·70	3·47	3·50	4·25	4·77	4·51	4·63	3·79	3·24	2·20
12	2·69	2·29	2·65	3·39	3·47	4·15	5·67	4·43	4·51	3·73	3·20	2·17

The means of the numbers contained in this table are taken for March, April, and May, and called Spring;
for June, July, and August, and called Summer;
for September, October, and November, and called Autumn;
for December, January, and February, and called Winter;
and thus the following table is formed:

TABLE LXXI.—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.

Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr.	gr.
14	3·09	4·37	3·75	2·36	3·39
16	3·03	4·34	3·72	2·35	3·36
18	3·03	4·39	3·68	2·34	3·36
20	3·28	4·66	3·73	2·32	3·50
22	3·47	4·79	3·98	2·38	3·66
0	3·57	4·86	4·12	2·47	3·76
2	3·64	4·91	4·14	2·50	3·80
4	3·57	4·91	4·08	2·49	3·76
6	3·47	4·79	4·02	2·47	3·69
8	3·30	4·65	3·95	2·45	3·59
10	3·22	4·51	3·89	2·43	3·51
12	3·17	4·42	3·81	2·38	3·45

The mean weight of vapour in a cubic foot of air in Spring, was 3·3 grains
,, Summer, was 4·6
,, Autumn, was 3·9
,, Winter, was 2·4
,, for the Year, was 3·6

TABLE LXXII.—Mean Additional Weight of Vapour in Grains 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, 1844.	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	0·14	0·43	0·62	0·66	1·31	1·29	1·12	0·78	*S*	0·85	0·34	*S*
2	0·21	0·17	0·53	1·11	1·25	*S*	0·54	0·96	0·91	1·22	0·12	0·24
3	0·25	0·30	*S*	1·32	1·22	1·30	0·84	0·87	0·76	0·89	*S*	0·41
4	0·09	*S*	0·20	1·26	0·51	1·74	0·62	*S*	0·90	0·97	0·27	0·36
5	0·19	0·17	0·39	Good Friday	*S*	1·70	0·35	0·65	0·61	0·63	0·14	0·30
6	0·39	0·17	0·44	0·83	1·12	0·99	0·64	1·04	0·80	*S*	0·18	0·21
7	*S*	0·17	0·51	*S*	1·56	1·35	*S*	0·98	0·54	0·62	0·19	0·23
8	0·20	0·31	0·50	0·80	1·06	1·85	1·35	1·20	*S*	0·64	0·29	*S*
9	0·47	0·22	0·51	1·44	1·68	*S*	1·72	1·25	0·28	0·77	0·23	0·34
10	0·14	0·24	*S*	1·40	0·94	1·90	1·51	0·86	0·61	0·69	*S*	0·33
11	0·07	*S*	0·47	1·15	1·08	1·95	1·95	*S*	0·82	0·63	0·55	0·35
12	0·07	0·15	0·60	0·87	*S*	2·54	1·09	0·51	0·78	0·36	0·21	0·38
13	0·22	0·05	0·59	0·63	1·13	2·34	0·70	0·34	1·11	*S*	0·07	0·28
14	*S*	0·24	0·18	*S*	1·13	2·07	*S*	0·27	1·00	0·34	0·06	0·21
15	0·30	0·20	0·51	0·53	1·02	2·07	1·73	0·61	*S*	0·50	0·33	*S*
16	0·16	0·39	0·36	0·49	1·15	*S*	0·93	1·03	0·84	0·21	0·17	0·08
17	0·22	0·33	*S*	0·90	0·68	1·86	0·79	1·23	0·34	0·58	*S*	0·01
18	0·37	*S*	0·56	0·85	0·76	1·14	1·27	*S*	0·28	0·36	0·25	0·00
19	0·51	0·35	0·55	1·17	*S*	0·71	0·84	1·36	0·36	0·50	0·31	0·21
20	0·57	0·56	0·58	0·91	1·20	1·02	1·19	1·38	0·47	*S*	0·23	0·53

The letter *S* denotes that the day was Sunday.

TABLE LXXII.—*continued.*

Days of the Month, 1844.	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.
21	*S*	0·56	0·75	*S*	0·39	2·05	*S*	1·13	0·41	0·18	0·07	0·44
22	0·13	0·22	0·51	1·13	0·62	2·27	1·96	0·84	*S*	0·22	0·14	*S*
23	0·25	0·21	0·50	1·23	0·65	*S*	2·17	1·01	0·65	0·20	0·32	0·36
24	0·36	0·34	*S*	1·15	1·18	2·63	1·51	0·77	0·74	0·13	*S*	0·26
25	0·23	0·37	0·35	1·23	1·25	0·32	2·06	*S*	0·46	0·20	0·41	Christ. Day.
26	0·50	*S*	0·83	1·61	*S*	0·88	1·27	1·06	0·33	0·19	0·28	0·05
27	0·33	0·33	0·42	1·01	0·58	0·87	1·70	1·32	0·50	*S*	0·18	0·04
28	*S*	0·46	0·79	*S*	1·03	1·32	*S*	0·72	0·67	0·26	0·21	0·13
29	0·40	0·55	0·48	0·67	0·62	1·70	1·87	0·87	*S*	0·55	0·24	*S*
30	0·83	0·37	0·66	1·11	0·75	*S*	0·94	0·65	0·59	0·15	0·41	0·06
31	0·39		*S*		0·75		1·27	0·80		0·30		0·08

The letter *S* denotes that the day was Sunday.

TABLE LXXIII.—Mean Additional Weight of Vapour, in Grains, required for complete Saturation of a Cubic Foot of Air, for those Days in each Month, in which the Quantity was the Greatest and the Least.

1844, Month.	Mean Additional Weight of Vapour. Greatest.	Mean Additional Weight of Vapour. Least.	Difference.	Day of the Month when Greatest.	Day of the Month when Least.
	gr.	gr.	gr.	d	d d
January	0·83	0·07	0·76	30	11 & 12
February	0·56	0·05	0·51	20	13
March	0·83	0·18	0·65	26	14
April	1·61	0·49	1·12	26	16
May	1·68	0·39	1·29	9	21
June	2·63	0·32	2·31	24	25
July	2·17	0·35	1·82	23	5
August	1·38	0·27	1·11	20	14
September	1·11	0·28	0·83	13	9 & 18
October	1·22	0·13	1·09	2	24
November	0·55	0·06	0·49	11	14
December	0·53	0·00	0·53	20	18

TABLE LXXIV.—Mean Additional Weight of Vapour, in Grains, 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.

1844, Month.	Mean additional Weight of Vapour.	1844, Month.	Mean additional Weight of Vapour.
	gr.		gr.
January	0·30	July	1·26
February	0·29	August	0·91
March	0·52	September	0·63
April	1·02	October	0·49
May	0·99	November	0·24
June	1·59	December	0·24

The mean of all the monthly results is $0^{gr.}71$

TABLE LXXV.—Mean additional Weight of Vapour in Grains required for complete Saturation of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time in each Month.

1844, 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	0·24	0·22	0·31	0·40	0·35	0·56	0·48	0·33	0·14	0·21	0·20	0·23
16	0·22	0·21	0·32	0·30	0·25	0·46	0·34	0·26	0·10	0·21	0·18	0·23
18	0·21	0·20	0·29	0·21	0·23	0·51	0·31	0·20	0·08	0·16	0·16	0·20
20	0·22	0·23	0·28	0·45	0·59	1·12	0·83	0·54	0·15	0·23	0·16	0·20
22	0·22	0·29	0·53	1·16	1·17	1·93	1·71	1·22	0·58	0·47	0·20	0·26
0	0·38	0·44	0·80	1·85	1·74	2·68	2·31	1·66	1·22	0·86	0·35	0·32
2	0·53	0·51	0·97	2·36	2·03	3·35	2·34	1·95	1·72	1·08	0·40	0·36
4	0·47	0·57	0·97	2·39	2·04	3·07	2·38	1·79	1·74	1·05	0·40	0·32
6	0·38	0·35	0·71	1·88	1·75	2·66	2·04	1·61	1·17	0·66	0·31	0·25
8	0·30	0·19	0·52	1·15	1·20	1·86	1·29	1·02	0·56	0·43	0·21	0·26
10	0·21	0·20	0·40	0·70	0·75	1·12	0·87	0·64	0·34	0·35	0·21	0·24
12	0·22	0·22	0·37	0·50	0·53	0·82	0·72	0·46	0·26	0·24	0·21	0·22

The means of the numbers contained in this table are taken for March, April, and May, and called Spring;
June, July, and August, and called Summer;
September, October, and November, and called Autumn;
December, January, and February, and called Winter.

TABLE LXXVI.—Mean additional Weight of Vapour in Grains, 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.

1844, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr.	gr.
14	0·35	0·46	0·18	0·23	0·31
16	0·29	0·35	0·16	0·22	0·26
18	0·24	0·34	0·13	0·20	0·23
20	0·44	0·83	0·18	0·22	0·42
22	0·95	1·62	0·42	0·26	0·81
0	1·46	2·22	0·81	0·38	1·22
2	1·79	2·55	1·07	0·47	1·47
4	1·80	2·41	1·06	0·45	1·43
6	1·45	2·10	0·71	0·33	1·15
8	0·96	1·39	0·40	0·25	0·75
10	0·62	0·88	0·30	0·22	0·51
12	0·47	0·67	0·24	0·22	0·40

The mean additional weight required in Spring, was 0·90 grains
,, Summer, was 1·32 ,,
,, Autumn, was 0·47 ,,
,, Winter, was 0·29 ,,
,, for the Year, was 0·75 ,,

TABLE LXXVII.—Mean Degree of Humidity (complete Saturation = 1) for every Day in the Year, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·951	0·812	0·837	0·839	0·720	0·751	0·815	0·842	*S*	0·825	0·909	*S*
2	0·907	0·927	0·837	0·756	0·739	*S*	0·903	0·816	0·843	0·781	0·965	0·911
3	0·886	0·880	*S*	0·718	0·729	0·732	0·852	0·841	0·874	0·844	*S*	0·845
4	0·975	*S*	0·931	0·734	0·887	0·699	0·894	*S*	0·865	0·798	0·915	0·859
5	0·957	0·925	0·848	Good Friday.	*S*	0·723	0·936	0·887	0·909	0·878	0·955	0·864
6	0·898	0·929	0·819	0·795	0·786	0·830	0·881	0·835	0·878	*S*	0·944	0·893

The letter *S* denotes that the day was Sunday.

TABLE LXXVII.—*continued.*

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
7	*S*	0·943	0·811	*S*	0·724	0·774	*S*	0·819	0·919	0·840	0·948	0·889
8	0·929	0·884	0·820	0·788	0·800	0·704	0·776	0·782	*S*	0·826	0·928	*S*
9	0·820	0·917	0·864	0·690	0·720	*S*	0·723	0·773	0·808	0·839	0·941	0·837
10	0·955	0·907	*S*	0·712	0·805	0·694	0·761	0·840	0·889	0·866	*S*	0·851
11	0·977	*S*	0·871	0·727	0·779	0·683	0·717	*S*	0·838	0·867	0·834	0·832
12	0·978	0·933	0·797	0·791	*S*	0·625	0·810	0·914	0·856	0·928	0·951	0·816
13	0·928	0·974	0·796	0·853	0·794	0·686	0·880	0·939	0·802	*S*	0·985	0·853
14	*S*	0·897	0·939	*S*	0·804	0·665	*S*	0·946	0·834	0·926	0·985	0·902
15	0·871	0·938	0·852	0·880	0·769	0·635	0·717	0·883	*S*	0·892	0·933	*S*
16	0·929	0·869	0·894	0·895	0·760	*S*	0·824	0·820	0·877	0·948	0·964	0·972
17	0·925	0·893	*S*	0·814	0·826	0·685	0·852	0·793	0·931	0·858	*S*	0·997
18	0·886	*S*	0·808	0·800	0·782	0·799	0·774	*S*	0·943	0·900	0·943	1·000
19	0·847	0·893	0·828	0·733	*S*	0·856	0·832	0·757	0·918	0·865	0·927	0·932
20	0·802	0·772	0·809	0·821	0·728	0·819	0·789	0·934	0·903	*S*	0·944	0·783
21	*S*	0·911	0·723	*S*	0·912	0·709	*S*	0·786	0·912	0·951	0·976	0·822
22	0·957	0·911	0·842	0·781	0·875	0·684	0·736	0·841	*S*	0·940	0·953	*S*
23	0·912	0·862	0·850	0·756	0·868	*S*	0·722	0·814	0·864	0·941	0·898	0·841
24	0·866	0·880	*S*	0·748	0·762	0·684	0·805	0·855	0·848	0·968	*S*	0·888
25	0·920	*S*	0·905	0·739	0·726	0·940	0·748	*S*	0·896	0·945	0·869	Christ. Day.
26	0·849	0·897	0·801	0·707	*S*	0·831	0·816	0·800	0·924	0·950	0·897	0·979
27	0·902	0·811	0·906	0·777	0·849	0·834	0·755	0·749	0·887	*S*	0·931	0·983
28	*S*	0·815	0·807	*S*	0·760	0·766	*S*	0·851	0·855	0·914	0·928	0·959
29	0·883	0·885	0·866	0·817	0·854	0·740	0·707	0·834	*S*	0·849	0·920	*S*
30	0·778		0·815	0·749	0·833	*S*	0·833	0·877	0·846	0·957	0·853	0·980
31	0·854		*S*		0·831		0·785	0·858		0·920		0·973

The letter *S* denotes that the day was Sunday.

In this table there is only one day in which the air was completely saturated with moisture throughout the day; viz., December 18th. There are sixteen days in which the air was nearly saturated, viz., January 1st, 4th, 5th, 10th, 11th, 12th, 22nd, February 13th, October 21st, December 16th, 17th, 26th, 27th, 30th, and 31st.

TABLE LXXVIII.—Mean Degree of Humidity (complete Saturation = 1) on those Days in each Month when the Mean Degree of Humidity was Greatest or Least.

1844, Month.	Mean Degree of Humidity.		Extreme Range of the Daily Mean Degree of Humidity in each Month.	Days of the Month when the Mean Degree of Humidity was	
	Greatest.	Least.		Greatest.	Least.
				d	d
January	0·978	0·778	0·200	12	30
February	0·974	0·772	0·202	13	20
March	0·939	0·723	0·216	14	21
April	0·895	0·690	0·205	16	9
May	0·912	0·720	0·192	21	1 & 9
June	0·940	0·625	0·315	25	12
July	0·936	0·707	0·229	5	29
August	0·946	0·749	0·197	14	27
September	0·943	0·802	0·141	18	13
October	0·968	0·781	0·187	24	2
November	0·985	0·834	0·151	13 & 14	11
December	1·000	0·782	0·218	18	20

The day on which the degree of humidity was less than on any other day in the year was June 12, it being then 0·625; the difference between this and unity, viz., 0·375, represents the yearly range of the mean daily degree of moisture in the atmosphere.

TABLE LXXIX.—Mean Degree of Humidity (complete Saturation = 1) in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1844, Month.	Mean Degree of Humidity.	1844, Month.	Mean Degree of Humidity.
January	0 ·902	July	0 ·802
February	0 ·891	August	0 ·840
March	0 ·845	September	0 ·877
April	0 ·777	October	0 ·889
May	0 ·793	November	0 ·931
June	0 ·742	December	0 ·898

The mean of all the monthly results is 0 ·849.

TABLE LXXX.—Mean Degree of Humidity (complete Saturation = 1) at every Even Hour of Göttingen Mean Time in each Month.

1844, Hour, Göttingen Mean Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h 14	0 ·917	0 ·912	0 ·894	0 ·890	0 ·907	0 ·881	0 ·906	0 ·929	0 ·970	0 ·944	0 ·941	0 ·902
16	0 ·924	0 ·915	0 ·890	0 ·912	0 ·931	0 ·900	0 ·931	0 ·943	0 ·978	0 ·944	0 ·947	0 ·902
18	0 ·927	0 ·917	0 ·898	0 ·937	0 ·937	0 ·892	0 ·938	0 ·955	0 ·982	0 ·956	0 ·952	0 ·915
20	0 ·923	0 ·904	0 ·904	0 ·884	0 ·864	0 ·801	0 ·856	0 ·893	0 ·968	0 ·939	0 ·952	0 ·916
22	0 ·924	0 ·888	0 ·839	0 ·758	0 ·773	0 ·704	0 ·746	0 ·796	0 ·894	0 ·889	0 ·942	0 ·893
0	0 ·879	0 ·846	0 ·783	0 ·672	0 ·698	0 ·637	0 ·687	0 ·743	0 ·807	0 ·819	0 ·906	0 ·875
2	0 ·839	0 ·830	0 ·750	0 ·621	0 ·671	0 ·586	0 ·689	0 ·711	0 ·746	0 ·784	0 ·897	0 ·862
4	0 ·855	0 ·811	0 ·747	0 ·611	0 ·668	0 ·608	0 ·685	0 ·728	0 ·739	0 ·787	0 ·895	0 ·876
6	0 ·878	0 ·873	0 ·799	0 ·664	0 ·689	0 ·632	0 ·715	0 ·744	0 ·805	0 ·854	0 ·915	0 ·900
8	0 ·900	0 ·927	0 ·840	0 ·754	0 ·753	0 ·703	0 ·794	0 ·817	0 ·894	0 ·899	0 ·941	0 ·895
10	0 ·928	0 ·922	0 ·871	0 ·832	0 ·824	0 ·791	0 ·846	0 ·876	0 ·932	0 ·915	0 ·939	0 ·902
12	0 ·924	0 ·912	0 ·877	0 ·871	0 ·868	0 ·835	0 ·866	0 ·906	0 ·947	0 ·940	0 ·938	0 ·908

This table shews that at 4^h generally, the atmosphere is in its driest state; after 4^h it becomes more charged with moisture, which increases till about the time of sun rising, at which time the air is most saturated; the changes during the night hours are small.

The degree of humidity was less than the mean degree for the month in January at 0^h, 2^h, 4^h, 6^h, and slightly so at 8^h.
,, ,, in February at 22^h, 0^h, 2^h, 4^h, and 6^h.
,, ,, from March to August at 22^h, 0^h, 2^h, 4^h, 6^h, and 8^h.
,, ,, in September at 0^h, 2^h, 4^h, and 6^h.
,, ,, in October at 0^h, 2^h, 4^h, and 6^h.
,, ,, in November at 0^h, 2^h, 4^h, and 6^h.
,, ,, in December at 22^h, 0^h, 2^h, 4^h, and 8^h.

At the remaining hours in each month the degree of humidity was the same as, or exceeded, the mean for the month.

In the six winter months the atmosphere was in its mean state of humidity at 22^h and at 8^h. In the six summer months the atmosphere was in its mean state of humidity between 20^h and 22^h, and again between 8^h and 10^h, except in September, in which month it was so near 22^h and near 8^h.

TABLE LXXXI.—Hours of Göttingen Mean Time at which the Greatest and the Least Degree of Humidity took place, as inferred from the Monthly Means of the Two-hourly Observations, with the Degrees of Humidity (complete Saturation = 1), and the Amounts of the Changes.

1844, Month.	First Minimum.		First Maximum.		Second Minimum.		Second Maximum.		Third Minimum.		Third Maximum.	
	Hour.	Degree of Humidity.	Hour.	Degree of Humidity.	Hour.	Degree of Humidity.	Hour.	Degree of Humidity.	Hour.	Degree of Humidity.	Hour.	Degree of Humidity.
	h		h		h		h		h h		h	
January	2	0·839	10	0·928	14	0·917	18	0·927				
February	4	0·811	8	0·927	12 & 14	0·912	18	0·917				
March	4	0·747	14	0·894	16	0·890	20	0·904				
April	4	0·611	18	0·937								
May	4	0·668	18	0·937								
June	2	0·586	16	0·900								
July	0 to 4	0·687	18	0·938								
August	2	0·711	18	0·955								
September	4	0·739	18	0·982								
October	2	0·784	18	0·956								
November	4	0·895	8	0·941	12	0·938	18 & 20	0·952				
December	2	0·862	6	0·900	8	0·895	12	0·908	14 & 16	0·902	20	0·916

TABLE LXXXI.—*continued.*

1844, Month.	Interval from First Minimum to First Maximum.		Interval from First Maximum to Second Minimum.		Interval from Second Minimum to Second Maximum.		Interval from Second Maximum to Third Minimum.		Interval from Third Minimum to Third Maximum.		Interval from Last Maximum to First Minimum.		Sums of the Changes.	Difference between the Greatest and the Least Degree of Humidity.
	Time Elapsed.	Amount of Change	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.		
	h		h		h		h h		h h		h			
January	8	0·089	4	0·011	4	0·010					8	0·088	0·198	0·089
February	4	0·116	4 & 6	0·015	6 & 4	0·005					10	0·106	0·242	0·116
March	10	0·147	2	0·004	4	0·014					8	0·157	0·322	0·157
April	14	0·326									10	0·326	0·652	0·326
May	14	0·269									10	0·269	0·538	0·269
June	14	0·314									10	0·314	0·628	0·314
July	16	0·251									8	0·251	0·502	0·251
August	16	0·244									8	0·244	0·488	0·244
September	14	0·243									10	0·243	0·486	0·243
October	16	0·172									8	0·172	0·344	0·172
November	4	0·046	4	0·003	6 & 8	0·014					10 & 8	0·057	0·120	0·057
December	4	0·038	2	0·005	4	0·013	2 & 4	0·006	6 & 4	0·014	6	0·054	0·130	0·054

In July it is considered that there was but one maximum and one minimum, the latter continuing from 0^h to 4^h, and amounting to 0·687, which is the mean of the numbers at 0^h, 2^h, and 4^h.

From this table it appears, that during the winter months, from November to March both inclusive, the degree of moisture in the atmosphere was subject to a double increase and decrease, and in the remaining months there was only one increase and one decrease; the last column shews that the changes are much larger in the summer than at any other period of the year.

The means of the numbers in Table LXXX. are taken for March, April, and May, and are called Spring;
,, ,, June, July, and August, and called Summer;
,, ,, September, October, and November, and called Autumn;
,, ,, December, January, and February, and called Winter.

and thus the following table is formed:—

TABLE LXXXII.—Mean Degree of Humidity (complete Saturation = 1), at every Even Hour of Göttingen Mean Time in Quarterly Periods, and for the Year.

1844, Hour of Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h 14	0·897	0·905	0·952	0·910	0·916
16	0·911	0·925	0·956	0·914	0·927
18	0·924	0·928	0·963	0·920	0·934
20	0·884	0·850	0·953	0·914	0·900
22	0·790	0·749	0·908	0·902	0·837
0	0·718	0·689	0·844	0·867	0·779
2	0·681	0·662	0·809	0·844	0·749
4	0·675	0·674	0·807	0·847	0·751
6	0·717	0·697	0·858	0·884	0·789
8	0·782	0·771	0·911	0·907	0·843
10	0·842	0·838	0·929	0·917	0·882
12	0·872	0·869	0·942	0·915	0·899

Thus, it appears that at 2^h the least degree of humidity has prevailed, and at about 16^h or 18^h the greatest.

The mean degree of humidity in Spring, was 0·808
,, Summer, was 0·797
,, Autumn, was 0·903
,, Winter, was 0·895
,, for the Year, was 0·850

Comparing this last number with those contained in the last column of the above table, we find that

At 14^h	the degree of humidity was	0·066	greater than the mean of the year.
16	,,	0·077	,,
18	,,	0·084	,,
20	,,	0·050	,,
22	,,	0·013	less than the mean of the year.
0	,,	0·071	,,
2	,,	0·101	,,
4	,,	0·099	,,
6	,,	0·061	,,
8	,,	0·007	,,
10	,,	0·032	greater than the mean of the year.
12	,,	0·049	,,

And thus it appears, that the degree of humidity at 8^h agrees more nearly than at any other observation hour with the degree of humidity for the year.

TABLE LXXXIII.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.	gr.
1	545·3	560·3	531·7	543·7	542·5	531·3	523·4	529·0	*S*	535·1	532·7	*S*
2	554·5	551·6	537·7	538·1	541·7	*S*	526·0	528·6	532·3	523·7	531·6	555·3
3	560·4	555·8	*S*	532·3	540·1	535·2	525·6	520·1	527·5	524·5	*S*	557·5
4	537·2	*S*	541·1	528·7	538·5	529·7	520·5	*S*	521·9	533·3	536·1	560·7
5	529·9	552·0	552·8	Good Friday.	*S*	524·3	522·6	524·1	519·5	528·0	535·3	564·5
6	538·5	551·5	555·3	538·5	528·2	523·1	526·8	517·2	520·9	*S*	535·3	570·9
7	*S*	537·8	557·2	*S*	525·6	524·5	*S*	523·7	520·8	541·0	532·6	570·4
8	552·4	543·1	553·4	540·0	529·7	525·8	524·7	523·1	*S*	541·2	523·6	*S*
9	562·4	540·9	543·8	544·5	526·1	*S*	522·8	524·7	523·7	521·1	523·8	566·4
10	554·8	546·9	*S*	539·6	532·7	526·1	523·7	523·8	526·6	518·9	*S*	563·6
11	556·3	*S*	536·5	538·7	533·4	529·1	519·7	*S*	532·4	528·9	535·4	564·2
12	552·7	562·0	543·5	537·5	*S*	525·3	525·8	517·6	531·0	526·6	528·9	563·0
13	550·8	568·5	551·4	533·4	535·5	518·5	523·0	521·5	531·5	*S*	529·4	558·7
14	*S*	561·2	548·9	*S*	526·7	525·7	*S*	521·2	527·2	521·6	540·9	553·3
15	566·9	547·8	536·8	539·2	543·4	529·5	522·9	524·4	*S*	517·8	535·0	*S*
16	566·4	554·8	538·2	538·3	536·8	*S*	530·3	526·0	518·9	522·1	539·3	541·1
17	555·7	551·9	*S*	537·3	540·1	528·4	529·4	523·7	518·9	527·6	*S*	540·4
18	552·1	*S*	552·8	542·0	544·8	523·6	524·1	*S*	531·5	539·1	542·2	543·3
19	547·3	537·5	549·4	543·7	*S*	531·2	529·1	530·7	536·9	538·1	541·8	552·2
20	553·2	554·5	544·8	537·2	536·6	529·1	530·7	519·0	534·0	*S*	542·7	564·2
21	*S*	548·7	555·0	*S*	536·0	519·5	*S*	526·1	537·0	535·1	558·2	564·4
22	549·3	549·1	542·4	534·6	535·6	516·2	521·7	525·4	*S*	540·4	555·6	*S*
23	554·5	550·2	539·7	535·9	535·0	*S*	516·7	524·6	530·6	543·6	552·0	566·6
24	559·5	535·8	*S*	538·5	533·9	509·4	516·1	525·3	532·6	534·3	*S*	565·8
25	556·8	*S*	535·8	538·0	537·0	523·2	514·4	*S*	541·0	536·7	550·2	Christ. Day.
26	552·4	526·8	534·7	529·8	*S*	526·6	521·4	531·3	542·0	542·7	559·6	560·7
27	551·3	547·6	535·8	542·4	545·0	528·6	524·5	532·9	540·3	*S*	562·3	561·6
28	*S*	544·3	546·1	*S*	538·5	528·2	*S*	536·2	535·8	551·4	554·0	548·1
29	543·9	540·2	554·2	549·0	537·7	524·0	523·4	533·3	*S*	544·7	551·6	*S*
30	539·6		551·5	542·4	536·8	*S*	522·8	533·4	547·7	542·4	556·1	551·1
31	551·3		*S*		537·6		520·1	533·9		538·6		554·0

The letter *S* denotes that the day was Sunday.

The numbers in this and the following table were computed to two places of decimals, and inserted in the tables to one place by contraction; therefore, the numbers in the following table may frequently differ $0^{gr.}1$ from the numbers deduced from the above.

TABLE LXXXIV.—Table exhibiting the Times at which Differences greater than 5 Grains took place between the Mean Weights of a Cubic Foot of Air on Two consecutive Days, with the Amounts of the Differences, estimated positive when the Weight on the Second Day was the greater.

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
January.		February.		March.		April.		May.		June.	
	gr.		gr.		gr.		gr.		gr.		gr.
1 & 2	+ 9·2	1 & 2	− 8·7	1 & 2	+ 6·0	1 & 2	− 5·6	9 & 10	+ 6·6	3 & 4	− 5·5
2 & 3	+ 5·9	6 & 7	−13·7	4 & 5	+11·7	2 & 3	− 5·8	13 & 14	− 8·8	4 & 5	− 5·4
3 & 4	−23·2	7 & 8	+ 5·3	8 & 9	− 9·6	19 & 20	− 6·5	14 & 15	+16·7	12 & 13	− 6·8
4 & 5	− 7·3	9 & 10	+ 6·0	11 & 12	+ 7·0	25 & 26	− 8·2	15 & 16	− 6·6	13 & 14	+ 7·2
5 & 6	+ 8·6	12 & 13	+ 6·5	12 & 13	+ 7·9	26 & 27	+12·6	27 & 28	− 6·5	18 & 19	+ 7·6
8 & 9	+10·0	13 & 14	− 7·3	14 & 15	−12·1	29 & 30	− 6·6	31 & 32	− 6·3	20 & 21	− 9·6
9 & 10	− 7·6	14 & 15	−13·4	20 & 21	+10·2					24 & 25	+13·8
16 & 17	−10·7	15 & 16	+ 7·0	21 & 22	−12·6						
19 & 20	+ 5·9	19 & 20	+17·0	27 & 28	+10·3						
22 & 23	+ 5·2	20 & 21	− 5·8	28 & 29	+ 8·1						
23 & 24	+ 5·0	23 & 24	−14·4								
30 & 31	+11·7	26 & 27	+20·8								
31 & 32	+ 9·0	29 & 30	− 8·5								

TABLE LXXXIV.—*concluded.*

Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.	Between what Days.	Difference.
July.		August.		September.		October.		November.		December.	
	gr.		gr.		gr.		gr.		gr.		gr.
3 & 4	−5·1	2 & 3	− 8·5	3 & 4	− 5·6	1 & 2	−11·4	7 & 8	− 9·0	5 & 6	+ 6·4
11 & 12	+6·1	5 & 6	− 6·9	10 & 11	+ 5·8	3 & 4	+ 8·8	11 & 12	− 6·5	13 & 14	− 5·4
15 & 16	+7·4	6 & 7	+ 6·5	17 & 18	+12·6	4 & 5	− 5·3	13 & 14	+11·5	18 & 19	+ 8·9
17 & 18	−5·3	19 & 20	−11·7	18 & 19	+ 5·4	8 & 9	−20·1	14 & 15	− 5·9	19 & 20	+12·0
18 & 19	+5·0	20 & 21	+ 7·1	24 & 25	+ 8·4	10 & 11	+10·0	20 & 21	+15·5	27 & 28	−13·5
22 & 23	−5·0			30 & 31	−12·6	16 & 17	+ 5·5	25 & 26	+ 9·4		
25 & 26	+7·0					17 & 18	+11·5	27 & 28	− 8·3		
31 & 32	+8·9					21 & 22	+ 5·3				
						23 & 24	− 9·3				
						25 & 26	+ 6·0				
						28 & 29	− 6·7				
						31 & 32	− 5·9				

In addition to the instances contained in this table, differences between January 6^{d} and 8^{d}, 13^{d} and 15^{d}, February 10^{d} and 12^{d}, 17^{d} and 19^{d}, March 16^{d} and 18^{d}, May 4^{d} and 6^{d}, September 28^{d} and 30^{d}, October 5^{d} and 7^{d}, November 9^{d} and 11^{d}, and December 14^{d} and 16^{d} (Sundays intervening), amounting respectively to $+13^{gr.}9$, $+16^{gr.}1$, $+15^{gr.}1$, $-14^{gr.}4$, $+14^{gr.}6$, $-10^{gr.}3$, $+11^{gr.}9$, $+13^{gr.}0$, $+11^{gr.}6$, $-12^{gr.}2$, took place. Assuming that the difference for each day in the above intervals amounted to more than $6^{gr.}$, $8^{gr.}$, $7^{gr.}$, $7^{gr.}$, $7^{gr.}$, $5^{gr.}$, $5^{gr.}$, $6^{gr.}$, $5^{gr.}$, and $6^{gr.}$ respectively, we have that :—

During the year there were	29	instances in which the difference exceeded		5 grains and was less than		6 grains	
,,	23	,,	,,	6	,,	7	,,
,,	17	,,	,,	7	,,	8	,,
,,	14	,,	,,	8	,,	9	,,
,,	7	,,	,,	9	,,	10	,,
,,	5	,,	,,	10	,,	11	,,
,,	6	,,	,,	11	,,	12	,,
,,	6	,,	,,	12	,,	13	,,
,,	4	,,	,,	13	,,	14	,,
,,	4	,,	,,	14	,,	20	,,
,,	3	,,	,,	20			

being in all 118 instances out of 365 (including those cases in which Sunday intervened), in which the difference of the mean weights of a cubic foot of air on two consecutive days has amounted to 5 grains or more.

TABLE LXXXV.—Table exhibiting the Times at which the Greatest and Least Differences took place in each Month between the Mean Weight in Grains of a Cubic Foot of Air, on Two consecutive Civil Days, with the Amounts of the Difference, estimated positive when the Mean Weight was greater on the Second Day.

1844, Month.	Difference between the Mean Weights of a Cubic Foot of Air on consecutive Days.		Days of the Month between which the Difference of the Mean Weights of a Cubic Foot of Air was	
	Greatest.	Least.	Greatest.	Least.
	gr.	gr.	d d	d d
January	− 23·2	− 0·5	3 & 4	15 & 16
February	+ 20·8	+ 0·4	26 & 27	21 & 22
March	− 12·6	− 1·1	21 & 22	25 & 26
April	+ 12·6	− 0·5	26 & 27	24 & 25
May	+ 16·7	− 0·4	14 & 15	21 & 22
June	+ 13·8	− 0·4	24 & 25	27 & 28
July	+ 8·9	− 0·4	31 & 32	2 & 3
August	− 11·7	+ 0·1	19 & 20	29 & 30
September	− 12·6	0·0	30 & 31	16 & 17
October	− 20·1	+ 0·2	8 & 9	7 & 8
November	+ 15·5	0·0	20 & 21	5 & 6
December	− 13·5	+ 0·2	27 & 28	20 & 21

In September a difference of the same amount as inserted above, but with a contrary sign, viz. $+12^{gr.}6$, took place between the 17th and 18th days.

TABLE LXXXVI.—Mean Weight in Grains of a Cubic Foot of Air, for those Days in each Month when the Mean Weight was the Greatest and the Least.

1844, Month.	Mean Weight in Grains of a Cubic Foot of Air.		Difference.	Days of the Month when the Mean Weight was	
	Greatest.	Least.		Greatest.	Least.
	gr.	gr.	gr.	d	d
January	566 ·9	529 ·9	37 ·0	15	5
February	568 ·5	526 ·8	41 ·7	13	26
March	557 ·2	531 ·7	25 ·5	7	1
April	549 ·0	528 ·7	20 ·3	29	4
May	545 ·0	525 ·6	19 ·4	27	7
June	535 ·2	509 ·4	25 ·8	3	24
July	530 ·7	514 ·4	16 ·3	20	25
August	536 ·2	517 ·2	19 ·0	28	6
September	547 ·7	518 ·9	28 ·8	30	16 & 17
October	551 ·4	517 ·8	33 ·6	28	15
November	562 ·3	523 ·6	38 ·7	27	8
December	570 ·9	540 ·4	30 ·5	6	17

The day in the year on which the mean weight of a cubic foot of air was the greatest was December 6; and the day on which it was the least was June 24; the weights were respectively 570 ·9 grains and 509 ·4 grains: the difference of these numbers is 61 ·5 grains.

TABLE LXXXVII.—Mean Weight in Grains of a Cubic Foot of Air in each Month, deduced from the Mean of all the Two-hourly Observations in each Month.

1844, Month.	Mean Weight.	1844, Month.	Mean Weight.	1844, Month.	Mean Weight.
	gr.		gr.		gr.
January	551 ·7	May	536 ·1	September	530 ·5
February	548 ·8	June	525 ·4	October	533 ·3
March	545 ·0	July	523 ·4	November	541 ·8
April	538 ·5	August	526 ·0	December	558 ·5

The mean of all the monthly results is 538 ·3 grains.

TABLE LXXXVIII.—Mean Weight in Grains of a Cubic Foot of Air, at every Even Hour of Göttingen Mean Time in each Month.

1844, 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	552 ·2	550 ·2	548 ·7	546 ·4	543 ·8	533 ·8	529 ·8	531 ·9	535 ·2	537 ·3	542 ·8	559 ·9
16	552 ·4	550 ·2	548 ·9	548 ·5	545 ·0	534 ·8	530 ·8	532 ·3	536 ·0	536 ·3	543 ·0	559 ·9
18	552 ·5	551 ·7	549 ·6	549 ·6	545 ·0	533 ·7	530 ·3	533 ·1	536 ·6	537 ·7	543 ·3	559 ·6
20	552 ·8	552 ·0	548 ·5	544 ·6	539 ·5	527 ·7	525 ·4	528 ·5	534 ·9	537 ·6	543 ·6	559 ·4
22	552 ·9	549 ·8	544 ·4	537 ·2	533 ·5	522 ·7	520 ·4	522 ·9	529 ·2	533 ·2	542 ·7	558 ·6
0	550 ·0	546 ·4	540 ·6	531 ·7	529 ·3	518 ·5	517 ·3	520 ·3	524 ·6	529 ·3	540 ·0	556 ·7
2	547 ·9	544 ·0	538 ·9	527 ·8	526 ·9	515 ·5	516 ·6	518 ·9	522 ·3	527 ·1	538 ·1	556 ·1
4	548 ·3	543 ·9	539 ·3	527 ·9	527 ·1	516 ·1	516 ·0	519 ·6	522 ·8	527 ·5	538 ·7	556 ·5
6	549 ·8	547 ·0	542 ·1	530 ·9	529 ·6	518 ·8	517 ·9	521 ·2	526 ·4	530 ·4	540 ·6	558 ·4
8	550 ·9	548 ·8	545 ·5	537 ·2	535 ·3	527 ·3	522 ·2	525 ·2	530 ·8	532 ·6	541 ·7	558 ·4
10	551 ·8	549 ·8	547 ·1	541 ·5	539 ·9	529 ·3	526 ·4	528 ·5	532 ·8	533 ·4	542 ·6	559 ·0
12	552 ·1	551 ·6	548 ·1	543 ·9	541 ·9	532 ·0	527 ·9	530 ·2	534 ·4	535 ·5	543 ·1	559 ·7

This table shews that the mean weight of a cubic foot of air is less than the mean weight for the month :—

	h	h	h	h	h	h
In January,	0,	2,	4,	6, and 8		
February,	0,	2,	4, and 6			
March,	22,	0,	2,	4, and 6		
April and May,	22,	0,	2,	4,	6, and 8	
June	22,	0,	2,	4, and 6		
July and August,	22,	0,	2,	4,	6, and 8	
September,	22,	0,	2,	4, and 6		
October,	22,	0,	2,	4,	6, and 8	
November and December	0,	2,	4,	6, and 8 ;		

and that at the other hours the weight exceeds, or is equal to, the mean for the month.

TABLE LXXXIX.—Hours of Göttingen Mean Time at which the Weight of a Cubic Foot of Air was the Greatest and the Least in different Months, as inferred from the Monthly Means of the Two-hourly Observations, with the Weights and *Amounts of the Changes.*

1844, Month.	First Minimum.		First Maximum.		Second Minimum.		Second Maximum.		Interval from First Minimum to First Maximum.		Interval from First Maximum to Second Minimum.		Interval from Second Minimum to Second Maximum.		Interval from Last Maximum to First Minimum.		Sums of the Changes.	Difference between the Greatest and the Least Weights of a Cubic *Foot of* Air.
	Hour.	Weight of a Cubic Foot of Air.	Hour.	Weight of a Cubic Foot of Air.	Hour.	Weight of a Cubic Foot of Air.	Hour.	Weight of a Cubic Foot of Air.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.	Time Elapsed.	Amount of Change.		
	h	gr.	h	gr.	h h	gr.	h	gr.	h	gr.	h h	gr.	h h	gr.	h	gr.	gr.	gr.
January	2	547·9	22	552·9					20	5·0					4	5·0	10·0	5·0
February	4	543·9	12	551·6	14 & 16	550·2	20	552·0	8	7·7	2 & 4	1·4	6 & 4	1·8	8	8·1	19·0	8·1
March	2	538·9	18	549·6					16	10·7					8	10·7	21·4	10·7
April	2	527·8	18	549·6					16	21·8					8	21·8	43·6	21·8
May	2	526·9	16 & 18	545·0					14+	18·1					10 & 8	18·1	36·2	18·1
June	2	515·5	16	534·8					14	19·3					10	19·3	38·6	19·3
July	4	516·0	16	530·8					12	14·8					12	14·8	29·6	14·8
August	2	518·9	18	533·1					16	14·2					8	14·2	28·4	14·2
Septem.	2	522·3	18	536·6					16	14·3					8	14·3	28·6	14·3
October	2	527·1	14	537·3	16	536·3	18	537·7	12	10·2	2	1·0	2	1·4	8	10·6	23·2	10·6
Novem.	2	538·1	12	543·1	14	542·8	20	543·6	10	5·0	2	0·3	6	0·8	6	5·5	11·6	5·5
Decem.	2	556·1	14 & 16	559·9					12+	3·8					12 & 10	3·8	7·6	3·8

This table shews, that at 2^h in every month, except in February and July, the weight of a cubic foot of air was less than at any other time in the day, and that at 16^h, 18^h, or 20^h, generally, the weight of a cubic foot of air was the greatest. In nine of the months one maximum is shewn and one minimum : in the other three months there are two maxima and minima.

The means of the numbers in Table LXXXVIII. are taken for March, April, and May, and called Spring;
,, ,, June, July, and August, and called Summer;
,, ,, September, October, and November, and called Autumn;
,, ,, December, January, and February, and called Winter;

and thus the following table is formed :—

TABLE XC.—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.

1844, Hour, Göttingen Mean Time.	Spring.	Summer.	Autumn.	Winter.	For the Year.
h	gr.	gr.	gr.	gr.	gr.
14	546 ·3	531 ·8	538 ·4	554 ·1	542 ·7
16	547 ·5	532 ·6	538 ·4	554 ·2	543 ·2
18	548 ·1	532 ·4	539 ·2	554 ·6	543 ·6
20	544 ·2	527 ·2	538 ·7	554 ·7	541 ·2
22	538 ·4	522 ·0	535 ·0	553 ·8	537 ·3
0	533 ·9	518 ·7	531 ·3	551 ·0	533 ·7
2	531 ·2	517 ·0	529 ·2	549 ·3	531 ·7
4	531 ·4	517 ·2	529 ·7	549 ·6	532 ·0
6	534 ·2	519 ·3	532 ·5	551 ·7	534 ·4
8	539 ·3	524 ·9	535 ·0	552 ·7	538 ·0
10	542 ·8	528 ·1	536 ·3	553 ·5	540 ·2
12	544 ·6	530 ·0	537 ·7	554 ·5	541 ·7

The even hour here shewn as that at which the mean weight of a cubic foot of air is the least, is 2^h in spring, summer, autumn, and winter; and the hours at which it is the greatest, are 16^h in summer, 18^h in spring and autumn, and 20^h in winter.

			gr.
The mean weight in	Spring,	was	540 ·2
,,	Summer,	was	525 ·1
,,	Autumn,	was	535 ·1
,,	Winter,	was	552 ·8
,,	for the Year,	was	538 ·3

	h			
The mean weight at	14	exceeds the mean weight for the year by	4 ·4	grains
	16	,, ,,	4 ·9	,,
	18	,, ,,	5 ·3	,,
	20	,, ,,	2 ·9	,,
	22	is less than the mean weight for the year by	1 ·0	,,
	0	,, ,,	4 ·6	,,
	2	,, ,,	6 ·6	,,
	4	,, ,,	6 ·3	,,
	6	,, ,,	3 ·9	,,
	8	,, ,,	0 ·3	,,
	10	exceeds the mean weight for the year by	1 ·9	,,
	12	,, ,,	3 ·4	,,

At 8^h the difference from the yearly mean is small.

Abstracts of the Results by Osler's Anemometer.

In every month, the mean force of the wind and its direction (supposing the circumference divided into 16 equal parts) at every hour were 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 those 16 directions, with the pressures at the corresponding times. A second abstract was formed, by taking the sums of the pressures of the wind in each direction at every hour, as inserted in the first abstract; and the number of hours during which the wind blew in that direction, at the hour in the month, was inserted opposite to the sum of the pressures.

Adding together the numbers in each month for every hour, the following table was formed:—

TABLE XCI.—Sums of the Pressures of the Wind 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 $\frac{1}{4}$ lb. on the Square Foot; (and general Range of Hours during which it blew in each Direction) the Direction being referred to Sixteen Points of the Azimuthal Circle.

1844, Month.	N.			N.N.E.			N.E.			E.N.E.		
	Sums of Pressures.	No. of Hours.	General Range of Hours.	Sums of Pressures.	No. of Hours.	General Range of Hours.	Sums of Pressures.	No. of Hours.	General Range of Hours.	Sums of Pressures.	No. of Hours.	General Range of Hours.
	lbs.	h	h h	lbs.	h	h h h	lbs.	h	h h	lbs.	h	h
Jan.	4	5	from 6 to 10				$5\frac{1}{2}$	7	from 1 to 9	1	1	at 8
Feb.	$37\frac{3}{4}$	21	from 8 to 1	$\frac{1}{2}$	1	at 4	7	6	from 22 to 3	$\frac{1}{2}$	1	at 21
March	20	10	at 0, & from 3 to 8	10	4	at 23, & from 8 to 10	$58\frac{1}{2}$	27	at all hours, except 18, 19, & 20	$64\frac{1}{2}$	23	at all hours, except 0, 5, 10, & 11
April	3	3	from 2 to 4	3	2	at 8 & 12	5	3	at 20, 9, & 10	$2\frac{1}{2}$	3	at 1 & 6
May	186	93	at all hours	$224\frac{1}{2}$	89	at all hours	$57\frac{1}{2}$	37	at all hours, except 10, 11, & 12	$4\frac{1}{2}$	4	from 3 to 6
June	$2\frac{3}{4}$	5	from 6 to 10	$1\frac{1}{4}$	3	at 20, 21, & 0				$1\frac{1}{2}$	3	from 0 to 2
July	$\frac{3}{4}$	1	at 6	$\frac{1}{4}$	1	at 7				$\frac{1}{2}$	1	at 3
Aug.												
Sep.	$9\frac{3}{4}$	8	from 23 to 5, & at 12	$2\frac{3}{4}$	5	at 22 & 23, & from 3 to 5	$15\frac{3}{4}$	30	from 19 to 8	13	18	from 21 to 11
Oct.	$15\frac{1}{2}$	21	from 22 to 17							2	2	at 2 & 3
Nov.	2	4	from 7 to 10	$4\frac{1}{2}$	7	from 22 to 4	4	8	from 13 to 21	$4\frac{1}{2}$	6	at 16, 17, & 1, & from 10 to 12
Dec.	$2\frac{1}{4}$	5	at 1, 2, & 5	$27\frac{1}{4}$	36	at all hours, except 10, 11, & 12	48	46	at all hours, except 6, 7, & 11	$96\frac{1}{4}$	61	at all hours

1844, Month.	E.			E.S.E.			S.E.			S.S.E.		
	lbs.	h	h h	lbs.	h	h h h	lbs.	h	h h h	lbs.	h	h h
Jan.							$\frac{1}{4}$	1	at 1			
Feb.												
March	$30\frac{1}{4}$	18	from 23 to 11	$\frac{1}{4}$	1	at 7						
April	$4\frac{1}{2}$	5	at 22, 0, 5, 7, & 8	4	3	at 21, 23, & 2	3	3	at 0, 3, & 4			
May	$\frac{1}{2}$	1	at 0	3	5	from 1 to 4						
June	$1\frac{1}{2}$	3	at 3 & 4				$\frac{1}{2}$	1	at 14			
July	2	3	from 4 to 6									
Aug.												
Sep.												
Oct.	$3\frac{3}{4}$	7	from 23 to 5	$\frac{1}{2}$	1	at 23				27	13	from 22 to 10
Nov.	$97\frac{1}{2}$	36	at all hours									
Dec.	$24\frac{3}{4}$	29	at all hours, except 15 & 18	$4\frac{1}{4}$	8	at 8, 12, 13, & 18, & from 20 to 23						

TABLE XCI.—*continued.*

1844, Month.	S. Sums of Pressures.	S. No. of Hours.	S. General Range of Hours.	S.S.W. Sums of Pressures.	S.S.W. No. of Hours.	S.S.W. General Range of Hours.	S.W. Sums of Pressures.	S.W. No. of Hours.	S.W. General Range of Hours.	W.S.W. Sums of Pressures.	W.S.W. No. of Hours.	W.S.W. General Range of Hours.
	lbs.	h	h h	lbs.	h	h h h	lbs.	h	h h	lbs.	h	h h
Jan.	31	12	from 5 to 16	17	14	from 3 to 5, from 10 to 14, & from 17 to 22	28	16	from 21 to 2, & from 6 to 11	$24\frac{3}{4}$	20	from 17 to 7, & from 12 to 14
Feb.	$43\frac{1}{2}$	25	at 22, & from 0 to 12	37	25	from 13 to 15, & from 18 to 19	$93\frac{1}{2}$	28	at all hours, except 17, 18, 20, & 3	68	41	from 13 to 6, & at 10
March	6	3	from 13 to 15	57	26	at all hours except 6 & 9	175	68	at all hours	$144\frac{1}{2}$	41	at all hours, except 7, 8, 10, & 11
April	7	5	from 8 to 11	$10\frac{1}{4}$	11	from 23 to 1, at 3 & 4, from 6 to 8, & at 12	$26\frac{1}{4}$	21	at 23, from 1 to 6, & from 11 to 13	$12\frac{1}{2}$	14	from 0 to 2, from 5 to 7, & from 13 to 17
May												
June				2	2	at 19 & 23	$42\frac{1}{4}$	41	at all hours except 14, 17, 6, & 8.	78	43	from 20 to 10, & at 12, 13, & 16
July				12	4	from 1 to 3	$31\frac{1}{2}$	18	from 23 to 1, & from 6 to 16	56	29	at all hours, except 22, 23, & 12
Aug.	$\frac{3}{4}$	1	at 15	$22\frac{1}{4}$	19	from 8 to 21, & at 23	$101\frac{3}{4}$	40	from 22 to 9, & from 11 to 18	$87\frac{1}{2}$	40	from 19 to 7, & at 10 & 11
Sep.	$\frac{1}{4}$	1	at 19	$4\frac{3}{4}$	5	from 20 to 23, & at 2	13	18	from 22 to 8	$7\frac{1}{4}$	9	at 19, from 21 to 23, & at 1, 5, 6, and 9
Oct.	$19\frac{1}{4}$	20	at all hours, except 14, 17, 18, 19, 22, 23, 8 & 9	$60\frac{3}{4}$	50	at 17, & from 20 to 12	$23\frac{1}{2}$	32	from 20 to 14, & at 17	$67\frac{3}{4}$	32	from 15 to 20, & from 22 to 10
Nov.	$8\frac{1}{2}$	8	from 1 to 8	41	24	from 18 to 2, & from 9 to 16	$75\frac{1}{2}$	32	from 17 to 21, & from 2 to 13	$24\frac{3}{4}$	12	from 3 to 7, & from 13 to 16
Dec.												

1844, Month.	W. Sums of Pressures.	W. No. of Hours.	W. General Range of Hours.	W.N.W. Sums of Pressures.	W.N.W. No. of Hours.	W.N.W. General Range of Hours.	N.W. Sums of Pressures.	N.W. No. of Hours.	N.W. General Range of Hours.	N.N.W. Sums of Pressures.	N.N.W. No. of Hours.	N.N.W. General Range of Hours.
	lbs.	h	h h	lbs.	h	h h	lbs.	h	h h	lbs.	h	h h
Jan.	36	24	from 22 to 8, & from 11 to 18	76	26	from 23 to 19	63	25	from 22 to 13, & at 16 & 19	22	14	from 17 to 5, & at 12
Feb.	22	16	from 18 to 20, from 22 to 2, at 4, from 6 to 7, & from 9 to 10	$18\frac{3}{4}$	14	from 20 to 0, at 5, & from 11 to 17	13	11	from 17 to 19, from 23 to 1, at 6, & from 10 to 12	$30\frac{1}{4}$	21	from 23 to 4, from 7 to 10, & from 13 to 20
March	72	26	from 21 to 2, from 5 to 13, & from 15 to 18	$42\frac{1}{2}$	11	from 22 to 3, at 10, 16, 19, & 20	31	21	from 23 to 15, & at 21	$31\frac{1}{2}$	12	from 1 to 4, from 6 to 9, & from 10 to 12
April	10	12	at 23 & 0, from 2 to 3, & from 16 to 21	2	2	at 22, & at 1						
May												
June	43	28	from 18 to 1, & from 3 to 10	$6\frac{1}{2}$	4	at 22, 2, 5, & 6	$7\frac{1}{2}$	5	at 20, 21, 1 & 2	13	10	from 23 to 6, & at 10
July	$74\frac{3}{4}$	30	from 21 to 7	$5\frac{3}{4}$	4	from 3 to 5	$6\frac{1}{4}$	7	at 0, 2, & from 4 to 6	$5\frac{1}{2}$	9	from 23 to 7
Aug.	$69\frac{1}{4}$	41	from 22 to 7, at 10, & from 12 to 18	34	23	from 19 to 4, & at 6	$25\frac{1}{2}$	26	from 20 to 23, & from 2 to 9	$1\frac{1}{2}$	2	at 4 & 6
Sep.	$5\frac{3}{4}$	6	at 20, 21, 0, & from 2 to 4									
Oct.	$15\frac{1}{2}$	10	at 21, 22, from 0 to 4, at 8 & 11	9	3	at 3, 6, & 7	5	3	at 0, 4, & 5	$4\frac{3}{4}$	7	from 18 to 21, & at 1 & 9
Nov.	$16\frac{1}{4}$	14	at 21, 5, & 6, & from 9 to 19	$1\frac{1}{2}$	1	at 4	14	6	from 22 to 3			
Dec.												

The largest number contained in this table is that ranging with May, and under N. N. E.; the next in order of magnitude is that ranging with May, and under N.; the next is that ranging with March, and under S. W.; the next also in March, and under W. S. W; the next, in August, and under S. W.; and those under E. and E. N. E. in the months of November and December respectively. It is remarkable in this year that those winds which are compounded with the W. should be so low in the order of magnitude; usually they are those greatly exceeding all others in their amounts.

The first strong wind in the year, of some duration, was on January 5^d, during which there were occasional pressures of 6lbs. and 7lbs. [See page (4).] On January 19^d the wind blew strongly for some time, and occasional pressures of 5lbs. took place. [See page (10).] A gale of wind took place on January 30^d; the wind blew strongly on January 29^d and on January 31^d, and during these three days the greater part of the pressures in January under W. N. W., and N. W., were recorded. In the gale on the 30th is recorded a pressure of 12lbs., and also on January 31^d a pressure of 12lbs. [For some particulars of this gale see pages (16) and foot-note on page (17).] The next strong wind was on February 18^d and 19^d, in which pressures from 3lbs. to 7lbs. were recorded. [See page (26) and foot-note on page (27).] A strong wind blew on February 23^d from the S. and S. W., during which a pressure of 12lbs. is recorded. [See page (28) and foot-note on page (29).] On February 25^d and 26^d the wind blew strongly, the direction varying from S. W. to N., during which pressures from 3lbs. to 7lbs. were recorded. [See page (30).] A strong wind, from the S. W. and S. S. W., at times approaching to a gale, took place on March 1^d, 2^d, and 3^d, the pressures being very variable; one of 9lbs., another of 8lbs, and several of 6lbs. and 7lbs. took place. [See page (32) and foot-note on page (33).] The greater number of the pressures in March under W. S. W. were recorded during this time. On March 10^d, 11^d, and 12^d, a gale of wind of more than usual violence took place, the direction of the wind being S. W. and W. generally on the 10th and 11th, and during a good part of the 12th, and nearly N. and N. W. during the remainder of the 12th. In this gale is recorded a pressure of 17lbs. on March 12^d at 6^h, being the greatest recorded pressure in the year. [For particulars of this gale see pages (36), (38), and foot-notes on pages (37) and (39).] On March 16^d and 17^d there was a strong and nearly steady wind from the E. and N. E., during which there were occasional pressures, varying from 5lbs. to 7lbs. [See page (40).] A strong and steady wind blew on May 19^d and 20^d, from the N. N. E. and N; for some hours the pressure was between 5lbs. and 7lbs.: and once a pressure of 9lbs. is recorded. [See page (72) and foot-note on page (73).] It was during those days that the greater part of the pressures in May under N. and N. N. E., were recorded; and which, as before stated, are the largest numbers contained in the preceding table. A strong wind blew from the N. generally from May 25^d to May 28^d, the recorded pressures being from 2lbs. to 4lbs. [See pages (74) and (76).] On June 7^d the wind blew strongly for a few hours from the S. W., recording pressures from 6lbs. to 8lbs. frequently. [See page (80).] On July 1^d at 6^h. 5^m the wind suddenly blew with a pressure of $9\frac{1}{2}$lbs, which pressure gradually decreased to nothing by 6^h. 20^m. [See foot note on page (95).] On July 13^d and 14^d a strong wind blew from the S. W. and the W., during which pressures from 5lbs. to 7lbs. were frequently recorded, and once a pressure of 10lbs. took place. [See page (100).] On July 30^d and 31^d the wind blew strongly from the S. W. and W. [See page (108).] A rather strong wind was blowing from the S. W. on August 3^d, during which pressures from 3lbs. to $9\frac{1}{2}$lbs. were recorded. [See page (110) and foot-note on page (111).] On August 5^d, 6^d, and 7^d the wind blew strongly. [See page (112).] No strong wind blew for any length of time between August 3^d and October 1^d; on the latter day the wind blew strongly for some hours from the S. W. and W. with pressures sometimes amounting to 5lbs. and 6lbs., occasionally to 7lbs. and once only to 8lbs. [See page (142).] On October 3^d the wind blew strongly from W. S. W. for some hours. [See page (142).] On October 13^d and 14^d the wind blew strongly for a few hours in each day from the S. S. W. [See page (148).] On November 1^d a steady wind blew from the E., the recorded pressures being from 4lbs. to 7lbs. [See page (158).] On November 10^h, 11^d, 12^d, and 13^d the wind was frequently blowing strongly; on the 11th a pressure of 7lbs. took place; on the 12th the general pressure was from 3lbs. to 5lbs., once to 7lbs.; and on the 13th frequently to 5lbs. and 6lbs. [See pages (162) and (164).] No wind blew after this time recording pressures for any long continuance, and the only strong wind after this time was that of December 20^d and 21^d, when it blew from the N. E. on the 20th and from the E. N. E. on the 21st, with a pressure on both days from 2lbs. to 4lbs., with occasional pressures of 5lbs. From this account it appears that the character of the year with respect both to the direction and strength of the wind has been unusual. There have been but few great gales, and the heaviest have been from the N. or N. N. E. The number of instances of strong winds or gales from the S. W., S. S. W., and W. S. W., has been unusually small, whilst the number from the opposite quarters has been unusually large. The columns in the preceding table, under the head of E. S. E. and S. E. being nearly blank, it appears that those winds throughout the year, as has been shewn in the years 1841, 1842, and 1843, were insignificant in amount.

At all the hours in every month when the wind blew without recording pressure, and which, consequently, are not included in the above table, the direction of the wind 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 XCII.—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.

1844, Month.	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.	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	28	18	32	19	3	3	6	24	33	16	92	59	52	8	24	29	446
February	16	6	4	13	16		1	10	50	41	40	53	22	6	32	65	375
March	55	8	24	14	17		2	2	21	29	55	41	22	15	29	32	366
April	68	28	23	17	20	7	8	2	30	36	97	50	41	7	7	17	458
May	158	62	67	25	15	19	7				5	4	17	3	5	34	421
June	56	45	27	10	21	5	14	6	12	11	78	38	57	10	20	8	418
July	32	15	26	17	24	12	4	3	2	7	27	61	38	28	26	31	353
August	6	2	5	5	15	4	9	1	4	50	67	78	68	15	31	14	374
September	67	48	98	25	28	4	1		20	17	32	22	7	4	11	15	399
October	19	20	23	10	30	8	6	1	43	71	70	82	28	7	8	23	449
November	12	20	22	17	19	10	8	26	34	74	84	63	11	9	14	43	466
December	42	88	68	57	57	47	4	10	4	5						2	384

By adding together all the quantities for each wind, in Tables XCI. and XCII., we find that during the year the

N.	wind blew	176	hours, recording a pressure of	283¾lbs.,	and it blew	559	hours without recording any pressure	
N. N. E.	,,	148	,,	274	,,	360	,,	
N. E.	,,	164	,,	201¼	,,	419	,,	
E. N. E.	,,	123	,,	190¾	,,	229	,,	
E.	,,	102	,,	164¾	,,	265	,,	
E. S. E.	,,	18	,,	12	,,	119	,,	
S. E.	,,	5	,,	3¾	,,	70	,,	
S. S. E.	,,	13	,,	27	,,	85	,,	
S.	,,	75	,,	116¼	,,	253	,,	
S. S. W.	,,	180	,,	264	,,	357	,,	
S. W.	,,	314	,,	610¼	,,	647	,,	
W. S. W.	,,	281	,,	571	,,	551	,,	
W.	,,	207	,,	364½	,,	363	,,	
W. N. W.	,,	88	,,	196	,,	112	,,	
N. W.	,,	104	,,	165¼	,,	207	,,	
N. N. W.	,,	75	,,	108½	,,	313	,,	

The sum of all the pressures is 3553lbs., the number of hours 2073, and the number of the hours during which air was in motion without recording pressure is 4909.

The S. W. wind has the greatest number opposite to it, and the next in order of magnitude are the W. S. W.; W.; S. S. W.; N.; N. E.; and N. N. E. The circumstance of the S. W., W. S. W., and the compounds of the W. wind generally having so small numbers, whilst the compounds of the N. and E. winds have so large numbers opposite to them, is of very rare occurrence.

Resolving the sum of the pressures for each direction of 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 XCIII.—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.	283·8	283·8			
N. N. E.	274·0	253·1	104·9		
N. E.	201·3	142·3	142·3		
E. N. E.	190·8	73·0	176·3		
E.	164·8		164·8		
E. S. E.	12·0		11·1	4·6	
S. E.	3·8		2·7	2·7	
S. S. E.	27·0		10·3	24·9	
S.	116·3			116·3	
S. S. W.	264·0			244·4	101·0
S. W.	610·3			431·6	431·6
W. S. W.	571·0			218·5	527·6
W.	364·5				226·5
W. N. W.	196·0	75·0			181·1
N. W.	165·3	116·9			116·9
N. N. W.	108·5	100·2			41·5
	Sums...	1044·3	612·4	1043·0	1626·2

TABLE XCIV.—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 ¼lb. was recorded by the Anemometer.

1844, Month.	13h		14h		15h		16h		17h		18h		19h		20h		21h	
	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January	14½	5	10½	6	10	5	15	6	13½	7	7½	7	6	5	4	2	10	3
February	14	6	15¾	7	22¾	7	12	6	7	6	9½	8	10¾	8	7	8	6¾	9
March	25	10	18½	11	27	11	17½	9	16½	9	18½	8	27	8	28½	9	40	12
April	2	2	1½	2	2½	2	1½	2	1½	2	1	1	1	1	2	2	2¼	3
May	6½	8	7½	6	11½	7	9½	6	10	6	13	6	16	8	19½	9	24	7
June	1	2	½	1	½	1	1	2			2	3	4¾	5	7½	6	8	7
July	7	2	5	2	2	2	2	2	4	2	2½	2	5	2	7	2	12	3
August	5½	3	4¾	4	6	4	5½	4	3½	4	3½	4	9½	5	11½	9	12½	9
September													1	3	1¼	3	4	5
October	1½	4	1¼	2	3¼	4	2½	3	3	4	3	2	5	4	6¼	5	9½	8
November	17	7	11½	6	10	4	5½	7	7¾	7	6¾	6	7¾	7	6	5	6½	6
December	3¾	7	3	6	3½	6	4	6	7¼	6	6¼	6	7¼	7	6½	9	14	10

TABLE XCIV.—*continued.*

1844, Month.	22^h		23^h		0^h		1^h		2^h		3^h		4^h		5^h		6^h	
	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.	Sum of Pressures.	No. of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h
January	4	5	24½	8	14½	9	18¼	12	19	12	13¼	9	9½	7	10	8	12½	9
February	16½	10	21	11	19	16	23¼	14	23¾	13	23	11	15	11	15½	7	14	7
March	43½	14	46½	17	44½	15	46½	18	57½	17	44	17	36½	16	30¼	15	31	12
April	1½	2	3½	4	2¾	5	7½	8	10½	8	9¼	8	7¼	7	7	6	5	5
May	29½	11	31	12	34	12	29½	13	37	13	34	14	31	12	33½	12	27	12
June	11½	8	9½	9	24½	14	17¾	12	13½	10	13½	10	20	11	23	11	15¾	11
July	10	2	8¾	6	13½	8	18	7	16	8	16¼	8	11¼	9	15	10	11¼	10
August	17½	10	29½	14	31¾	14	30	15	28	16	34½	16	29	16	18	11	17½	9
September	5¼	8	5¼	11	7¼	10	12¾	12	8¼	12	7½	9	7½	7	5	7	2½	4
October	16¼	11	18	14	23½	16	19¼	17	28	15	28	16	19½	12	14¼	11	12½	9
November	10½	6	14½	6	17	7	13½	9	20¼	9.	16½	8	14¾	7	16½	6	14½	6
December	14¼	9	8½	9	11¾	8	16¼	10	15	11	13	9	11¾	11	10¾	11	8¾	7

	7^h		8^h		9^h		10^h		11^h		12^h		Whole Sum of Pressures.	Whole Number of Hours.
January	14	8	12½	9	20½	7	12	6	19½	5	13½	5	308½	165
February	15	7	13¼	9	17	8	17¼	9	18¾	7	14	5	371¾	210
March	30¼	13	29	13	20½	9	26½	10	17½	9	20½	9	743	291
April	3½	3	5½	4	5	3	4	2	3	2	2½	3	93	87
May	18½	13	17	9	10¼	10	6¾	7	8½	9	11	7	476	229
June	9	7	6½	6	2½	4	4½	5	1½	1	1½	2	199¾	148
July	4¼	6	3½	3	3½	3	6	3	6	3	5½	2	195¼	107
August	7¾	8	8	4	7	3	8¾	3	6½	3	6½	4	342½	192
September	1½	2	¾	2	1½	2	¼	1	½	1	¼	1	72¼	100
October	7½	8	8¼	8	10¼	9	8	6	3¾	8	2	5	254¼	201
November	15	7	13¼	7	9¼	6	12¼	6	11½	6	16	7	294	158
December	6	5	6	8	8½	8	7¼	5	4	4	5½	7	202¾	185

In each of the preceding years a marked difference has been found between the sums of the pressures between 6^h and 19^h, and those between 20^h and 5^h; in the above table this difference is not nearly so strongly marked; th[redacted]at 19^h not differing much in amount from those at 18^h, and the difference between those at 5^h and 6^h being still less marked. During the month of September, the sums are very small, particularly those between 6^h and 19^h, and this, therefore, was the calmest period in the year; indeed, the whole month was remarkably calm. The month of April of this year, 1844, is remarkable, as deviating from its usual character, the sums of the pressures being less than usual. The month of May is also remarkable, as deviating from its usual character, the sums of the pressures being above their usual amount. At all periods of the year the sums are generally smallest about the time of sun-rising; but they are not the smallest at the time of sun-set, and in this respect they differ from previous results.

In January, the maximum sum of pressures occurs at		23^h,	and it was	$24\frac{1}{4}$ lbs.
February,	,,	2	,,	$23\frac{3}{4}$
March,	,,	2	,,	$57\frac{1}{2}$
April,	,,	2	,,	$10\frac{1}{2}$
May,	,,	2	,,	37
June,	,,	0	,,	$24\frac{1}{2}$
July,	,,	1	,,	18
August,	,,	3	,,	$34\frac{1}{2}$
September,	,,	1	,,	$12\frac{3}{4}$
October,	,,	2 and 3	,,	28
November,	,,	2	,,	$20\frac{1}{4}$
December,	,,	2	,,	15

From this it appears, that at 2^h in March the sum of the pressures was greater than at any other hour in the year.

The ratio of the maximum pressure to the minimum pressure was in	January	6 to 1
,, ,,	February	6 to 1
,, ,,	March	35 to 1
,, ,,	April	10 to 1
,, ,,	May	6 to 1
,, ,,	June	25 to 1
,, ,,	July	9 to 1
,, ,,	August	11 to 1
,, ,,	September,	night hours calm
,, ,,	October	19 to 1
,, ,,	November	4 to 1
,, ,,	December	5 to 1

The ratios which most nearly approach to equality are those of January, February, March, May, November, and December, 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 ratios of greatest inequality are those of June and October, and therefore the nights of those months, and those of September as above remarked, may be considered as among the calmest in the year.

At all the hours in every month not included in Table XCII., the anemometer sheets have been consulted, and whenever the direction-pencil has recorded a perfectly straight line, as would be the case when the air was absolutely calm, such cases have been considered to correspond to calms; and whenever there was any deviation from such line, either at right angles or inclined to it, such cases have been considered to correspond to times when the air was in motion, although the instrument is not sufficiently delicate to record such pressures. These results have all been copied out, and treated exactly as the numbers forming Table XCIV., and thus the following Table has been formed :—

TABLE XCV.—Shewing 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, in every Month, at every Hour of Greenwich Mean Time.

1844, 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	7	19	5	20	5	21	4	21	5	19	6	18	6	20	6	23	5	23
February	6	17	6	16	5	17	5	18	5	18	5	16	6	15	7	14	5	15
March	4	15	3	15	3	15	3	17	3	17	2	19	2	19	3	17	2	15
April	7	21	7	21	10	18	10	18	9	19	9	20	9	20	8	20	3	24
May	9	14	7	18	7	17	7	18	6	19	5	20	5	18	3	19	3	21
June	13	15	13	16	13	16	14	14	14	16	10	17	8	17	6	18	4	19
July	18	11	19	10	20	9	21	8	21	8	19	10	16	13	13	16	14	14
August	9	19	9	[illegible]	[illegible]	17	9	18	10	17	10	17	10	16	10	12	7	15
September	10	18	10	18	12	16	13	15	13	15	13	15	14	11	14	11	12	11
October	7	20	8	21	7	20	5	23	5	22	6	23	5	22	5	21	5	18
November	6	17	6	18	6	20	5	18	5	18	5	19	4	19	4	21	4	20
December	10	14	12	13	11	14	8	17	8	17	6	19	6	18	9	13	9	12

TABLE XCV.—*continued.*

1844, Month.	22h Calm Hours.	22h Hours of Wind not recording Pressure.	23h Calm Hours.	23h Hours of Wind not recording Pressure.	0h Calm Hours.	0h Hours of Wind not recording Pressure.	1h Calm Hours.	1h Hours of Wind not recording Pressure.	2h Calm Hours.	2h Hours of Wind not recording Pressure.	3h Calm Hours.	3h Hours of Wind not recording Pressure.	4h Calm Hours.	4h Hours of Wind not recording Pressure.	5h Calm Hours.	5h Hours of Wind not recording Pressure.	6h Calm Hours.	6h 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	4	22	5	18	5	17	3	16	4	15	6	16	7	17	6	17	8	14
February	3	16	3	15	2	11	2	13	3	13	3	15	4	14	3	19	4	18
March	2	15	2	12	2	14	2	10	2	11	1	12	1	13	1	14	1	17
April	4	23	3	22	2	22	2	19	5	16	6	15	6	16	4	19	5	19
May	0	20	0	19	0	19	0	18	0	18	0	17	0	19	2	17	3	16
June	2	20	1	20	1	15	1	17	2	18	1	19	1	18	1	18	2	17
July	4	24	5	19	6	16	2	21	2	20	2	20	3	18	3	17	5	15
August	5	16	6	11	4	13	3	13	4	11	5	10	5	10	7	13	7	15
September	3	19	2	17	4	16	2	16	3	15	3	18	3	19	5	17	5	20
October	2	18	1	16	2	13	1	13	2	14	2	13	2	17	1	19	1	21
November	5	19	3	21	1	22	1	20	1	20	1	21	2	21	3	21	4	20
December	9	13	7	15	6	17	5	16	5	15	5	17	5	15	4	16	6	18

1844, Month.	7h Calm Hours.	7h Hours of Wind not recording Pressure.	8h Calm Hours.	8h Hours of Wind not recording Pressure.	9h Calm Hours.	9h Hours of Wind not recording Pressure.	10h Calm Hours.	10h Hours of Wind not recording Pressure.	11h Calm Hours.	11h Hours of Wind not recording Pressure.	12h Calm Hours.	12h Hours of Wind not recording Pressure.	Whole Number of Calm Hours during the Month.	Whole Number of Hours during the Month at which the Wind was blowing without recording Pressure.
													h	h
January	6	17	5	17	5	19	6	19	7	19	7	19	133	446
February	4	18	5	15	6	15	7	13	6	16	6	18	111	375
March	1	16	3	14	4	17	3	17	3	18	4	17	57	366
April	6	20	11	14	9	17	8	19	9	18	8	18	160	458
May	5	13	6	16	7	14	7	17	6	16	6	18	94	421
June	5	18	6	18	7	19	10	15	9	20	11	17	155	417
July	5	20	11	17	17	11	16	12	16	12	16	13	274	354
August	8	15	6	21	7	21	9	19	9	19	9	18	178	374
September	7	19	7	19	8	18	8	19	8	19	9	18	188	399
October	3	20	3	20	4	18	5	20	6	17	6	20	94	449
November	4	19	4	19	4	20	6	18	6	18	6	17	96	466
December	5	21	6	17	7	16	8	18	8	19	10	14	175	384

By adding together the numbers contained in this table and those contained in Table XCIV., between 6^h and 19^h, and also the numbers between 20^h and 5^h in each month, the next two tables are formed.

TABLE XCVI.

1844, Month.	Between what Times.	Sum of Pressures	Number of Hours of Wind Recording Pressure.	Number of Hours of Wind Not recording Pressure.	Number of Hours Of Calm.	Number of Hours Instrument out of Order.	Total Number of Hours in the Period.
	h h	lbs.	h	h	h	h	h
January	6 and 19	181½	90	262	82		434
February		201	100	230	76		406
March		325¼	141	233	39	21	434
April		39½	34	262	117	7	420
May		173	114	234	86		434
June		51	50	235	135		420
July		67½	44	169	220	1	434
August		100¼	62	250	122		434
September		8¼	16	240	137	27	420
October		71¾	76	287	71		434
November		158	89	260	71		420
December		81	88	235	111		434

The sum of all the pressures between 6^h and 19^h was 1458 lbs.; the number of hours of wind recording pressure was 904; the number of hours of wind not recording pressure was 2897; the number of hours of calm was 1267; the number of hours during which the instrument was out of order was 56. The total number of hours during which the instrument was effective in the period was 5068; and as wind with pressure was recorded at 904 hours, the pressure was equal to or greater than ¼ lb. on the square foot for one hour out of 5^h. 36^m during the period. The air was in motion for 3801 hours out of 5068; and therefore the air was in motion for one hour out of 1^h. 20^m, and the air was not in motion for one hour out of 4^h. 0^m.

TABLE XCVII.

1844, Month.	Between what Times.	Sum of Pressures.	Number of Hours of Wind Recording Pressure.	Number of Hours of Wind Not recording Pressure.	Number of Hours Of Calm.	Number of Hours Instrument. out of Order.	Total Number of Hours in the Period.
	h h	lbs.	h	h	h	h	h
January	20 and 5	127	75	184	51		310
February		170¾	110	145	35		290
March		417¾	150	133	18	9	310
April		53½	53	196	43	8	300
May		303	115	187	8		310
June		148¾	98	182	20		300
July		127¾	63	185	54	8	310
August		242¼	130	124	56		310
September		64	84	159	51	6	300
October		182½	125	162	23		310
November		136	69	206	25		300
December		121¾	97	149	64		310

The sum of all the pressures between 20^h and 5^h was 2095 lbs.; the number of hours of wind recording pressure was 1169; the number of hours of wind not recording pressure was 2012; the number of hours of calm was 448; the number of hours during which the instrument was out of order was 31. The total number of hours in the period was 3660; the total number of hours of effective working of the instrument was 3629; and as wind with pressure has taken place at 1169 hours, the pressure was equal to or greater than ¼ lb. on the square foot for one hour out of 3^h. 7^m during the period. The air was in motion for 3181 hours out of 3629; and therefore for one hour out of 1^h. $8\frac{1}{2}^m$; and as there were 448 hours of calm out of 3629, the air was not in motion during one hour out of 8^h. 6^m.

By taking the sum of all the quantities at each hour, the next table is formed.

TABLE XCVIII.

1844, Hour.	Sum of Pressures.	Number of Hours of Wind Recording Pressure.	Number of Hours of Wind Not recording Pressure.	Number of Hours Of Calm.	Number of Hours Instrument out of Order.	Total Number of Hours.
h	lbs.	h	h	h	h	h
13	97¾	56	200	106	4	366
14	79¾	53	204	105	4	366
15	99	53	200	109	4	366
16	76	53	205	104	4	366
17	74	53	205	104	4	366
18	73½	53	213	96	4	366
19	101	63	208	91	4	366
20	107	69	205	88	4	366
21	149½	82	207	73	4	366
22	180¼	96	225	43	2	366
23	220½	121	205	38	2	366
0	244	134	195	35	2	366
1	252½	147	192	24	3	366
2	276¾	144	186	33	3	366
3	252¾	135	193	35	3	366
4	213	126	197	39	4	366
5	198¾	115	207	40	4	366
6	172¼	101	210	51	4	366
7	132¼	87	216	59	4	366
8	123½	82	207	73	4	366
9	115¾	72	205	85	4	366
10	113½	63	206	93	4	366
11	101	58	211	93	4	366
12	98¾	57	207	98	4	366

Therefore there is a minimum pressure at about the time of sun-rising, and a maximum at about the time the Sun has passed the meridian by 2 hours, from which time the sum at each succeeding hour is much less than the sum at the preceding hour, till about the time of sun-setting; the decrease, hour by hour, continues, but at a less rapid rate, till after midnight. In previous years a minimum has been shewn at about the time of sun-setting, after which an increase in the pressure took place till midnight: the exception this year in this respect seems remarkable.

The sum of all the pressures is 3553 lbs. The number of hours during which the wind was blowing while recording this pressure was 2073; the number of hours during which it was blowing without recording pressure was 4909; and the number of hours that were calm was 1715, as shewn by Osler's anemometer. The instrument, during the year, has been out of order 87 hours, and it fails entirely in registering all light winds.

From the preceding account, as compared with those of preceding years, this year seems an exception to the general rule in the following particulars, viz.: there has been a smaller amount of pressure than is usual; a greater number of hours during which the air has been in motion, and, consequently, a much less number of calm hours; and a smaller pressure than usual when the air has been in motion; an unusual prevalence of N. and E. winds, and a diminution of the W., S.W., W. S.W., and S. S.W. winds, both in force and duration.

From the numbers in Table XCIV. the following table is immediately formed:—

TABLE XCIX.—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 a Quarter of a Pound on the Square Foot.

1844, Month.	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h
	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	2·9	1·8	2·0	2·5	1·9	1·1	1·2	2·0	3·3	0·8	3·1	1·6	1·5	1·6	1·5	1·4	1·3	1·4	1·8	1·4	2·9	2·0	3·9	2·7
February	2·3	2·3	3·3	2·0	1·2	1·2	1·3	0·9	0·8	1·7	1·9	1·2	1·7	1·8	2·1	1·4	2·2	2·0	2·1	1·5	2·1	1·9	2·7	2·8
March	2·5	1·7	2·5	1·9	1·8	2·3	3·4	3·2	3·3	3·1	2·7	3·0	2·6	3·4	2·6	2·3	2·0	2·6	2·3	2·2	2·3	2·7	1·9	2·3
April	1·0	0·8	1·3	0·8	0·8	1·0	1·0	1·0	0·7	0·8	0·9	0·6	0·9	1·3	1·1	1·0	1·2	1·0	1·2	1·4	1·7	2·0	1·5	0·8
May	0·8	1·3	1·6	1·6	1·7	2·2	2·0	2·2	3·4	2·7	2·6	2·8	2·3	2·8	2·4	2·6	2·8	2·3	1·4	1·9	1·0	1·0	0·9	1·6
June	0·5	0·5	0·5	0·5		0·7	1·0	1·3	1·1	1·4	1·1	1·8	1·5	1·4	1·4	1·8	2·1	1·4	1·3	1·1	0·6	0·9	1·5	0·8
July	3·5	2·5	1·0	1·0	2·0	1·3	2·5	3·5	4·0	5·0	1·5	1·7	2·6	2·0	2·0	1·2	1·5	1·1	0·7	1·2	1·2	2·0	2·0	2·8
August	1·8	1·2	1·5	1·4	0·9	0·9	1·9	1·3	1·4	1·8	2·1	2·3	2·0	1·8	2·2	1·8	1·6	1·9	0·9	2·0	2·3	2·9	2·2	1·6
September							0·3	0·4	0·8	0·7	0·5	0·7	1·1	0·7	0·8	1·1	0·7	0·6	0·8	0·4	0·8	0·2	0·5	0·3
October	0·4	0·6	0·8	0·8	0·8	1·5	1·3	1·2	1·2	1·5	1·3	1·5	1·1	1 9	1·8	1·6	1·3	1·4	0·9	1·0	1·1	1·3	0·5	0·4
November	2·4	1·9	2·5	0·8	1·1	1·1	1·1	1·2	1·1	1·8	2·4	2·4	1·5	2·2	2·1	2·1	2·8	2·4	2·1	1·9	1·5	2·0	1·9	2·3
December	0·5	0·5	0·6	0·7	1·2	1·0	1·0	0·7	1·4	1·6	0·9	1·5	1·6	1·4	1·4	1·1	1·0	1·2	1·2	0·8	1·1	1·4	1·0	0·8

TABLE C.—Sums of the Pressures of each Wind at every Hour, Greenwich Mean Time; and Number of Hours during which it blew with a recorded Pressure not less than a Quarter of a Pound on the Square Foot, in the Year 1844.

Direction of Wind.	13h		14h		15h		16h		17h		18h		19h		20h		21h	
	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.	Sums of Pressures.	Number of Hours.
	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs.	h	lbs	h	lbs.	h	lbs.	h
N.	4½	6	6	3	9	4	4½	4	6½	4	8	3	8½	5	10	5	6	4
N. N. E.	4½	4	5¼	5	6½	4	7¼	4	6	4	6¼	5	10	6	12¾	9	20	8
N. E.	2¼	4	2¼	4	3¼	4	2¼	4	2¾	4	2¼	3	3½	4	5	7	10½	8
E. N. E.	6	4	5¼	4	6¼	5	6½	5	8	5	6½	3	7½	3	7½	2	10	4
E.	4½	2	4¾	2	4½	1	2	3	5	3	4½	2	5¼	3	4½	3	4½	3
E. S. E.	½	1									¾	1			¼	1	1	2
S. E.			½	1														
S. S. E.																		
S.	8	3	4	2	8½	6	7½	3					¼	1	¼	1	2	1
S. S. W.	8	5	5½	7	6½	4	6½	4	7½	6	4½	5	6½	6	7½	8	14	7
S. W.	20½	11	15	8	20¼	7	13½	6	10½	6	9½	6	13¾	6	14	6	20½	13
W. S. W.	22	8	16¾	9	18¾	9	9½	9	9	9	14	9	26	13	27½	12	21¼	11
W.	7	4	5	4	7½	5	5	6	8¼	7	10¼	10	6¼	7	4¾	5	22¾	10
W. N. W.	½	1	6½	2	5	2	6½	3	5	2	½	1	6	4	3½	4	2	3
N. W.	7½	2	1	1	½	1	3½	1	1	1	2	1	3½	2	4½	3	8½	6
N. N. W.	2	1	2	1	2½	1	1½	1	4½	2	4½	4	4	3	5	3	6½	2

	22h		23h		0h		1h		2h		3h		4h		5h		6h	
N.	13	7	15½	7	21½	9	16	10	20½	10	23½	10	22	9	18	10	17½	10
N. N. E.	16	7	18¼	10	16½	8	16½	8	15	7	17½	8	16	9	13½	6	12¼	5
N. E.	12½	12	15¾	13	15	10	20¾	12	23	13	14	11	9½	8	18¼	10	8	7
E. N. E.	16	5	5¼	4	9¼	7	13	10	10½	8	14	10	9	7	7½	6	10	6
E.	5½	4	6¾	5	9½	7	7½	7	10½	5	9	7	8½	8	12	9	10	6
E. S. E.	½	1	2½	3			1	1	2½	2	½	1	1	2				
S. E.					1	1	¼	1			1½	1	½	1				
S. S. E.	3½	1	1	1	3	1	1½	1	4	1	1	1	1	1	2½	1	2½	1
S.	1	1			1½	2	3	3	5	4	7	5	5	4	4½	5	7½	6
S. S. W.	22½	9	22	12	19¾	11	20¾	13	18½	13	20¼	11	11¼	11	7½	6	5½	5
S. W.	30¾	17	36¾	21	45¾	23	37¼	22	37	19	39	20	36½	16	33¾	16	29	15
W. S. W.	22½	13	34	16	41½	20	46½	21	49	19	44¾	17	43½	19	41½	18	30	17
W.	23	10	19¾	11	25¼	15	38¼	19	32	18	23¾	15	23	12	22	12	17¾	8
W. N. W.	9	5	20	7	17	7	16	6	16½	8	20	7	8¾	6	3½	3	5½	4
N. W.	4½	4	20	7	9½	7	11	7	20	9	8½	6	13½	8	10¼	10	5¼	7
N. N. W.			3	4	8	6	3¼	6	12¾	8	8½	5	4	5	4	3	11½	4

	7h		8h		9h		10h		11h		12h		Sums of the Pressures for the Year.	Sums of the Hours.
													lbs.	h
N.	10¼	13	8¾	10	9	9	9½	9	7	7	8¾	8	283¾	176
N. N. E.	11¼	7	13	6	9¾	7	7	4	5½	4	6½	3	274	148
N. E.	5	6	7½	7	9¾	7	6	3	1	1	1¼	2	201¼	164
E. N. E.	4½	2	5½	4	5	4	4¼	4	4¼	5	9¼	6	190¾	123
E.	7½	5	9	4	7½	4	8¾	4	9¼	3	4	2	164¾	102
E. S. E.	¼	1	¾	1							½	1	12	18
S. E.													3¾	5
S. S. E.	1½	1	2½	1	1½	1	1½	1					27	13
S.	13	6	7	6	10	6	8	4	9¼	4	4	2	116¼	75
S. S. W.	6	5	12½	9	7½	5	9¾	6	5½	5	8¼	7	264	180
S. W.	16½	13	24¾	14	25	12	21½	9	30	15	29¼	13	610¼	314
W. S. W.	17¾	11	4½	5	6¾	6	11½	5	5½	2	7	3	571	281
W.	21½	6	16	6	6	4	7½	5	4½	5	7½	3	364½	207
W. N. W.	5½	3	1½	1	11	2	12	3	11¾	2	2½	2	196	88
N. W.	3¾	4	4½	4	3½	3	5	3	6½	4	7½	3	165¼	104
N. N. W.	7	4	5¾	4	3½	2	1¼	3	1	1	2½	2	108½	75

TABLE CI.—Mean Pressure of each Wind, for every Hour of Greenwich Mean Time, during the Year 1844.

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.	0·8	2·0	2·3	1·1	1·6	2·7	1·7	2·0	1·5	1·9	2·2	2·4
N. N. E.	1·1	1·0	1·6	1·8	1·5	1·3	1·7	1·4	2·5	2·3	1·8	2·1
N. E.	0·6	0·5	0·8	0·6	0·7	0·7	0·9	0·7	1·3	1·0	1·2	1·5
E. N. E.	1·5	1·3	1·2	1·3	1·6	2·2	2·5	3·8	2·5	3·2	1·3	1·3
E.	2·3	2·4	4·5	0·7	1·7	2·3	1·7	1·5	1·5	1·4	1·3	1·4
E. S. E.	0·5					0·8		0·3	0·5	0·5	0·8	
S. E.		0·5										1·0
S. S. E.										3·5	1·0	3·0
S.	2·7	2·0	1·4	2·5			0·3	0·3	2·0	1·0		0·8
S. S.W.	1·6	0·8	1·6	1·6	1·3	0·9	1·1	0·9	2·0	2·5	1·8	1·8
S.W.	1·9	1·9	2·9	2·3	1·8	1·6	2·3	2·3	1·6	1·8	1·8	2·0
W. S.W.	2·8	1·9	2·1	1·1	1·0	1·6	2·0	2·3	1·9	1·7	2·1	2·1
W.	1·8	1·3	1·5	0·8	1·2	1·0	0·9	0·9	2·3	2·3	1·8	1·7
W. N.W.	0·5	3·3	2·5	2·2	2·5	0·5	1·5	0·9	0·7	1·8	2·9	2·4
N.W.	3·8	1·0	0·5	3·5	1·0	2·0	1·8	1·5	1·4	1·1	2·9	1·4
N. N.W.	2·0	2·0	2·5	1·5	2·3	1·1	1·3	1·7	3·3		0·8	1·3

	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h
N.	1·6	2·1	2·4	2·4	1·8	1·8	0·8	0·9	1·0	1·1	1·0	1·1
N. N. E.	2·1	2·1	2·2	1·8	2·3	2·4	1·7	2·2	1·4	1·8	1·4	2·2
N. E.	1·7	1·8	1·3	1·2	1·8	1·1	0·8	1·1	1·4	2·0	1·0	0·6
E. N. E.	1·3	1·3	1·4	1·3	1·3	1·7	2·3	1·4	1·3	1·0	0·8	1·5
E.	1·1	2·1	1·3	1·1	1·3	1·7	1·5	2·3	1·9	2·2	3·1	2·0
E. S. E.	1·0	1·3	0·5	0·5			0·3	0·8				0·5
S. E.	0·3		1·5	0·5								
S. S. E.	1·5	4·0	1·0	1·0	2·5	2·5	1·5	2·5	1·5	1·5		
S.	1·0	1·3	1·4	1·3	0·9	1·3	2·2	1·2	1·7	2·0	2·3	2·0
S. S.W.	1·6	1·4	1·8	1·0	1·3	1·1	1·2	1·4	1·5	1·6	1·1	1·2
S.W.	1·7	1·9	2·0	2·3	2·1	1·9	1·3	1·8	2·1	2·4	2·0	2·3
W. S.W.	2·2	2·6	2·6	2·3	2·3	1·8	1·6	0·9	1·1	2·3	2·8	2·3
W.	2·0	1·8	1·6	1·9	1·8	2·2	3·6	2·7	1·5	1·5	0·9	2·5
W. N.W.	2·7	2·1	2·9	1·5	1·2	1·4	1·8	1·5	5·5	4·0	5·9	1·3
N.W.	1·6	2·2	1·4	1·7	1·0	0·7	0·9	1·1	1·2	1·7	1·6	2·5
N. N.W.	0·5	1·6	1·7	0·8	1·3	2·9	1·8	1·4	1·8	0·4	1·0	1·3

Sums of the Forces of the Wind, by estimation, in the Year 1844.

The remarks applying to the formation of the abstracts of results deduced from the records of Osler's self-registering anemometer (Introduction to Table XCI.) apply in every respect to the formation of the results obtained by estimation. It will be remarked, however, that the force and direction of the wind have been estimated only at every even hour of Göttingen mean time, whereas the readings of the anemometer record have been taken for every hour of Greenwich mean time; and thus the estimation-results are only half as numerous as those registered by the anemometer, and do not exactly correspond with any of them. It will also be remarked that the proportion which the force by estimation bears to the pressure as recorded by Osler's anemometer is not the same for great and for small pressures.

TABLE CII.—Sums of the Forces of the Winds for different Directions in every Month, without distinction of Hours, and Number of Two-hourly Periods during which it blew in each Direction, and general Range of Two-hourly Periods during which the Wind blew in each Direction, the Direction being referred to Sixteen Points of the Azimuthal Circle.

1844, Month.	N.			N.N.E.			N.E.			E.N.E.		
	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.
Jan.	1½	5	at 22^{h}, 4^{h}, 6^{h}, & 12^{h}	1	3	at 0^{h}, 2^{h}, & 12^{h}	4¾	14	at all hours, except 8^{h} & 10^{h}	2¾	9	at all hours, except 14^{h}, 4, 6, & 12^{h}
Feb.	9½	22	at all hours	2¼	5	at 20, & from 6 to 10	3¼	8	from 16 to 4	2¼	8	from 8 to 20
March	15	42	at all hours	3¼	8	from 14 to 22, & at 4 & 12	8½	20	at all hours	7¼	15	at all hours, except 0
April	6½	20	at all hours, except 22 & 12	2½	10	from 22 to 8	1½	5	at 0 & 2	6½	15	at all hours, except 18, 0, & 12
May	39½	99	at all hours	19¼	50	at all hours	15¼	43	at all hours	14½	44	at all hours
June	5	19	at all hours	3½	12	at all hours, except 18, 20, 2, & 12	3¼	10	from 14 to 2, & at 6	2¼	7	from 4 to 12, & at 16, 20, & 0
July	5½	19	at all hours, except 2	½	2	at 6 & 8	2¼	9	at 14 & 16, from 22 to 2, & from 8 to 12	2	8	from 0 to 10, & at 18 & 20
Aug.	2	5	at 22, & from 4 to 8							¾	3	at 2 & 8
Sep.	8¾	27	at all hours, except 6	7¾	22	at all hours, except 12 & 14	12¾	31	at all hours	10¾	26	from 20 to 10, & at 16
Oct.	6¾	17	at all hours, except 10	¾	2	at 2 & 4	2	8	from 20 to 8, & at 16	1	3	at 0, 6, & 10
Nov.	2¼	9	at 0, 4, 8, & from 12 to 20	1½	6	from 12 to 20, & at 2	3¼	13	at all hours, except 4 & 12	6¼	4	from 12 to 16, & at 6
Dec.	6	18	at all hours, except 10 & 12	10	30	at all hours	11¼	31	at all hours, except 22	20¼	29	at all hours

1844, Month.	E.			E.S.E.			S.E.			S.S.E.		
Jan.				1	4	at 0^{h}, & from 4^{h} to 8^{h}	1	3	from 10^{h} to 14^{h}	3¼	9	from 12^{h} to 20^{h}, & at 2 & 4
Feb.	1½	6	from 2 to 10	½	2	at 22 & 4	½	2	at 18 & 20	¼	1	at 2
March	5½	13	from 22 to 12	¼	1	at 0				¾	3	at 20, 8, & 10
April	2¼	6	from 6 to 12, & at 18 & 20	4¼	12	at all hours, except 14, 20, & 4	1	4	from 10 to 14, & at 22	2¼	7	from 12 to 20, & from 2 to 4
May	5	19	from 14 to 20, & from 2 to 10	1¾	5	at 14, 20, 8, & 10	3	8	from 6 to 10, & at 16 & 18			
June	1	4	from 4 to 10	½	2	at 18 & 10	½	2	at 12 & 14	½	2	at 20 & 22
July	3½	10	from 2 to 10, & at 14 & 20	1	4	at 22, 2, & 8	1	4	at 20, 22, & 10	1½	6	at 22, 0, & 12
Aug.	2½	10	from 2 to 10	¾	3	at 22 & 0	2½	9	from 6 to 12, and from 18 to 0	1¼	4	at 18 & 20, & at 2 & 4
Sep.	4	13	from 2 to 12, & at 16 & 22				¼	1	at 10			
Oct.	4½	13	at all hours	4¾	12	from 18 to 4, & at 8 & 12	1¼	3	at 18 & 20, & at 8	3¾	7	at 16, 2, 6, & 10
Nov.	19¼	17	at all hours, except 14, 16, & 20	4	6	from 14 to 22, & at 4	4¼	8	from 8 to 20	4½	13	at all hours, except 14, 16, 20, & 4
Dec.	21	46	at all hours	3½	8	from 22 to 8	1¾	5	at 14, 20, 0, 2, & 10	2¼	8	at all hours, except 14, 16, 18, & 12

TABLE CII.—*continued.*

1844, Month.	S.			S.S.W.			S.W.			W.S.W.		
	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.	Sums of Forces.	Number of Two-hourly Periods.	General Range of Hours.
			h h h			h h h			h			h
Jan.	6½	10	at all hours, except 20, 4, & 12	7	13	at all hours, except 14, 18, and 2	17¾	26	at all hours, except 22	16½	36	at all hours
Feb.	6½	9	from 6 to 16	18	27	at all hours, except 2	16	32	at all hours, except 18 & 12	23¼	39	at all hours, except 14
March	4¼	7	from 14 to 18, & at 2 & 4	13¾	25	at all hours, except 16	19½	31	at all hours, except 2	33¼	45	at all hours
April	2½	10	from 12 to 20, & at 0 & 4	6	17	at all hours, except 14 & 20	17¾	47	at all hours	9¼	27	at all hours, except 16
May							1¼	5	from 14 to 2	2½	9	from 8 to 20
June	3½	10	at all hours, except 20, 4, 8, & 10.	15¾	30	at all hours	17¼	44	at all hours	26½	51	at all hours
July	4	15	from 0 to 14	2½	7	from 2 to 10	17	43	at all hours, except 8	22	39	at all hours, except 22
Aug.	2¼	7	from 14 to 20, & at 0 & 10	31½	46	at all hours	15½	33	at all hours	23¾	57	at all hours
Sep.	2½	8	from 12 to 0	4½	14	from 22 to 12	8½	25	at all hours	2¾	7	from 20 to 6
Oct.	9¾	22	at all hours, except 8	17	33	at all hours	19½	39	at all hours	24½	50	at all hours
Nov.	3¾	12	from 14 to 22, & at 4	4	14	from 10 to 4	20¾	34	at all hours	13¾	33	at all hours
Dec.												

1844, Month.	W.			W.N.W.			N.W.			N.N.W.		
			h			h h h			h h h			h h
Jan.	18	32	at all hours, except 0	12¼	12	at all hours, except 16, 20, & 4	25½	25	at all hours	13¼	33	at all hours, except 14 & 18
Feb.	16½	30	at all hours, except 4	4¾	9	from 22 to 4, & at 10 & 14	4½	9	from 0 to 8, & at 18	14¾	31	at all hours
March	18¾	23	at all hours, except 8	16¼	18	at all hours, except 22 & 10	13	11	at all hours, except 18, 20, & 4	6½	15	at all hours, except 14, 0, & 10
April	11¾	28	at all hours, except 12	4	8	from 2 to 6, & at 14 & 22	1¼	5	from 2 to 12	½	2	at 6
May	1¼	4	at 18 & 20, & at 4 & 6	¼	1	at 22	¼	1	at 0	2¼	5	from 2 to 12
June	20	41	at all hours	10¾	18	at all hours, except 16	1	2	at 0 & 4	2¼	7	from 20 to 8
July	14	24	at all hours, except 8	9¾	23	from 8 to 14, & from 22 to 4	6¾	15	at all hours, except 14 & 20	4¼	15	at 14, & from 20 to 8
Aug.	20¼	49	at all hours	7¾	12	from 22 to 10	5¾	11	0 to 16	6¾	14	from 20 to 2, & from 6 to 10, & at 16
Sep.	2	6	from 4 to 10, & at 22	½	2	at 22 & 2	½	1	at 20	3	12	at all hours, except 16, 18, & 20
Oct.	20	36	at all hours	¾	3	at 0 & 2	5¾	7	from 4 to 10, & at 14 & 22	2¾	8	at 22 & 2, & from 8 to 12
Nov.	8½	13	at all hours, except 20, 6, & 10	¼	1	at 10	2½	3	at 2 & 4	2¾	11	at all hours, except 12, 16, 18, & 20
Dec.												

By adding together the quantities for each wind, we obtain that during the year, (excepting Sundays, Good Friday, and Christmas Day,) the

N.	wind blew during	302	two-hourly periods, and the whole sum of the estimated forces was		108¼
N. N. E.	,,	150	,,	,,	52¼
N. E.	,,	192	,,	,,	68
E. N. E.	,,	171	,,	,,	76½
E.	,,	157	,,	,,	70
E. S. E.	,,	59	,,	,,	22¼
S. E.	,,	49	,,	,,	17
S. S. E.	,,	60	,,	,,	20¼
S.	,,	110	,,	,,	45½
S. S. W.	,,	226	,,	,,	120
S. W.	,,	359	,,	,,	170¾
W. S. W.	,,	393	,,	,,	198
W.	,,	286	,,	,,	151
W. N. W.	,,	107	,,	,,	67¼
N. W.	,,	90	,,	,,	66¾
N. N. W.	,,	153	,,	,,	59

The sum of all the estimated forces is 1312¾; the whole number of two-hourly periods is 2864.

Resolving these numbers for the estimated forces into the cardinal directions, as in page 103, we have

TABLE CIII.—Sums of the Forces of the Wind by Estimation for the whole of the year 1844, resolved in the Directions of the Cardinal Points.

Direction of Wind.	Whole estimated Force.	Resolved parts in the Direction of N.	E.	S.	W.
N.	108·25	108·25			
N. N. E.	52·25	48·27	20·00		
N. E.	68·00	48·08	48·08		
E. N. E.	76·50	29·28	70·68		
E.	70·00		70·00		
E. S. E.	22·25		20·56	8·51	
S. E.	17·00		12·02	12·02	
S. S. E.	20·25		7·75	18·71	
S.	45·50			45·50	
S. S.W.	120·00			110·87	45·92
S.W.	170·75			120·74	120·74
W. S.W.	198·00			75·77	182·93
W.	151·00				151·00
W. N.W.	67·25	25·74			62·13
N.W.	66·75	47·20			47·20
N. N.W.	59·00	54·51			22·58
	Sums.....	361·33	249·09	392·12	632·50

TABLE CIV.—Sums of the Forces of the Wind at every Even Hour of Göttingen Mean Time, independently of Direction; and Number of Hours of its Duration for each Month of the Year 1844.

1844, Month.	14h		16h		18h		20h		22h		0h		2h		4h		6h		8h		10h		12h		Sum of all the Forces.	Sum of all the Two-hourly Periods.
	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.		
January	10¾	15	11½	16	11¼	16	7½	17	8	19	12¼	24	12	22	10	23	11½	22	12¾	21	14	20	10½	19	132	234
February	11¼	16	12	18	11¾	17	9½	21	9½	20	9¼	21	10	22	12	23	9¼	23	10½	22	11¾	21	7½	16	124¼	240
March	13	22	14	21	12	21	11¾	23	11¼	23	14	24	16	25	16	26	14¾	25	14¾	24	16¾	23	11½	20	165¾	277
April	5	16	5	16	4½	14	5	16	6¼	17	7¼	22	9¼	25	9¾	24	9½	23	7½	21	7	17	3¾	12	79¾	223

TABLE CIV.—*continued.*

1844, Month.	14h		16h		18h		20h		22h		0h		2h		4h		6h		8h		10h		12h		Sum of all the Forces.	Sum of all the Two-hourly Periods.
	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.		
May	$6\frac{3}{4}$	19	7	20	$7\frac{1}{4}$	24	$7\frac{3}{4}$	26	$8\frac{3}{4}$	26	9	27	$9\frac{1}{2}$	27	$10\frac{3}{4}$	26	$11\frac{3}{4}$	27	11	27	$8\frac{3}{4}$	23	$7\frac{3}{4}$	21	106	293
June	$6\frac{1}{4}$	19	$5\frac{1}{2}$	17	$5\frac{3}{4}$	16	8	21	$9\frac{3}{4}$	24	12	25	$12\frac{1}{4}$	24	13	24	$14\frac{1}{4}$	25	$10\frac{1}{4}$	24	$9\frac{3}{4}$	24	$6\frac{3}{4}$	18	$113\frac{1}{2}$	261
July	$5\frac{1}{4}$	15	5	15	$5\frac{3}{4}$	16	$7\frac{1}{4}$	22	8	23	$9\frac{1}{2}$	24	12	26	$11\frac{1}{4}$	24	$11\frac{1}{4}$	25	$8\frac{1}{2}$	22	$6\frac{3}{4}$	17	7	14	$97\frac{1}{2}$	243
August	$7\frac{3}{4}$	19	$8\frac{1}{2}$	19	$8\frac{3}{4}$	21	10	21	$9\frac{3}{4}$	26	$11\frac{1}{4}$	27	$14\frac{1}{2}$	26	$12\frac{3}{4}$	23	$11\frac{1}{4}$	22	$10\frac{3}{4}$	22	$9\frac{1}{2}$	19	$8\frac{1}{2}$	18	$123\frac{1}{4}$	263
September	$3\frac{1}{2}$	10	$5\frac{1}{2}$	11	$4\frac{1}{4}$	12	4	13	7	18	$6\frac{1}{4}$	19	8	23	$8\frac{1}{4}$	22	7	21	$5\frac{3}{4}$	16	5	16	4	14	$68\frac{1}{2}$	195
October	8	19	$8\frac{1}{4}$	20	$7\frac{1}{2}$	18	$7\frac{1}{4}$	19	$11\frac{1}{2}$	24	13	25	$12\frac{3}{4}$	26	$14\frac{1}{4}$	25	$12\frac{3}{4}$	24	$10\frac{3}{4}$	21	$10\frac{1}{2}$	23	$8\frac{1}{4}$	19	$124\frac{3}{4}$	263
November	11	17	$8\frac{1}{2}$	14	$8\frac{1}{2}$	16	$6\frac{3}{4}$	15	$6\frac{1}{2}$	18	$9\frac{1}{4}$	17	$9\frac{3}{4}$	19	$8\frac{1}{2}$	19	$7\frac{1}{4}$	14	$9\frac{1}{4}$	18	$7\frac{3}{4}$	16	$8\frac{1}{2}$	14	$101\frac{1}{2}$	197
December	$4\frac{1}{2}$	10	$4\frac{3}{4}$	10	5	10	$6\frac{1}{4}$	14	5	16	6	16	8	18	$8\frac{3}{4}$	20	8	19	$8\frac{1}{4}$	15	$6\frac{1}{2}$	16	5	11	76	175

TABLE CV.—Number of Two-hourly Periods of Calm, and of Air in very gentle Motion, at every Even Hour of Göttingen Mean Time, in every Month, including all the Observations not contained in Table CIV.

1844, Month.	14h	16h	18h	20h	22h	0h	2h	4h	6h	8h	10h	12h	Whole Number of Calm Observations and very Light Winds in each Month.
	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	Number of Observations.	
	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	Calm and very Light.	
January	12	11	11	10	8	3	5	4	5	6	7	8	90
February	9	7	8	4	5	4	3	2	2	3	4	9	60
March	4	5	5	3	3	2	1		1	2	3	6	35
April	9	9	11	9	8	3		1	2	4	8	13	77
May	8	7	3	1	1			1			4	6	31
June	6	8	9	4	1		1	1		1	1	7	39
July	12	12	11	5	4	3	1	3	2	5	10	13	81
August	8	8	6	6	1		1	4	5	5	8	9	61
September	15	14	13	12	7	6	2	3	4	9	9	11	105
October	8	7	9	8	3	2	1	2	3	6	4	8	61
November	9	12	10	11	8	9	7	7	12	8	10	12	115
December	15	15	15	11	9	9	7	5	6	10	9	14	125

By taking the sums of the quantities at each hour, in Tables CIV. and CV., we obtain that

At 14^h	the whole sum of the estimated forces is	93,	the number of two-hourly periods	197,	the number of calms	115
16	,,	$95\frac{1}{2}$	,,	197	,,	115
18	,,	$92\frac{1}{4}$	,,	201	,,	111
20	,,	91	,,	228	,,	84
22	,,	$101\frac{1}{4}$	,,	254	,,	58
0	,,	119	,,	271	,,	41
2	,,	134	,,	283	,,	29
4	,,	$135\frac{1}{4}$	,,	279	,,	33
6	,,	$128\frac{1}{2}$	,,	270	,,	42
8	,,	120	,,	253	,,	59
10	,,	114	,,	235	,,	77
12	,,	89	,,	196	,,	116

And the whole sum of the estimated forces at all hours is $1312\frac{3}{4}$; the whole number of two-hourly periods is 2864; and the whole number of calms is 880.

The whole number of two-hourly periods over which the observations are spread is 3744. There are 2864 observations during the period, indicating that the air was in motion at those times; and there are 880 cases of calms, or of the air being in very gentle motion; of the latter the cases are very few indeed, and they have been all treated as calms. These cases of calms were distributed over the year as follows:—In spring, 143; in summer, 181; in autumn, 281; and in winter, 275.

At 14^h,	115 cases, of which in Spring there were 21,	in Summer there were 26,	in Autumn there were 32,	and in Winter there were 36
16,	115	,, 21,	,, 28,	,, 33,	,, 13
18,	111	,, 19,	,, 26,	,, 32,	,, 34
20,	84	,, 13,	,, 15,	,, 31,	,, 25
22,	58	,, 12,	,, 6,	,, 18,	,, 22
0,	41	,, 5,	,, 3,	,, 17,	,, 16
2,	29	,, 1,	,, 3,	,, 10,	,, 15
4,	33	,, 2,	,, 8,	,, 12,	,, 11
6,	42	,, 3,	,, 7,	,, 19,	,, 13
8,	59	,, 6,	,, 11,	,, 23,	,, 19
10,	77	,, 15,	,, 19,	,, 23,	,, 20
12,	116	,, 25,	,, 29,	,, 31,	,, 31

Spring is here used for March, April, May; Summer for June, July, August; Autumn for September, October, November; and Winter for December, January, and February.

Now, dividing the 24 hours of the day into two periods, that between 18^h and 6^h for the day period, and that between 6^h and 18^h for the night period, we find that there were—

In Spring	36 cases of calm during the day out of	468,	and 107 cases during the night out of	468
In Summer	42 ,, ,,	474,	139 ,,	474
In Autumn	107 ,, ,,	468,	174 ,,	468
In Winter	102 ,, ,,	462,	173 ,,	462

Therefore in Spring, during the day, one hour in 13^h. 0^m was calm.
,, during the night, one hour in 4. 22 was calm.
In Summer, during the day, one hour in 11. 17 was calm.
,, during the night, one hour in 3. 25 was calm.
In Autumn, during the day, one hour in 4. 22 was calm.
,, during the night, one hour in 2. 41 was calm.
In Winter, during the day, one hour in 4. 32 was calm.
,, during the night, one hour in 2. 40 was calm.

Or, for the whole year, there were 287 cases of calm out of 1872, during the day period, and there were 593 cases of calm out of 1872, during the night period.

Therefore, for the whole year, one hour out of 6^h. 31^m was calm during the day, and one hour out of 3^h. 9^m was calm during the night.

TABLE CVI.—Sums of the Forces of each Wind at every even Hour of Göttingen Mean Time, and Numbers of Two-hourly Periods of its Duration about that time, for the year 1844.

Direction of Wind.	14^h		16^h		18^h		20^h		22^h		0^h		2^h		4^h		6^h		8^h		10^h		12^h	
	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.	Sums of Forces.	Number of Two-hourly Periods.
N.	9¼	24	9¾	26	9¾	29	8½	28	9	26	8¼	27	7½	25	10¾	28	8½	20	9¾	24	8¾	22	8½	23
N. N. E.	2½	8	3¾	8	1¾	5	3¼	12	6	20	5½	18	6½	20	5	13	5¾	15	5¼	14	3	7	4	10
N. E.	4¾	14	4¼	12	4	13	4	14	5¾	16	10¼	27	8	22	7	15	7¾	21	4½	15	5	14	2¾	9
E. N. E.	4¾	9	5½	12	5	11	6½	15	5	11	3¼	11	7	14	7¾	22	9	20	9	16	6½	15	7¼	15
E.	3	8	3¼	8	4	7	2½	8	4½	11	4½	7	6	16	10	19	9	24	10¾	23	8¼	16	4¼	10
E. S. E.	1¼	2	¾	2	¾	3	3¼	4	3	9	3¾	10	2½	7	2	6	1¼	3	2¼	7	1	4	½	2
S. E.	1½	5	¾	2	2	5	2	7	1	4	½	2	¼	1			1	2	3	6	3½	10	1½	5
S. S. E.	½	2	1½	4	2	5	2	6	1¼	5	1¾	7	3¼	9	1¾	5	1	3	1	3	3	7	1¼	4
S.	6¼	14	7½	14	4¾	9	2¼	7	3¾	10	3¼	10	2¼	7	2½	7	2½	8	2½	5	4¼	8	3¾	11
S. S. W.	10½	15	9¾	15	8¼	17	6½	15	5	15	8¼	20	11¼	19	15¾	26	13¼	21	10½	19	11¼	21	9¾	23
S. W.	13¾	27	14	32	13½	28	14	32	10¾	28	13¾	28	14¾	34	14¼	30	16¾	34	15¼	34	14½	31	15½	21
W. S. W.	10½	26	14½	29	17¼	34	18¼	40	15	34	20¾	41	21¾	35	21¼	37	19½	33	18	36	12	24	9¼	24
W.	15¼	27	13¼	23	11¾	24	11	23	13¾	27	15¼	22	13	26	15½	29	12	24	7½	16	12¼	23	10½	22
W. N. W.	3½	6	½	1	2½	3	2¾	4	9¼	16	7¼	14	14	19	8¼	14	6¾	8	5¼	8	3½	9	3¾	5
N. W.	3½	5	3¾	4	2½	4	1	3	3	4	6¾	11	8½	10	6½	11	8½	13	7	9	11¾	10	4	6
N. N. W.	2¼	5	2¾	5	2½	4	3¼	10	5¼	18	6	16	7½	19	7	17	6	21	8½	18	5½	14	2½	6

By adding together the quantities at each hour, we obtain that during the year, (except Sundays, Good Friday, and Christmas Day,) at

h				
14	the whole sum of the estimated forces was	93;	the number of two-hourly periods was	197
16	,,	95½	,,	197
18	,,	92¼	,,	201
20	,,	91	,,	228
22	,,	101¼	,,	254
0	,,	119	,,	271
2	,,	134	,,	283
4	,,	135¼	,,	279
6	,,	128½	,,	270
8	,,	120	,,	253
10	,	114	,,	235
12	,,	89	,,	196

These numbers are identical with those following Table CV.

By taking the sums of all the forces for each civil day inserted in the Ordinary Observations, the following table is immediately formed:—

TABLE CVII.—Sums of the Estimated Forces of the Wind independently of Direction on each Civil Day.

Days of the Month, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	6 ·25	6 ·75	7 ·00	1 ·25	5 ·50	4 ·00	2 ·25	6 ·25	*S*	6 ·00	15 ·75	*S*
2	3 ·75	3 ·00	11 ·75	4 ·00	3 ·00	*S*	2 ·00	2 ·75	1 ·50	13 ·75	13 ·25	1 ·50
3	3 ·25	3 ·25	*S*	4 ·00	4 ·25	3 ·00	3 ·00	16 ·75	5 ·00	12 ·50	*S*	3 ·50
4	2 ·75	*S*	5 ·00	2 ·75	3 ·50	4 ·00	2 ·25	*S*	5 ·00	5 ·25	2 ·25	3 ·25
5	8 ·75	2 ·75	2 ·50	Good Friday	*S*	5 ·00	1 ·25	2 ·50	2 ·75	3 ·25	0 ·50	1 ·50
6	9 ·50	1 ·75	2 ·25	1 ·75	2 ·25	6 ·25	1 ·75	8 ·00	2 ·25	*S*	1 ·00	0 ·50
7	*S*	2 ·00	4 ·75	*S*	2 ·25	10 ·25	*S*	5 ·25	2 ·00	4 ·25	1 ·25	2 ·75
8	2 ·50	9 ·75	3 ·00	1 ·50	2 ·00	3 ·50	2 ·25	6 ·00	*S*	2 ·00	5 ·50	*S*
9	3 ·50	2 ·50	10 ·00	2 ·25	2 ·00	*S*	2 ·50	4 ·75	1 ·75	5 ·50	3 ·50	2 ·75
10	3 ·50	3 ·75	*S*	3 ·00	4 ·25	4 ·50	3 ·25	1 ·25	1 ·50	5 ·75	*S*	5 ·50
11	0 ·25	*S*	21 ·75	3 ·75	3 ·50	3 ·25	5 ·75	*S*	1 ·50	3 ·75	12 ·75	1 ·75
12	1 ·75	4 ·25	25 ·00	4 ·25	*S*	4 ·25	4 ·75	5 ·00	1 ·00	3 ·00	6 ·50	1 ·50
13	4 ·75	0 ·00	7 ·50	8 ·00	2 ·00	11 ·50	7 ·00	2 ·50	2 ·00	*S*	11 ·25	7 ·00
14	*S*	1 ·25	2 ·00	*S*	4 ·00	7 ·75	*S*	5 ·50	4 ·50	8 ·00	1 ·00	3 ·00
15	4 ·50	5 ·75	4 ·25	5 ·75	5 ·00	7 ·00	5 ·25	8 ·00	*S*	7 ·50	6 ·50	*S*
16	0 ·00	3 ·75	5 ·50	3 ·50	2 ·25	*S*	4 ·25	4 ·00	5 ·25	2 ·50	1 ·75	2 ·50
17	1 ·25	2 ·00	*S*	1 ·00	7 ·00	2 ·50	0 ·75	11 ·00	3 ·25	5 ·50	*S*	0 ·25
18	3 ·75	*S*	6 ·50	2 ·25	4 ·50	1 ·00	3 ·50	*S*	3 ·00	3 ·75	1 ·75	0 ·50
19	11 ·25	11 ·25	3 ·25	2 ·25	*S*	3 ·75	2 ·25	4 ·50	2 ·50	3 ·50	3 ·50	3 ·00
20	7 ·00	9 ·00	9 ·25	2 ·50	8 ·75	6 ·25	1 ·50	6 ·75	0 ·75	*S*	2 ·25	10 ·50
21	*S*	2 ·50	3 ·25	*S*	3 ·75	6 ·00	*S*	4 ·25	4 ·00	1 ·00	0 ·25	14 ·75
22	0 ·50	3 ·50	4 ·00	2 ·50	3 ·50	2 ·50	2 ·50	3 ·00	*S*	2 ·25	0 ·75	*S*
23	0 ·75	10 ·00	1 ·50	3 ·00	2 ·75	*S*	3 ·00	1 ·50	8 ·00	0 ·75	1 ·00	2 ·25
24	1 ·50	11 ·25	*S*	3 ·00	3 ·50	4 ·00	2 ·50	0 ·75	4 ·00	3 ·75	*S*	2 ·00
25	3 ·00	*S*	5 ·75	1 ·50	5 ·25	3 ·25	1 ·50	*S*	2 ·50	5 ·50	2 ·75	Ch. Day
26	4 ·75	9 ·50	4 ·75	1 ·50	*S*	2 ·00	4 ·75	3 ·25	0 ·50	3 ·00	0 ·25	0 ·00
27	4 ·50	5 ·75	3 ·00	3 ·50	4 ·75	2 ·25	1 ·75	2 ·25	0 ·75	*S*	0 ·75	0 ·00
28	*S*	5 ·25	2 ·75	*S*	6 ·50	2 ·00	*S*	1 ·00	0 ·25	1 ·00	2 ·50	2 ·25
29	6 ·75	3 ·75	1 ·75	5 ·50	4 ·25	2 ·75	5 ·00	2 ·25	*S*	4 ·50	1 ·00	*S*
30	14 ·00		6 ·00	5 ·25	3 ·00	*S*	8 ·00	1 ·00	3 ·00	2 ·25	3 ·00	1 ·00
31	17 ·50		*S*		3 ·25		14 ·00	1 ·75		3 ·50		1 ·50

The letter *S* denotes that the day was Sunday.

TABLE CVIII.—Comparison of the estimated Forces of the Wind, where the Limits are 0 and 6, with the corresponding Pressures on the Square Foot, as shewn by Osler's Anemometer, and Deduction of the Rule for comparing the Results obtained by the two Methods.

Month, 1844.	ESTIMATED FORCE. ½		1		1½		2		2½		3		3½		4	
	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations in estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.	Number of Observations of estimated Force.	Sum of the Pressures at the Anemometer in lbs. on the Square Foot.
Jan.	68	8½	30	24½	21	48½	8	29½	3	12¼	1	5				
Feb.	55	19	56	46¼	19	44¾	7	26¼	4	23½	1	5	2	13	1	12
March	52	24½	45	65½	29	82½	9	32¼	9	52½	2	23½	1	12	1	17
April	49	17¾	24	16¾	5	19	2	8								
May	50	21½	14	14¾	8	24	7	29								
June	59	16½	46	35¼	5	11¼	5	16½								
July	41	9	25	21	11	28	5	23	1	5	1	10				
August	61	41¾	23	25	9	19	4	15	4	21½	1	7				
Sep.	54	23¾	17	24¼	9	9										
Oct.	82	46½	42	40	8	21¼	4	19½	1	5						
Nov.	28	13¾	15	25½	10	28	11	41½	6	32½						
Dec.	33	15½	22	25¾	12	31	1	4								
Sums	632	258	359	354¾	146	366½	63	244¼	28	152¼	6	50½	3	25	2	29
Mean pressure in pounds for corresponding estimation.	lbs 0·4		lbs. 1·0		lbs. 2·5		lbs. 3·9		lbs. 5·4		lbs. 8·4		lbs. 8·3		lbs. 14·5	

These results, with the exception of that corresponding to the estimation-force of 3½, (which, however, depends on three observations only,) are nearly identical with those deduced from the observations in each of the years 1841, 1842, and 1843; and the connexion indicated as existing between the estimated force and the pressure as shewn by Osler's anemometer in lbs. on the square foot, is confirmatory of that indicated in the discussion of each of those years, viz.: that the square of the force by estimation represents approximately the number of lbs. pressure on the square foot. If the above numbers be combined with the corresponding numbers of 1841, 1842, and 1843, we have—

Estimated force	½,	1642	observations,	585¼	lbs. pressure;	mean pressure in lbs.	0·29
,,	1,	1685	,,	1750¾	,,	,,	1·0
,,	1½,	516	,,	1421¾	,,	,,	2·8
,,	2,	278	,,	1104¾	,,	,,	4·0
,,	2½,	113	,,	678¾	,,	,,	6·0
,,	3,	47	,,	375½	,,	,,	8·0
,,	3½,	9	,,	90	,,	,,	10·0
,,	4,	13	,,	142	,,	,,	10·9
,,	4½,	2	,,	25	,,	,,	12·5
,,	5,	4	,,	74	,,	,,	18·5

And the error that arises from assuming that the square of the estimated force represents the pressure in lbs. on the square foot, is as follows:—

Force by estimation	½,	the error is 0·04 lb.	in excess.
,,	1,	0·0	,,
,,	1½,	0·5	,,
,,	2,	0·0	,,
,,	2½,	0·2	in defect.
,,	3,	1·0	,,
,,	3½,	1·2	,,
,,	4,	5·1	,,
,,	4½,	7·7	,,
,,	5,	6·5	,,

With reference to all the forces by estimation above 3, there have been but few comparisons; and, for forces of 4 and 5, there have been very few indeed, and those being estimations of gusts in gales, the comparisons are of little value, and cannot be allowed to have much weight.

Considering the strength of the wind by estimation to be reduced to pressures on the square foot, by the above rule—

¼	by estimation is	1	oz.	pressure on the square foot.
½	,,	4	,,	,,
¾	,,	9	,,	,,
1	,,	1	lb.	,,
1½	,,	2¼	,,	,,
2	,,	4	,,	,,
2½	,,	6¼	,,	,,
3	,,	9	,,	,
3½	,,	12¼	,,	,,
4	,,	16	,,	,,
4¼	,,	20¼	,,	,,
5	,,	25	,,	,,
6	,,	36	,,	,,

In this investigation it was found that during the year 1844 there were 1791 cases of estimated force of ¼, and that in 1569 of these cases there were no pressures shewn at Osler's anemometer, while the sum of the pressures in the other 222 cases amounted to 117 lbs.; there were also 308 cases of estimated force of ½, 37 cases of ¾, 5 cases of 1, and 1 case of 1½, in which no pressures were shewn at the anemometer. From these results, which agree closely in their general character with those derived from previous years, it appears that the wind may frequently blow with a pressure of ½ lb. and occasionally with a pressure of 1lb. on the square foot, and yet no pressure will be shewn by Osler's anemometer.

Abstracts of the Results of Whewell's Anemometer.

In every month the amounts in inches through which the pencil had descended, corresponding to each direction of the wind (suppcsing the circumference divided into 16 equal parts), were collected together and their sums taken, and thus the following table was formed:—

TABLE CIX.—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.	iu.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Jan. 0. 22 to 30. 22	3 ·47	1 ·84	3 ·29	1 ·52	0 ·65	1 ·73	0 ·89	2 ·39	2 ·50	19 ·24	15 ·04	24 ·13	12 ·48	12 ·45	12 ·87	9 ·21	123 ·70
Feb. 0. 22 to 28. 22	14 ·26	1 ·91	1 ·14	2 ·42	1 ·64		0 ·20		3 ·07	25 ·78	12 ·44	33 ·19	4 ·77	11 ·05	9 ·06	10 ·84	131 ·77
Mar. 0. 22 to 11. 22	12 ·75	0 ·31	0 ·43	0 ·70					3 ·26	11 ·10	8 ·44	30 ·99	8 ·07	0 ·65	0 ·15	1 ·62	78 ·47
May 3. 22 to 30. 22	32 ·72	54 ·51	13 ·02	0 ·65	3 ·87	3 ·60	1 ·18				0 ·07		3 ·07	0 ·28	0 ·39	1 ·08	114 ·44
June 0. 22 to 16. 22	1 ·86	6 ·64	5 ·06	1 ·58	1 ·15	1 ·14	0 ·05	0 ·20	0 ·64	7 ·81	28 ·21	5 ·25	5 ·59	2 ·48	4 ·79		72 ·45
Aug. 21. 22 to 30. 22		0 ·06		0 ·45	2 ·55	1 ·20	0 ·31				0 ·31	2 ·90	4 ·31	3 ·98	3 ·49	0 ·35	19 ·91
Sep. 0. 22 to 29. 22	6 ·58	9 ·01	12 ·28	5 ·36	3 ·27	0 ·81			1 ·46	7 ·45	8 ·91	7 ·78	3 ·47	0 ·10	1 ·35	2 ·45	70 ·28
Oct. 0. 22 to 24. 22	0 ·48		1 ·15				1 ·74	2 ·77	9 ·46	17 ·59	20 ·18	22 ·14	15 ·15	6 ·53	5 ·25	3 ·73	106 ·17
Nov. 0. 22 to 29. 22	2 ·22	1 ·09	3 ·77	1 ·65	17 ·39	2 ·33		2 ·29	3 ·11	10 ·03	21 ·63	28 ·99	3 ·39	3 ·33	0 ·93	0 ·98	103 ·13
Dec. 0. 22 to 30. 22	3 ·53	13 ·29	7 ·16	18 ·20	13 ·01	8 ·34		0 ·57	2 ·97								67 07

By taking the sum of all the quantities for each wind, we find that from January 1st to the end of the year (excepting the intervals of time between March 11^{d}. 22^{h} and May 3^{d}. 22^{h}, between June 16^{d}. 22^{h} and August 21^{d}. 22^{h}, and between October 24^{d}. 22^{h} and October 29^{d}. 22^{h}, at which time the instrument was out of order,) the

Descent of the pencil with the	N.	wind was	77 ·87	inches.
,,	N. N. E.	,,	88 ·66	,,
,,	N. E.	,,	47 ·30	,,
,,	E. N. E.	,,	32 ·53	,,
,,	E.	,,	43 ·53	,,
,,	E. S. E.	,,	19 ·15	,,
,,	S. E.	,,	4 ·37	,,
,,	S. S. E.	,,	8 ·22	,,
,,	S.	,,	26 ·47	,,
,,	S. S. W.	,,	99 ·00	,,
,,	S. W.	,,	115 ·23	,,
,,	W. S. W.	,,	155 ·37	,,
,,	W.	,,	60 ·30	,,
,,	W. N. W.	,,	40 ·85	,,
,,	N. W.	,,	38 ·28	,,
,,	N. N. W.	,,	30 ·26	,,

And the whole descent was 887 ·39 inches.

Resolving these numbers into the cardinal directions, as for Osler's Anemometer, we have

TABLE CX.—Sums of the Forces of the Wind for the Year 1844, measured by the Descent of the Pencil of Whewell's Anemometer, resolved in the Directions of the Cardinal Points.

Direction of Wind.	Whole descent of the Pencil.	Resolved Parts in the Direction N.	E.	S.	W.
	in.	in.	in.	in.	in.
N.	77·87	77·87			
N. N. E.	88·66	81·91	33·93		
N. E.	47·30	33·45	33·45		
E. N. E.	32·53	12·45	30·05		
E.	43·53		43·53		
E. S. E.	19·15		17·69	7·33	
S. E.	4·37		3·09	3·09	
S. S. E.	8·22		3·15	7·59	
S.	26·47			26·47	
S. S.W.	99·00			91·47	37·88
S.W.	115·23			81·48	81·48
W. S.W.	155·37			59·46	143·55
W.	60·30				60·30
W. N.W.	40·85	15·63			37·74
N.W.	38·28	27·07			27·07
N. N.W.	30·26	27·96			11·58
	Sums...	276·34	164·89	276·89	399·60

By taking the sum of all the quantities for each day inserted in the Ordinary Observations, the following table is immediately formed:—

TABLE CXI.—Shewing the whole Descent of the Pencil in the Twenty-four Hours previously to reading the Instrument.

Day and Hour of Reading the Instrument, 1844.	January.	February.	March.	May.	June.	August.	September.	October.	November.	December.
d h	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
0. 22	9·22	9·75	6·72		3·00		0·42	2·82	4·58	2·96
1. 22	3·82	1·16	8·60		4·30		0·76	6·15	8·52	1·72
2. 22	3·12	3·01	11·00		4·47		2·45	6·21	3·94	1·98
3. 22	4·58	2·10	9·60		3·45		3·59	5·85	4·12	4·43
4. 22	4·50	3·10	4·18	4·00	4·46		3·05	4·56	1·36	1·97
5. 22	9·83	0·60	0·63	2·09	5·42		2·78	3·02	0·15	0·85
6. 22	6·90	3·50	4·99	2·81	6·49		3·10	4·38	2·80	0·68
7. 22	3·98	2·48	2·46	3·00	7·31		2·87	1·45	3·54	3·25
8. 22	3·62	9·02	5·12	1·05	1·65		2·02	3·37	4·59	3·08
9. 22	3·61	4·80	5·95	2·90	4·20		0·68	6·95	2·86	4·29
10. 22	2·50	3·52	8·22	3·10	3·80		1·20	4·29	6·23	2·29
11. 22	1·11	2·68	11·00	4·45	3·10		1·21	4·12	7·06	0·25
12. 22	2·79	0·03		2·30	4·98		1·20	4·92	8·34	3·75
13. 22	3·10	0·00		1·27	5·70		3·19	6·23	5·05	4·41
14. 22	2·59	3·69		3·85	5·60		4·35	5·78	3·89	0·81
15. 22	1·37	5·28		4·45	3·30		6·42	5·47	6·50	4·46
16. 22	0·82	4·70		1·42	1·22		5·13	4·50	2·84	0·70
17. 22	2·62	5·89		6·61			2·29	4·83	3·83	1·23
18. 22	5·30	7·11		7·92			1·95	3·03	4·86	1·35
19. 22	7·01	7·60		8·22			1·52	5·37	3·92	3·10
20. 22	3·70	3·42		(6·00)			1·29	3·50	2·58	5·45
21. 22	2·10	2·32		2·60		2·70	3·15	2·68	0·34	5·68
22. 22	0·13	2·46		4·10		2·70	3·74	0·90	0·31	2·84
23. 22	0·00	10·00		3·45		1·05	4·01	0·95	0·35	0·71
24. 22	1·22	3·95		5·40		1·23	2·10	4·84	1. 22	0·60
25. 22	4·55	8·50		6·92		3·13	0·73		1. 27	0·68
26. 22	4·59	8·10		7·60		2·79	0·72		0·77	0·00
27. 22	3·91	4·70		6·11		1·58	0·38		3·45	0·57
28. 22	5·67	8·30		5·52		0·47	0·99		2·21	2·97
29. 22	7·14			4·25		1·51	2·99		1·63	0·01
30. 22	8·30			3·05		2·75				0·00

By taking the sums of the numbers in each column, we find that—

In January the sum of all the descents of the pencil was		123·70	inches
In February	,, ,,	131·77	,,
From February $28^d. 22^h$ to March $11^d. 22^h$	,,	78·47	,,
From May $3^d. 22^h$ to the end of May	,,	114·44	,,
From May $30^d. 22^h$ to June $16^d. 22^h$	,,	72·45	,,
From August $20^d. 22^h$ to the end of the month	,,	19·91	,,
In September	,, ,,	70·28	,,
From September $29^d. 22^h$ to October $24^d. 22^h$	,,	106·17	,,
In November	,, ,,	103·13	,,
In December	,, ,,	67·07	,,

And the sum of all the descents is 887·39 inches.

Shortly after Whewell's Anemometer was used, it was found that there was a close agreement between the daily sums of the twelve estimated forces (upon the scale usually assumed in our estimations, and for which observations were taken every two hours,) and the daily descents of the pencil of the Anemometer (as measured in inches). By comparison of the numbers in the preceding table with those in Table CVIII., it will be seen that the numbers are nearly alike, although not strictly comparable; because the former numbers represent the sums of the descents of the pencil between 22^h of one day and the same time of the next day, whilst those in Table CVIII. represent the sums of the estimated forces during a civil day. The next table has, therefore, been formed in the following manner:—The sum of all the estimated forces between 22^h of one day and 22^h of the next day was taken for every corresponding period during which Whewell's Anemometer was at work throughout the year. Those sums were then compared with the numbers in the above table, and the differences thus found were taken. The Algebraic sums of those differences were then taken in each month, and thus the following table was formed:—

TABLE CXII.—Comparison of the Sums of Twelve estimated Forces of the Wind, upon the scale of estimation adopted in the preceding observations, with the corresponding Descents of the Pencil of Whewell's Anemometer, measured in inches; and Deduction of the Rule for comparing the Results obtained by the two Methods.

1844, Month.	Sums of Estimated Forces between 22^h of one day and 22^h of the next day.																					
	Less than 3.	Number of Comparisons.	Between 3 and 4.	Number of Comparisons.	Between 4 and 5.	Number of Comparisons.	Between 5 and 6.	Number of Comparisons.	Between 6 and 7.	Number of Comparisons.	Between 7 and 8.	Number of Comparisons.	Between 8 and 9.	Number of Comparisons.	Between 9 and 10.	Number of Comparisons.	Between 10 and 11.	Number of Comparisons.	Between 11 and 12.	Number of Comparisons.	Above 12.	Number of Comparisons.
	Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.		Excess of Sum of descents of Pencil above the Sum of Estimated Forces.	
Jan.	+ 1·31	9	+2·44	3	+0·66	5									−2·61	1			−1·67	1	−22·99	3
Feb.	+ 3·13	6	−2·61	5	+2·18	5	+1·47	1			+2·02	1			+1·40	1					−16·22	2
Mar.	− 0·62	1	+0·14	2			−0·39	2									− 1·40	1			− 8·00	1
May	+ 1·73	6	−1·10	4	−0·45	5	+1·23	2			−1·14	2										
June			+0·51	3	−0·70	1			− 1·86	3	−1·90	1					− 7·24	2				
Aug.	+ 1·07	6	−0·46	1	−1·30	1																
Sep.	+ 1·63	14	−2·87	4	+0·88	1			− 5·15	2												
Oct.	+ 0·38	6	+2·68	3	+0·88	2	−0·70	2	− 1·42	1	−0·80	1	−2·47	1	−3·60	1			5·90	1	− 6·04	1
Nov.	+ 6·75	12	+2·57	3			+0·14	3									− 2·41	1			−18·92	2
Dec.	− 2·99	12			−3·39	5			− 1·59	1											−10·05	1
Sum	+12·39	72	+1·30	28	−1·24	25	+1·75	10	−10·02	7	−1·82	5	−2·47	1	−4·81	3	−11·05	4	−7·57	2	−82·22	10
Mean	+ 0·17		+0·05		−0·05		+0·18		−1·43		−0·36		−2·47		−1·60		− 2·76		−3·78		− 8·22	

By an inspection of the numbers in the different months, it would seem that the instrument has been throughout the year consistent with itself, as tested by the comparison with the estimated forces. By examining the mean values, it seems that for all daily sums of the estimated forces less than 6, the difference between the sum by estimation and the descent in inches by Whewell's Anemometer, is insignificant, and the forces given by the two methods may therefore be considered identical; it appears also, that when the daily sums of the estimated forces amount to any number between 6 and 10, the daily descent by the Anemometer is 1·8 less than the estimated force; and finally, that for all values of the estimated forces greater than 10, the descent of the pencil is much less than 10, but there are so few comparisons of those numbers that no certain rule can at present be deduced.

TABLE CXIII.—*Monthly Changes of the Wind as derived from Osler's Anemometer in the Year* 1844.

1843, Dec. 31^d. 12^h. The direction of the wind was S. S. W.
1844, Jan. 31^d. 12^h. ,, ,, N. W.; which implies apparent direct motion 112½°.
Jan. 9^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Jan. 12^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Jan. 22^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Jan. 24^d. 4^h. 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 January was 112½°.

1844, Jan. 31^d. 12^h. The direction of the wind was N. W.
Feb. 29^d. 12^h. ,, ,, S. by E.; which implies apparent retrograde motion 146¼°.
Feb. 2^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Feb. 22^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Feb. 24^d. 22^h. 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 February was 506¼°.

1844, Feb. 29^d. 12^h. The direction of the wind was S. by E.
Mar. 31^d. 12^h. ,, ,, E. by S.; which implies apparent direct motion 292½°.
Mar. 3^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Mar. 8^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Mar. 15^d. 5^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Mar. 17^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Mar. 28^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Mar. 30^d. 22^h. 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 1012½°.

1844, Mar. 31^d. 12^h. The direction of the wind was E. by S.
April 30^d. 12^h. ,, ,, E. S. E.; which implies apparent direct motion 11¼°.
April 1^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
April 5^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
April 24^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
April 27^d. 22^h. 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 April was 731¼°.

1844, April 30^d. 12^h. The direction of the wind was E. S. E.
May 31^d. 12^h. ,, ,, N. E.; which implies apparent retrograde motion 67½°.
May 6^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
May 8^d. 22^h. 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 652½°.

1844, May 31^d. 12^h. The direction of the wind was N. E.
June 30^d. 12^h. ,, ,, E.; which implies apparent direct motion 45°.
June 3^d. 22^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
June 18^d. 22^h. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
June 27^d. 19½^h. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

1844, June $28^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
June $29^d. 22^h$. 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 June was 405°.

1844, June $30^d. 12^h$. The direction of the wind was E.
July $31^d. 12^h$. ,, ,, W. S. W.; which implies apparent retrograde motion 202½°.
July $1^d. 7\frac{1}{2}^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $2^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $7^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $16^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $17^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°
July $19^d. 17^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $20^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
July $22^d. 22^h$. 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 2677½°.

1844, July $31^d. 12^h$. The direction of the wind was W. S. W.
August $31^d. 12^h$. ,, ,, S. E.; which implies apparent direct motion 247½°.
August $24^d. 22^h$. 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 August was 607½°.

1844, August $31^d. 12^h$. The direction of the wind was S.E.
Sep. $30^d. 12^h$. ,, ,, S.S.W.; which implies apparent direct motion 67½°.
Sep. $1^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $9^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $11^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $12^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $25^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $26^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Sep. $27^d. 9^h$. 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 2587½°.

1844, Sep. $30^d. 12^h$. The direction of the wind was S. S. W.
Oct. $31^d. 12^h$. ,, ,, E.; which implies apparent retrograde motion 472½°.
Sep $30^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Oct. $21^d. 8^h$. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Oct. $23^d. 2^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Oct. $25^d. 9\frac{1}{2}^h$. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Oct. $27^d. 22^h$. 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 October was 112½°.

1844, Oct. $31^d. 12^h$. The direction of the wind was E.
Nov. $30^d. 12^h$. ,, ,, N.; which implies apparent direct motion 270°.
Oct. $31^d. 19^d$. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Nov. $5^d. 4^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Nov. $22^d. 22^h$. The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
Nov. $24^d. 22^h$. The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
Nov. $29^d. 22^h$. 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 November was 90°.

1844, Nov. $30^d. 12^h$. The direction of the wind was N.
Dec. $31^d. 12^h$. ,, ,, E. N. E.; which implies apparent direct motion 67½°.
Dec. $29^d. 22^h$. 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 December was 292½°.

The whole excess of direct motion during the year was 7785°.

Amount of Clouds in the Year 1844.

TABLE CXIV.—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, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	6·2	1·3	7·5	4·7	1·0	2·9	8·4	5·2	*S*	5·9	7·8	*S*
2	4·6	10·0	7·2	1·0	0·2	*S*	9·8	4·8	2·1	8·8	10·0	10·0
3	6·3	8·3	*S*	0·0	4·0	6·2	8·9	9·4	7·2	8·0	*S*	10·0
4	9·8	*S*	8·9	2·1	9·8	4·9	9·7	*S*	6·8	1·8	7·6	7·8
5	10·0	3·6	8·3	Good Friday	*S*	6·6	9·9	7·8	7·5	8·5	10·0	0·2
6	5·4	6·8	3·5	3·4	3·2	9·0	9·4	6·3	5·8	*S*	7·6	0·4
7	*S*	9·8	8·4	*S*	4·1	8·0	*S*	3·1	7·8	3·5	8·4	6·3
8	6·2	1·3	6·5	3·0	7·6	5·7	8·6	3·1	*S*	4·4	9·0	*S*
9	9·3	6·5	7·9	0·9	5·3	*S*	8·3	4·3	10·0	9·6	5·1	10·0
10	8·4	8·0	*S*	0·3	7·8	4·9	6·4	8·3	8·8	6·4	*S*	10·0
11	8·7	*S*	8·7	4·9	7·8	2·7	7·6	*S*	4·0	2·2	8·1	9·2
12	8·7	8·4	4·3	8·4	*S*	3·5	8·7	9·7	8·5	8·1	10·0	10·0
13	9·8	9·4	3·0	9·8	3·7	5·5	9·4	8·8	9·5	*S*	8·3	10·0
14	*S*	9·7	9·5	*S*	4·3	3·0	*S*	7·8	9·1	8·0	9·4	10·0
15	6·2	9·4	8·8	5·5	6·6	4·4	2·5	7·8	*S*	6·1	9·8	*S*
16	3·9	1·2	9·0	7·7	9·3	*S*	6·9	5·7	7·8	7·2	7·3	10·0
17	9·1	8·4	*S*	4·2	6·0	4·8	7·5	6·0	8·5	7·3	*S*	10·0
18	10·0	*S*	6·1	4·2	5·1	9·4	6·2	*S*	8·8	2·4	10·0	10·0
19	7·4	6·8	9·6	5·8	*S*	10·0	6·9	3·6	2·7	5·8	10·0	10·0
20	7·7	3·6	7·7	9·5	3·6	8·5	2·5	8·6	5·3	*S*	7·5	3·6
21	*S*	8·3	2·3	*S*	7·6	5·3	*S*	8·4	6·0	10·0	3·4	9·8
22	7·3	7·3	9·8	5·5	8·5	4·0	0·6	9·5	*S*	5·9	10·0	*S*
23	9·8	5·3	7·8	1·6	7·3	*S*	2·4	6·8	9·8	4·7	8·5	10·0
24	6·6	8·0	*S*	3·9	8·4	5·5	4·0	6·9	5·9	10·0	*S*	10·0
25	6·3	*S*	9·2	0·3	5·7	10·0	5·3	*S*	3·1	10·0	9·7	Ch. Day
26	5·7	8·8	7·3	3·8	*S*	10·0	8·4	10·0	0·3	7·6	2·4	10·0
27	9·3	4·7	10·0	4·0	6·0	9·1	6·2	8·7	0·4	*S*	2·0	9·5
28	*S*	6·2	4·5	*S*	8·7	9·9	*S*	1·8	0·0	3·9	7·3	8·9
29	6·4	6·1	2·7	1·3	10·0	4·5	5·9	0·2	*S*	10·0	9·8	*S*
30	6·8		4·4	2·5	9·3	*S*	8·8	3·6	1·8	9·8	9·1	9·2
31	7·6		*S*		9·6		7·5	0·4		1·8		9·1

The spaces in which the letter *S* is inserted correspond to Sunday.

From this table we learn that there were two days in the year free from cloud, viz., April 3d and September 28d; there were, however, nine that may be considered cloudless, viz., April 10d and 25d; May 2d; August 29d and 31d; September 26d and 27d; and December 5d and 6d. The period about September 27d was the longest clear period in the year. There were thirty-four totally cloudy days, viz., January 5d and 18d; February 2d; March 27d; May 29d; June 19d, 25d, and 26d; August 26d; September 9d; October 21d, 24d, 25d, and 29d; November 2d, 5d, 12d, 18d, 19d, and 22d; December 2d, 3d, 9d, 10d, 12d, 13d, 14d, 16d, 17d, 18d, 19d, 23d, 24d, and 26d. Besides these there were twenty-seven days that may be considered totally cloudy, viz., January 4d, 13d, and 23d; February 7d and 14d; March 14d, 19d, and 22d; April 13d and 20d; May 4d and 31d; June 28d; July 2d, 4d, and 5d; August 12d and 22d; September 13d and 23d; October 9d and 30d; November 15d, 25d, and 29d; December 21d and 27d. Or there were only eleven days in the year that can be considered cloudless, and there were sixty-one days in the year that may be considered quite cloudy.

TABLE CXV.—Mean Amount of Cloud in each Month, deduced from the Mean of all the Two-Hourly Observations in each Month.

1844, Month.	Mean Amount of Cloud 0 – 10.	1844, Month.	Mean Amount of Cloud 0 – 10.	1844, Month.	Mean Amount of Cloud 0 – 10.
January	7·5	May	6·3	September	5·9
February	6·7	June	6·3	October	6·6
March	7·0	July	6·9	November	8·0
April	3·9	August	6·2	December	8·6

The mean of all the monthly results is 6·7.

TABLE CXVI.—Mean Amount of Cloud at every even Hour of Göttingen Mean Time, deduced from all the Observations taken at that Hour in each Month.

Hour, Göttingen Mean Time, 1844.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
h												
14	7·9	6·7	6·5	3·2	6·6	6·5	6·2	5·4	5·2	5·6	8·3	8·6
16	7·4	6·8	8·0	3·2	7·3	6·1	7·4	5·5	5·5	6·1	8·4	8·3
18	7·4	6·8	7·0	4·2	6·7	6·0	7·4	5·0	6·1	5·6	8·2	8·4
20	7·3	5·7	7·3	3·8	6·6	6·3	7·9	5·0	6·6	6·4	8·0	9·2
22	7·4	5·9	6·8	4·5	6·3	6·0	7·4	7·2	7·4	6·8	9·1	9·1
0	7·6	5·8	7·3	4·0	7·0	5·6	7·7	7·6	6·7	7·8	9·2	8·6
2	8·0	6·2	7·1	4·6	7·2	5·7	7·7	7·3	5·8	8·0	9·5	8·8
4	7·3	6·9	7·5	4·6	6·6	5·7	7·0	6·9	5·4	7·4	8·6	8·6
6	7·7	7·2	7·4	4·3	4·9	5·2	6·3	6·8	5·5	7·5	9·1	8·6
8	7·5	7·3	6·5	4·2	5·5	5·7	6·1	6·6	5·4	7·0	6·3	8·7
10	7·2	8·1	6·5	2·7	5·3	5·9	6·1	5·8	5·6	6·3	7·1	7·6
12	7·7	7·1	6·5	4·0	6·1	5·7	5·9	5·0	5·3	4·4	8·3	8·1

Generally the largest quantities of cloud prevail during the day, and the least during the night; but this is not true in every month, as will be seen from the following table:—

TABLE CXVII.—Hours of the Day, in different Months, at which the Greatest and Least Amounts of Cloud prevailed, with the Amount of Cloud at those Hours.

1844, Month.	Hour at which prevailed the Most Cloud.	Hour at which prevailed the Least Cloud.	Amount of Cloud 0—10. Greatest.	Amount of Cloud 0—10. Least.	Difference.
	h	h			
January	2	10	8·0	7·2	0·8
February	10	20	8·1	5·7	2·4
March	16	8, 10, 12, & 14	8·0	6·5	1·5
April	2 & 4	10	4·6	2·7	1·9
May	16	6	7·3	4·9	2·4
June	14	6	6·5	5·2	1·3
July	20	12	7·9	5·9	2·0
August	0	18, 20, & 12	7·6	5·0	2·6
September	22	14	7·4	5·2	2·2
October	2	12	8·0	4·4	3·6
November	2	8	9·5	6·3	3·2
December	20	10	9·2	7·6	1·6

The hours at which the least quantity of cloud prevailed were during the night; and the hours at which the greatest quantity prevailed were during the day, except in February, March, May, and June, in which months both the greatest and least quantities occur, shewing that the amount of cloud during these months was much more variable than at any other time in the year.

The next table is formed in the usual way from the numbers in Table CXVI.

TABLE CXVIII.—Mean Amount of Cloud in Quarterly Periods and for the Year.

Hour, Göttingen Mean Time, 1844.	Mean Amount of Cloud in				For the Year.
	Spring.	Summer.	Autumn.	Winter.	
h					
14	5·4	6·0	6·4	7·7	6·4
16	6·2	6·3	6·7	7·5	6·7
18	6·0	6·1	6·6	7·5	6·6
20	5·9	6·4	7·0	7·4	6·7
22	5·9	6·9	7·8	7·5	7·0
0	6·1	7·0	7·9	7·3	7·1
2	6·3	6·9	7·8	7·7	7·2
4	6·2	6·5	7·1	7·6	6·9
6	5·5	6·1	7·4	7·8	6·7
8	5·4	6·1	6·2	7·8	6·4
10	4·8	5·9	6·3	7·6	6·2
12	5·5	5·5	6·0	7·6	6·2

The greatest quantity of cloud in Spring was at 2^h, and the least quantity was at 10^h
Summer at 0, ,, 12
Autumn at 0, ,, 12
Winter at 6 and 8^h, ,, 0
For the Year at 2 ,, 10 and 12^h

The difference between the greatest and least amounts in Spring was 1·5
,, Summer was 1·5
,, Autumn was 1·9
,, Winter was 0·5
,, for the Year was 1·0

The mean quantity of cloud in Spring was 5·8
,, Summer was 6·3
,, Autumn was 6·9
,, Winter was 7·6
And the mean for the Year was 6·7

Records of the Rain Gauges.

TABLE CXIX.—Amount of Rain collected in each Month in the several Gauges.

1844, 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	1·46	2·36	2·380	2·42	
February	0·72	1·81	1·990	2·32	
March	1·37	2·03	2·195	2·30	2·87
April	0·22	0·23	0·330	0·35	0·35
May	0·02	0·15	0·290	0·30	0·37
June	1·30	1·58	1·535	1·56	1·82
July	1·84	2·32	2·210	2·18	2·82
August	1·12	1·43	1·580	1·71	1·99
September	0·89	1·19	1·055	1·19	1·23
October	2·41	4·01	3·450	4·01	4·03
November	3·09	4·74	3·875	4·50	4·32
December	0·18	0·34	0·375	0·36	0·42

During the months of January and February, the gauge at the Greenwich Hospital schools was not in use; but, as the amounts in the subsequent months are so nearly the same as those in the cylinder gauge on the ground, it has been assumed in the subsequent calculations that such was the case in those months. The amount of rain at Osler's anemometer during the month of March was inferred (see foot-notes on pages (33) and (631)). On July 1st and 2nd, Osler's gauge failed to record the amount fallen; it has been assumed as $0^{in.}50$, which, added to the amount registered in the month, viz. $1^{in.}34$, gives $1^{in.}84$, the amount used above.

Taking the sums of the quantities in December, January, and February, for Winter; those in March, April, and May, for Spring; those in June, July, and August, for Summer; and those in September, October, and November, for Autumn; the following table is formed:—

TABLE CXX.—Quarterly Amount of Rain.

1844.	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.
Spring	1·61	2·41	2·82	2·95	3·59
Summer	4·26	5·33	5·33	5·45	6·63
Autumn	6·39	9·94	8·38	9·70	9·58
Winter	2·36	4·51	4·75	5·10	5·16

The receiving surface of Osler's anemometer-gauge is about 50 feet above the ground; that of the gauge above the Library is about 24 feet above the ground; that of Crosley's gauge is 1 foot 11 inches above the ground; and those of the two cylindrical gauges are 5½ inches above the ground. The proportions of the sums collected are—

	Osler's Anemometer.	Above Library.	Crosley's.	Cylindrical at R. Observatory.	Cylindrical at R. H. Schools.
In Spring	45	82	96	100	122
In Summer	78	98	98	100	122
In Autumn	66	102	86	100	99
In Winter	46	89	94	100	101

Between the quantities of rain received in the two lowest gauges at the Royal Observatory (viz., Crosley's and the Cylindrical gauge), it has always been found, that when the former has been in good working order, there was very nearly a ratio of equality; and it is believed that such not being the case this year is attributable to defective working of the machinery of Crosley's gauge, and that the quantity lost by this defective working has amounted in the year to nearly 2 inches. The numbers at the upper station differ most from those at the lower in spring and in winter, and least of all in summer. Occasional observations were made on the temperature of rain in the years 1842 and 1843, and it was always found that when the rain was warm with respect to the temperature of the air at the time, no differences existed in the quantities of rain collected at the different heights; but that, when the temperature of the air has been higher than the temperature of the rain, a difference always existed; from this it appears probable, that the differences in the quantities of rain collected at different heights are owing, at least in part, to the great condensation of the vapour in the atmosphere from being brought in contact with the relatively cold rain.

The sums of the amounts fallen at each gauge during the year are as follow:—

		ft. in.		in.
At Osler's Anemometer-gauge, whose receiving surface is		205. 6	above the mean level of the sea,	14·62
At the gauge above the Library	,,	177. 2	,,	22·19
At Crosley's gauge	,,	156. 6	,,	21·28
At the Cylindrical gauge	,,	155. 3	,,	23·20
At the Cylindrical gauge in R. H. Schools	,,	35. 0	,,	24·96

It appears from these results that, for a point about 24 feet above the ground, the ratio of the sums collected at that altitude and on the ground is 96 : 100; and that, for a point 50 feet above the ground, the ratio is 63 : 100.

Abstracts of the Observations made with the Actinometer.

TABLE CXXI.

Month and Day, 1844.	Greenwich Astronomical Mean Time.	Altitude of the Sun.	Mean Radiation per Minute, in Parts of the Scale.	GENERAL REMARKS.	Kind of Cloud, &c., and Time of its Continuance.	Number of Divisions by which the removal of the Glass caused the Readings to be greater, or the presence of clouds, &c., caused them to be less.	Number of Divisions that would have been shewn by the Instrument had the Glass not been removed; or had the Sky been clear, &c., during the time of continuance of the Cloud.	Proportions of the whole of the Rays cut off by the Glass or by the Clouds, &c.
d	h m s	°	div.			div.	div.	
Feb. 1	0. 46. 30	21	4 ·57	The Sun in haze.				
	0. 57. 0	20	7 ·90	The haze is less dense.				
Apr. 3	22. 3. 11	38	44 ·10	A strong S. W. wind is blowing.				
	22. 11. 11	39	42 ·87	,, the glass in front of the cylinder was removed.				
	22. 30. 11	40	30 ·35	Nearly calm: the glass in front of the cylinder.				
	22. 36. 41	40	36 ·35	,, the glass removed.		5 ·85	30 ·50	0 ·192
	22. 41. 41	41	30 ·65	,, the glass in front of the cylinder.				
	22. 46. 41	41	35 ·70	,, the glass removed.		3 ·32	32 ·38	0 ·103
	23. 0. 41	42⅓	34 ·10	,, the glass in front of the cylinder.				
	23. 7. 41	43	38 ·55	,, the glass removed.		5 ·22	33 ·33	0 ·157
	23. 11. 41	43	32 ·55	,, the glass in front of the cylinder.				
	23. 16. 41	43	39 ·05	,, the glass removed.		5 ·82	33 ·23	0 ·176
	23. 22. 41	43	33 ·90	,, the glass in front of the cylinder.				
	23. 27. 41	43	39 ·40	,, the glass removed.		5 ·20	34 ·20	0 ·152
	23. 32. 41	44	34 ·50	,, the glass in front of the cylinder.				
	23. 37. 41	44	41 ·40	,, the glass removed.		7 ·20	34 ·20	0 ·211
	23. 42. 41	44	33 ·90	,, the glass in front of the cylinder.				
	23. 48. 41	44	41 ·70	,, the glass removed.		7 ·85	33 ·85	0 ·232
	23. 58. 41	44	33 ·80	,, the glass in front of the cylinder.				
Apr. 4	0. 3. 41	44	42 ·15	Nearly calm: the glass removed.		7 ·47	34 ·68	0 ·215
	0. 15. 41	44	35 ·55	,, the glass in front of the cylinder.				
	0. 23. 41	44	37 ·65	,, the glass removed.		5 ·17	32 ·48	0 ·159
	0. 28. 41	44	29 ·40	,, the glass in front of the cylinder.				
	0. 43. 41	43	(60 ·50)	The glass removed: currents of air: after the first observation the wind blew occasionally with a pressure of 1 lb. on the square foot. This result is deduced from two Sun and one shade observations, the latter being made between the times of making the former: during the first Sun observation the reading of the instrument increased by 26div., being about the rate of increase as deduced from the previous observations; and in the last Sun observation the readings decreased 1div., so that the difference between these numbers represents the effect of the air coming in quick contact with the chamber in decreasing the reading while the Sun was shining on the instrument. The decrease in the readings in the previous shade observation, when the glass was removed, was about 20div., and in this observation the decrease was 47 ·8div., and this difference is an approximation to the effect of quick passing air upon the readings of the instrument whilst the Sun was not shining on it.				
Apr. 5	21. 57. 41	37½	24 ·40	The glass in front of the cylinder.				
	22. 2. 41	38	31 ·70	The glass removed.		5 ·37	26 ·33	0 ·204

TABLE CXXI.—*continued.*

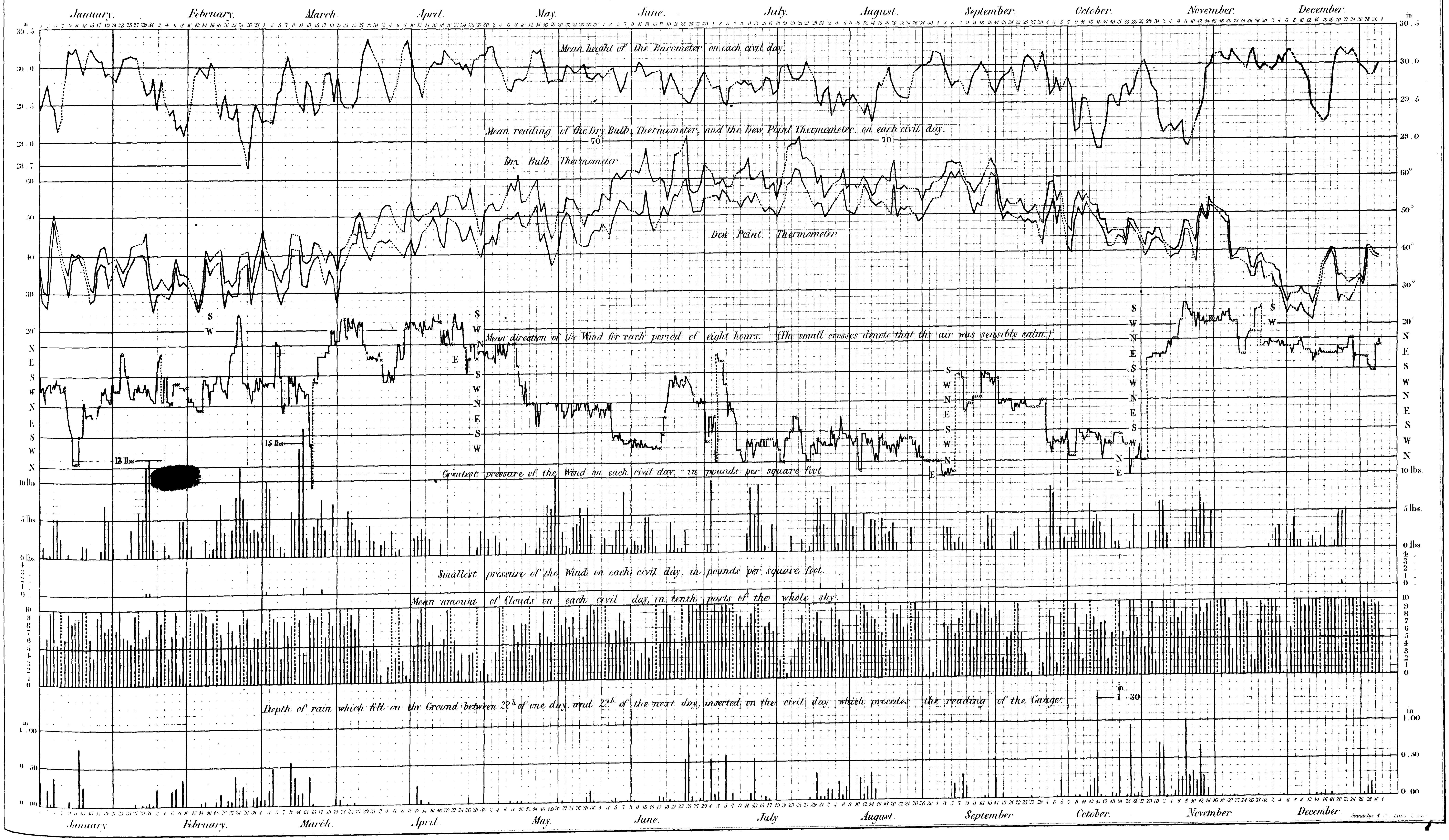
Month and Day, 1844.	Greenwich Astronomical Mean Time.	Altitude of the Sun.	Mean Radiation per Minute, in Parts of the Scale.	GENERAL REMARKS.	Kind of Cloud, &c., and Time of its Continuance.	Number of Divisions by which the removal of the Glass caused the Readings to be greater, or the presence of Clouds, &c., caused them to be less.	Number of Divisions that would have been shewn by the Instrument had the Glass not been removed; or had the Sky been clear, &c., during the time of continuance of the Cloud.	Proportions of the whole of the Rays cut off by the Glass or by the Clouds, &c.
d	h m s	°	div.			div.	div.	
Apr. 5	22. 7. 41	39	28 ·25	The glass in front of the cylinder.				
	22. 15. 41	40	35 ·60	The glass removed.		9 ·35	26 ·25	0 ·356
Apr. 9	21. 59. 0	40	24 ·25	The glass in front of the cylinder.				
	22. 3. 0	40	29 ·45	The glass removed.		4 ·55	24 ·90	0 ·183
	22. 10. 0	41	25 ·55	The glass in front of the cylinder.				
	22. 23. 0	42	26 ·70	,,				
	22. 28. 0	43	33 ·65	The glass removed.		6 ·00	27 ·65	0 ·217
	22. 33. 0	43	28 ·60	The glass in front of the cylinder.				
	22. 47. 0	44	35 ·80	The glass removed.		5 ·37	30 ·43	0 ·176
	22. 52. 0	44	32 ·25	The glass in front of the cylinder.				
	22. 59. 0	44	34 ·55	The glass removed.		2 ·38	32 ·17	0 ·074
	23. 4. 0	45	32 ·10	The glass in front of the cylinder.				
	23. 9. 0	45	36 ·65	The glass removed.		4 ·87	31 ·78	0 ·153
	23. 22. 0	46	31 ·45	The glass in front of the cylinder.				
	23. 28. 0	46	36 ·00	The glass removed.		3 ·83	32 ·17	0 ·119
	23. 33. 0	46	32 ·90	The glass in front of the cylinder.				
	23. 38. 0	46	39 ·80	The glass removed.		6 ·98	32 ·82	0 ·213
	23. 43. 0	46	32 ·75	The glass in front of the cylinder.				
	23. 48. 0	46	34 ·60	The glass removed.		1 ·55	33 ·05	0 ·047
	23. 53. 0	46	33 ·35	The glass in front of the cylinder.				
	23. 58. 0	46	38 ·10	The glass removed.		5 ·67	32 ·43	0 ·175
Apr. 10	0. 5. 0	46	31 ·50	The glass in front of the cylinder.				
	0. 10. 0	46	36 ·75	The glass removed.		4 ·60	32 ·15	0 ·143
	0. 15. 0	46	32 ·80	The glass in front of the cylinder.				
	0. 20. 0	46	34 ·15	The glass removed.		4 ·35	29 ·80	0 ·146
	0. 25. 0	46	26 ·80	The glass in front of the cylinder.				
	0. 48. 0	45	33 ·15	The glass removed.				
	1. 10. 0	44	34 ·20	The glass in front of the cylinder.				
	1. 15. 0	44	45 ·10	The glass removed.		11 ·78	33 ·32	0 ·353
	1. 20. 0	43	32 ·45	The glass in front of the cylinder.				
	1. 25. 0	43	41 ·60	The glass removed.		6 ·52	35 ·08	0 ·186
	1. 46. 0	41	37 ·70	The glass in front of the cylinder: currents of air.				
	3. 32. 15	29	27 ·40	,,				
	3. 49. 30	26	22 ·78	,,				
	4. 10. 15	23	20 ·03	,,				
	4. 20. 0	22	11 ·04	The Sun is shining through haze.				
	4. 44. 0	18	21 ·25	Cloudless.				
	5. 30. 0	11	13 ·94	,,				
May 6	21. 57. 45	48	30 ·16	Cloudless.				
	22. 11. 15	49	37 ·30	,,				
	22. 24. 0	51	35 ·13	,,				
	23. 27. 15	55	36 ·61	Fleecy clouds occasionally around the Sun.				
	23. 35. 30	55	16 ·00	Light clouds about the Sun's place.				

TABLE CXXI.—*concluded.*

Month and Day, 1844.	Greenwich Astronomical Mean Time.	Altitude of the Sun.	Mean Radiation per Minute, in Parts of the Scale.	GENERAL REMARKS.	Kind of Cloud, &c., and Time of its Continuance.	Number of Divisions by which the removal of the Glass caused the Readings to be greater, or the presence of Clouds, &c., caused them to be less.	Number of Divisions that would have been shewn by the Instrument had the Glass not been removed; or had the Sky been clear, &c., during the time of continuance of the Cloud.	Proportions of the whole of the Rays cut off by the Glass or by the Clouds, &c.
d	h m s	°	div.			div.	div.	
May 8	23. 39. 22	56	32 ·70					
May 9	0. 9. 52	56	35 ·15					
June 23	23. 45. 45	62	40 ·98	During one Sun observation the Sun was in a cumulus for 7ˢ, and during one shade observation a cumulus was passing, but it did not appear to have much effect on the readings.				
	23. 52. 30	62	43 ·68					
June 24	0. 0. 45	62	42 ·77	The Sun was in a cumulus at 56ᵐ. 53ˢ, during a shade observation, for a short time.				
	0. 14. 15	62	39 ·41	During one Sun observation the Sun was partially in a cumulus for the whole time, and the readings increased 19ᵈⁱᵛ·2 instead of 40ᵈⁱᵛ·. During another Sun observation the Sun was covered by a cumulus for 25ˢ, and the increase in the readings was 27ᵈⁱᵛ·9 instead of 40ᵈⁱᵛ·.	Partially in a cumulus. Covered by a cumulus during 25ˢ.	20 ·8 12 ·1	40 ·0 16 ·7	$\frac{1}{2}$ of the whole. $\frac{4}{5}$ths of the whole.
July 22	0. 0. 30	58	43 ·72	Cloudless.				
	0. 30. 15	58	41 ·30					
	4. 4. 30	34	34 ·56					
	4. 25. 0	30	34 ·93					

The mean of the numbers in the last column, shewing the effect of the glass, is 0 ·181, or one-sixth nearly, and it represents the proportion of the incident rays of the Sun which is stopped by the glass.

Curves exhibiting the principal Meteorological Phenomena in the Year 1844, as observed at the Royal Observatory, Greenwich. (A dotted line denotes that no observations were made on the day whose place is at the centre of that dotted line.)



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DAILY OBSERVATIONS OF MAGNETOMETERS, AND REDUCTIONS.

184 , MONTH and DAY.	Göttingen Mean Time, Astronomical Reckoning.		MAGNETOMETERS. VERTICAL FORCE. Clock Time of 1st. Obs. by M. / Therm.	VERTICAL FORCE. Marked End East.	DECLINATION. Clock Times of Observation by M. / Therm.	DECLINATION. Cross Wire West. Microm. Head East. Line of Coll. ′ ° Torsion Circle Plane-Glass in usual position.	DECLINATION. Reading of Theodolite.	HORIZONTAL FORCE. Clock Time of 1st Obs. by M. / Therm.	HORIZONTAL FORCE. Marked End West. 1st Rollers. Torsion Circle, ° ′	Observers.
	h m		m s	div.	m s	r	° ′	m s	div.	
	.	1st Reading	.	.	.	.	. +	.	.	
		2nd ,,		.	.	.	′ ″		.	
		3rd ,,		.	.	.	.		.	
		4th ,,		.	.	.	.		.	
		2nd Reading + 3rd Reading		.		.	.		.	
		Sum		6 .		6 .	3 .		6 .	
		Mean		.		.	.		.	
		Subtract (Vert. Force and Hor. Force) Circle Reading (Declination)		.		° ′ ″ 24 . . ,			.	
		Difference (Vert. Force and Hor. Force) Constant (Declination)		.		7. . ,			.	
		Equivalents {for Diff. (V.F. and H.F.) for Mean (Declination)	°	0·0	°	2. . .		°	0·0	
		Temperature Correction (V.F. and H.F.)	,		,	,		,		
		Sum diminished by 10°		0·0		24 . . ,			0·0	
		Theodolite Reading for South Astronomical Meridian				269 . . ,				
		Difference = Western Declination				2 . . ,				

184 , MONTH and DAY.	Göttingen Mean Time, Astronomical Reckoning.		VERTICAL FORCE. Clock Time of 1st. Obs. by M. / Therm.	VERTICAL FORCE. Marked End East.	DECLINATION. Clock Times of Observation by M. / Therm.	DECLINATION. Cross Wire West … position.	DECLINATION. Reading of Theodolite.	HORIZONTAL FORCE. Clock Time of 1st Obs. by M. / Therm.	HORIZONTAL FORCE. Marked End West.	Observers.
	h m		m s	div.	m s	r	° ′	m s	div.	
	.	1st Reading	.	.	.	.	. +	.	.	
		2nd ,,		.	.	.	′ ″		.	
		3rd ,,		.	.	.	.		.	
		4th ,,		.	.	.	.		.	
		2nd Reading + 3rd Reading		.		.	.		.	
		Sum		6 .		6 .	3 .		6 .	
		Mean		.		.	.		.	
		Subtract (Vert. Force and Hor. Force) Circle Reading (Declination)		.		° ′ ″ 24 . . ,			.	
		Difference (Vert. Force and Hor. Force) Constant (Declination)		.		7. . ,			.	
		Equivalents {for Diff. (V.F. and H.F.) for Mean (Declination)	°	0·0	°	2. . ,		°	0·0	
		Temperature Correction (V.F. and H.F.)	,		,	,		,		
		Sum diminished by 10°		0·0		24 . . ,			0·0	
		Theodolite Reading for South Astronomical Meridian				269 . . ,				
		Difference = Western Declination				2 . . ,				

184 , MONTH and DAY.	Göttingen Mean Time, Astronomical Reckoning.		VERTICAL FORCE. Clock Time of 1st. Obs. by M. / Therm.	VERTICAL FORCE. Marked End East.	DECLINATION. Clock Times of Observation by M. / Therm.	DECLINATION. Cross Wire West … position.	DECLINATION. Reading of Theodolite.	HORIZONTAL FORCE. Clock Time of 1st Obs. by M. / Therm.	HORIZONTAL FORCE. Marked End West.	Observers.
	h m		m s	div.	m s	r	° ′	m s	div.	
	.	1st Reading	.	.	.	.	. +	.	.	
		2nd ,,		.	.	.	′ ″		.	
		3rd ,,		.	.	.	.		.	
		4th ,,		.	.	.	.		.	
		2nd Reading + 3rd Reading		.		.	.		.	
		Sum		6 .		6 .	3 .		6 .	
		Mean		.		.	.		.	
		Subtract (Vert. Force and Hor. Force) Circle Reading (Declination)		.		° ′ ″ 24 . . ,			.	
		Difference (Vert. Force and Hor. Force) Constant (Declination)		.		7. . ,			.	
		Equivalents {for Diff. (V.F. and H.F.) for Mean (Declination)	°	0·0	°	2. . ,		°	0·0	
		Temperature Correction (V.F. and H.F.)	,		,	,		,		
		Sum diminished by 10°		0·0		24 . . ,			0·0	
		Theodolite Reading for South Astronomical Meridian				269 . . ,				
		Difference = Western Declination				2 . . ,				

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS OF METEOROLOGICAL INSTRUMENTS, &c., 184 ,

AND DEDUCTIONS.

Göttingen Mean Time, Astronomical Reckoning.	BAROMETER. Observed Height. / Correction for Temp. to 32°. / Corrected Height.	BAROMETER. Attached Therm.	THERMOMETERS. Dry. Correction. Corrected.	THERMOMETERS. Wet. Correction. Corrected.	THERMOMETERS. Excess of Dry over Wet. / Factor for Dew-Point. / Product = Excess of Dry over Dew-Point.	THERMOMETERS. Deduced Temperature of Dew-Point.	Beneath the surface of the Ground. 24 French Feet.	12 French Feet.	6 French Feet.	3 French Feet.	1 Inch.	Within the Case above the Ground.	Observed Temperature of the Dew-Point. Correction. Corrected.	WIND by Estimation. Direction.	Strength 0–6.	Clouds 0–10.	ELECTRICAL INSTRUMENTS. Divergence of Double Gold Leaf in Degrees.	Straws of Volta 1.	Straws of Volta 2.	Inclination of Gold Leaf of Dry Pile + or −.	Divergence of Needle of Galvanometer towards A or B.	Distance in Inches between Balls of Ronalds' Spark Measurer, and Number of Sparks, &c.	Inclination of Henley's Electrom. in Degrees.
h m	in.	°	°	°	°	°	°	°	°	°	°	°	°				°	div.	div.	°	°	sp. sec.	°
																						in at inch.	
																						in at inch.	
																						in at inch.	

STATE OF THE WEATHER AND REMARKS.

SELF-REGISTERING THERMOMETERS read at 22h, Gött. Free in Air. Max. Correction. Corrected.	Free in Air. Min. Correction. Corrected.	Radiators. Max. Correction. Corrected.	Radiators. Min. Correction. Corrected.	In Water of the Thames. Max. Correction. Corrected.	In Water of the Thames. Min. Correction. Corrected.	RAIN-GAUGES read at 22h, Gött. Gauge of Osler's Anemometer: Reading from January 1d.	Gauge above Library: Amount in previous 24 hours.	Crosley's Gauge on the Ground: Reading from January 1d.	THERMOMETERS read at 19h. 10m, Gött. Dry.	Wet.	WHEWELL'S ANEMOMETER read at 22h. 40m, Gött. Direction of Wind.	Reading of Scale.	Descent of Pencil during the continuance of Each Wind, and Sum.	COMPARISONS OF THERMOMETER READINGS. Standard.	Dry.	Hygrometer.	Free in Air. Max.	Free in Air. Min.	Radiators. Max.	Radiators. Min.
°	°	°	°	°	°	in.	in.	in.	°	°		in.	in.	°	°	°	°	°	°	°
											Set the Index to		in.							

ROYAL OBSERVATORY, GREENWICH. [Form No. 82.]

Report of the state of Magnetical and Meteorological Calculations, on 18

No. of Book.	Subject of Book.	Line of Calculation.	Date at Completion of Entry or Computation.	Date at Completion of Examination.
	Adjustments of Declination Magnetometer.	Last determination of Micrometer Scale of Theodolite .		
		.... of Line of Collimation of Theodolite .		
		.... of Inequality of Pivots of Theodolite .		
		.... of Value of Level Scale . . .		
		.... of Error of Collimation of Plane Glass		
		.... of Error of Collimation of Magnet .		
		.... of Effect of Disturbing Causes . .		
		.... of Constant for Ordinary Observations		
		.... of Constant for Term-Day Observations		
		.... of Constant for Extraordinary Obs. .		
		.... of Time of Vibration of Magnet .		
		.... of Torsion-Force		
		Last Insertion of Brass Bar		
	Adjustments of Horizontal Force Magnetometer.	Last Determination of Angle of Torsion . . .		
		.... of Times of Vibration and of Scale-Readings for different Readings of Torsion-Circle .		
		Last Determination of Time of Vibration at right angles to Magnetic Meridian		
		Last Determination of Value of Scale		
		.... of Temperature-Correction . .		
		.... of Effect of Disturbing Causes . .		
		.... of Constant for Reductions . .		
	Adjustments of Vertical Force Magnetometer.	Last Determination of Time of Vertical Vibration . .		
		.... of Time of Horizontal Vibration .		
		.... of Value of Scale		
		.... of Temperature-Correction . .		
	Adjustments of Barometer.	Last Comparison with Royal Society's or other Standard		
		Last Adjustment of Perpendicularity		
	Adjustments of Dry & Dew Point Ther.	Last Comparison with our Standard		
	Adjustments of Standard Therm.	Last Comparison with External Standard		
	Adjustments of Wet Thermometer.	Last Comparison with Dry Thermometer. . .		
	Adjustments of Max. and Min. Therm.	Last Determination of Monthly Correction . . .		
	Adjustments of Ther. for Radiation.	Last Determination of Correction		

Report of the state of Magnetical and Meteorological Calculations, on 18

(*continued.*)

No. of Book.	Subject of Book.	Line of Computation.	Date at Completion of Entry or Computation.	Date at Completion of Examination.
	Adjustments of Anenometers.	Last Verification of Force-Scale of Osler's . . .		
		.... of Direction-Zero of Osler's . .		
		.... of Space-Scale of Whewell's . .		
		.... of Direction of Whewell's . .		
	Adjustments of Pluviometers.	Last Valuation of Scale of Osler's		
		.... of Scale of No. 2		
		.... of Scale of Crosley's		
50 (Right Page.)	Daily Observations of Magnetometers.	Mean of Readings for the Three Magnetometers . .		
		Circle Reading for Declination Magnetometer . .		
		Constant for Declination Magnetometer *entered* . .		
		Equivalents for Micrometer *entered*		
		Sum		
		Theodolite Reading for Astronomical Meridian *entered* .		
		Western Declination		
		Constant for Horizontal Force *entered*		
		Difference		
		Equivalent for Difference *entered*		
		Temperature Correction *entered*		
		Sum		
		Constant for Vertical Force *entered*		
		Difference		
		Equivalent for Difference *entered*.		
		Temperature Correction *entered*		
		Sum		
50 (Left Page.)	Daily Observations of Meteorological Instruments.	Barometer Readings corrected		
		Thermometer Readings corrected		
		Excess of Dry Thermometer above Dew-Point . .		
		Excess of Dry Thermometer above Wet Thermometer .		
		Dew-Point deduced		
51	Term-Day Observations of Magnetometers.	Mean of Readings for the Three Magnetometers . .		
		Constant for Declination Magnetometer *entered* . .		
		Equivalents for Micrometer *entered*		
		Western Declination		
		Constant for Horizontal Force *entered*		
		Difference		
		Equivalent for Difference *entered*		
		Temperature Correction *entered*		
		Sum		
		Constant for Vertical Force *entered*		
		Difference		

Report of the state of Magnetical and Meteorological Calculations, on 18

(*continued.*)

No. of Book.	Subject of Book.	Line of Calculation.	Date at Completion of Entry or Computation.	Date at Completion of Examination.
51 (*contd.*)	Term-Day Obs. of Magnetometers—(*continued.*)	Equivalent for Difference *entered*		
		Temperature Correction *entered*		
		Sum		
	Extraordinary Obs. of Magnetometers.	Reduced		
53	Observations with Magnetic Theodolite.	Sidereal Clock Slow *entered*		
		Greenwich Sidereal Time		
		R. A. of Star *entered*		
		Star's Hour Angle		
		Star's N. P. D. *entered*		
		Star's Altitude		
		Mean of Microscope Readings		
		Correction to Meridian in Azimuth *entered* . . .		
		Reading for North Meridian		
		Correction for Level		
		Mean Adopted Reading for Astronomical Meridian .		
52	Magnetic Dip.	θ_1, θ_2, θ_3, θ_4, formed		
		Dip computed		
		Value of $\frac{b}{c}$		
	Deflexion Observations.	Date of last Observation		
		First stages in Reduction		
		Equations Formed		
		Equations Solved		
		Vibrations corrected for Arc		
		Result for Horizontal Force		
	Vibration Observations.	Date of last Observations		
		Vibrations corrected for Arc		
		First Result for Horizontal Force		
		Temperature-Correction		
		Result for Horizontal Force		
	Extraord. Meteor. Observations.	Reduced		
	Hygrometric Calculations.	Elastic Force of Vapour . . . . Daily		
		Hourly		
		Monthly		
		Weight of Vapour in a Cubic Foot of Air Daily		
		Hourly		
		Monthly		

Report of the state of Magnetical and Meteorological Calculations, on 18

(continued.)

No. of Book.	Subject of Book.	Line of Calculation.	Date at Completion of Entry or Computation.	Date at Completion of Examination.
	Hygrometric Calculations— (*continued.*)	Additional Vapour for Saturation. Daily		
		Additional Vapour for Saturation. Hourly		
		Additional Vapour for Saturation. Monthly		
		Degree of Humidity. Daily		
		Degree of Humidity. Hourly		
		Degree of Humidity. Monthly		
		Weight of a Cubic Foot of Air. Daily		
		Weight of a Cubic Foot of Air. Hourly		
		Weight of a Cubic Foot of Air. Monthly		
	Whewell's Anemometer.	Daily Descents for each Direction of Wind		
		Daily Sum of all the Descents		
		Monthly Sum of Descents for each Direction		
		Monthly Sum of all the Descents		
	Actinometer.	Last Measures for Estimation of Scale		
		Apparent effect of Sun's Radiation in parts of Scale		
		Mean of each Group		
56	Copy for Press of Daily Magnetic Observations.	Copy complete		
		Notes complete		
57	Copy for Press of Term-Day Magnetic Obs.	Copy complete		
		Notes complete		
	Copy for Press of Extraordinary Magnetic Obs.	Copy complete		
		Notes complete		
58	Copy for Press of Ordinary Meteorological Observations.	Barometer and Thermometer		
		Winds		
		Rain		
		Clouds		
		Phases of the Moon		
		Remarks complete		
		Notes complete		
	Copy for Press of Extra. Meteorological Obs.	Copy complete		
		Notes complete		

Report of the state of Magnetical and Meteorological Calculations, on 18

(continued.)

No. of Book.	Subject of Book.	Line of Calculation.	Subjects Entered, &c.	Subjects Examined.
77	First Abstract of Daily Observations to end of last Month. .	Numbers *entered* for		
		Daily Mean of Hourly Numbers for		
		Hourly Mean of Daily Numbers for		
		Mean for the Month for		
	Abstracts for Press.	Magnetic Declination—	Date of Entry, &c.	Date of Examination, &c.
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Magnetic Horizontal Force—		
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Magnetic Vertical Force—		
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Magnetic Triple Observations—		
		Abstracts of Declination		
		.... of Horizontal Force		
		.... of Vertical Force		
		Magnetic Dip—		
		Mean Monthly and Quarterly Values . .		
		Barometer—		
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Influence of the Moon on the Barometer—		
		Monthly Means arranged by Moon's Hour Angle.		
		Mean Height for the Year at each Hour Angle .		
		Mean Daily Height referred to Declination .		
		Mean Daily Height referred to Parallax . .		
		Mean Daily Height referred to Moon's Age .		
		Dry Thermometer—		
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Thermometers Sunk in the Ground—		
		Abstracts depending on Daily Means . .		
		.... Daily Ranges . .		
		.... Hourly Means . .		
		Evaporation—		
		Abstracts depending on Daily Means . .		
		.... Hourly Means . .		

ROYAL OBSERVATORY, GREENWICH. [Form No. 82.]

Report of the state of Magnetical and Meteorological Calculations, on 18

(continued.)

No. of Book.	Subject of Book.	Line of Calculation.	Date at Completion of Entry or Computation.	Date at Completion of Examination.
	Abstracts for Press (*continued.*)	Temperature of Dew-Point—		
		Last investig. of Factors for Wet Bulb Therm. .		
		Comparison of Observed and Deduced Dew Point		
		Abstracts depending on Daily Means . .		
		.... Hourly Means . .		
		Hygrometrical Results—		
		Abstracts depending on Daily Means . .		
		.... Hourly Means . .		
		Electricity—		
		Last Comparison of Scales of Electrometers .		
		Observations reduced to one Scale . . .		
		Abstracts depending on Daily Means . .		
		.... Hourly Means . .		
		Last Experiments on Induction . . .		
		Osler's Anemometer—		
		Abstracts formed		
		Whewell's Anemometer—		
		Last Comparison of Pressure with Speed . .		
		Abstracts formed		
		Estimated Winds—		
		Last Comparison of Pressure with Estimation .		
		Abstracts formed		
		Clouds—		
		Abstracts formed		
		Rain—		
		Abstracts formed		
		Actinometer—		
		Abstracts formed		
		Meteorological Curves—		
		Curves delineated		
	Miscellaneous Magnetic and Meteorological Observations and Computations.			

(Signed) First Assistant.

ROYAL OBSERVATORY, GREENWICH, 184 . [Form No. 84.]

EXTRAORDINARY OBSERVATIONS OF MAGNETOMETERS, AND REDUCTIONS.

Month and Day.	Time by Göttingen Clock.	Clock Fast.	True Göttingen Time.		Declination.	V. F. Temp.	Vertical Force.	H. F. Temp.	Horizontal Force.	Observers.
	h m s	s	h m s		r		div.		div.	
	. .		. .	1st Reading	.		.		.	
				2nd ,,	.		.		.	
				Sum	2 .		2 .		2 .	
				Mean	.		.		.	
				Mean − Constant (Hor. Force).					.	
				Equivalents {for Mean Dec. and Vertical Force... (omitting 2° in the former) and for (Mean − Constant) Hor. Force.... }	° ′ ″ .	°	0·0		0·0	
				Constant (Dec.); Temp. Corr. (Vert. F. and Hor. F.)	. .	,				
				Difference for Western Declination; Sum for Hor. Force and Vert. Force	. .		0·0		0·0	
	h m s	s	h m s		r		div.		div.	
	. .		. .	1st Reading	.		.		.	
				2nd ,,	.		.		.	
				Sum	2 .		2 .		2 .	
				Mean	.		.		.	
				Mean − Constant (Hor. Force).					.	
				Equivalents {for Mean Dec. and Vertical Force... (omitting 2° in the former) and for (Mean − Constant) Hor. Force.... }	° ′ ″ .	°	0·0		0·0	
				Constant (Dec.); Temp. Corr. (Vert. F. and Hor. F.)	. .	,				
				Difference for Western Declination; Sum for Hor. Force and Vert. Force	. .		0·0		0·0	
	h m s	s	h m s		r		div.		div.	
	. .		. .	1st Reading	.		.		.	
				2nd ,,	.		.		.	
				Sum	2 .		2 .		2 .	
				Mean	.		.		.	
				Mean − Constant (Hor. Force).					.	
				Equivalents {for Mean Dec. and Vertical Force... (omitting 2° in the former) and for (Mean − Constant) Hor. Force.... }	° ′ ″ .	°	0·0		0·0	
				Constant (Dec.); Temp. Corr. (Vert. F. and Hor. F.)	. .	,				
				Difference for Western Declination; Sum for Hor.) Force and Vert. Force	. .		0·0		0·0	
	h m s	s	h m s		r		div.		div.	
	. .		. .	1st Reading	.		.		.	
				2nd ,,	.		.		.	
				Sum	2 .		2 .		2 .	
				Mean	.		.		.	
				Mean − Constant (Hor. Force).					.	
				Equivalents {for Mean Dec. and Vertical Force... (omitting 2° in the former) and for (Mean − Constant) Hor. Force.... }	° ′ ″ .	°	0·0		0·0	
				Constant (Dec.); Temp. Corr. (Vert. F. and Hor. F.)	. .	,				
				Difference for Western Declination; Sum for Hor. Force and Vert. Force	. .		0·0		0·0	

DIRECTIONS FOR TAKING EXTRAORDINARY OBSERVATIONS.

With respect to Time:

If two observations are to be made (the declination magnet vibrating), the seconds of clock time are to be those marked for the two middle observations in the book of Daily Observations.

If one observation be taken (the declination magnet at rest), the seconds of clock time must correspond to the mean of the seconds as explained above.

If it be necessary to observe more frequently than once in a minute, the times of such observations for declination must differ from those explained above by 15^s and 30^s respectively.

The times of observation of the two other magnets will be related to the above times according to the times of their vibration.

Again, with respect to Method (supposing that the time of vibration of the Horizontal Force Magnet is less than that of the Vertical Force):

If the Magnets be all without Vibration.	If the Vertical Force Magnet be without Vibration, and both the Declination and Horizontal Force Magnets be vibrating.	If the Horizontal Force Magnet be without Vibration, and both the Declination and the Vertical Force Magnets be vibrating.	If the Declination Magnet be without Vibration, and both the Vertical Force and Horizontal Force Magnets be vibrating.
1st, Read the Vertical Force Scale.	1st, Bisect Cross and read Micrometer of Declination Magnet.	1st, Bisect Cross and read Micrometer for Declination.	1st, Read Vertical Force Scale.
2nd, Bisect the Declination Cross.	2nd, Read the Horizontal Force Scale.	2nd, Read Vertical Force Scale.	2nd, Read Horizontal Force Scale.
3rd, Read the Horizontal Force Scale.	3rd, Read the Vertical Force Scale.	3rd, Read Horizontal Force Scale.	3rd, Bisect Cross and read Micrometer for Declination.
4th, Read the Micr. for Declination, and observe whether the Cross be still bisected.	4th, Read again Hor. Force Scale. 5th, Bisect Cross, &c., for Declination Magnet.	4th, Read again Vertical Force Scale. 5th, Bisect Cross, &c., for Declination.	4th, Read again Hor. Force Scale. 5th, Read again Vertical Force Scale.

If observations be taken as thus detailed, the results may be considered simultaneous; but if they be taken in any other manner, a description must be given of the method employed. In all cases the times of observation must be carefully recorded.

Reading of Theodolite, and Calculation of Constant to be used in the Reductions of the Declination Magnet on the opposite page; and Constant to be used in the Reductions of the Observations of the Horizontal Force Magnet.

		°	′	″
Number of Degrees and Multiple of five Minutes		.		
Microscope A.			.	
,, B.			.	
,, C.			.	
Sum	3		.	
Mean = Circle Reading		.	.	
Adopted Theodolite Reading for South Astronomical Meridian		.	.	
Difference.		.	.	
Difference diminished by 2° = Constant to be used		.	.	

And this Constant applies from to inclusive.

The Constant to be used on the opposite page in the Reduction of the Observations of the Horizontal Force Magnet is .

Remarks on Auroræ, and General Remarks on Extraordinary Phenomena during the continuance of Extraordinary Observations.