

STONYHURST COLLEGE
OBSERVATORY

RESULTS

OF

METEOROLOGICAL & MAGNETICAL
OBSERVATIONS

WITH REPORT AND NOTES OF THE DIRECTOR,

REV. W. SIDGREAVES, S.J., F.R.A.S.

1900.

CLITHEROE :

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1901.

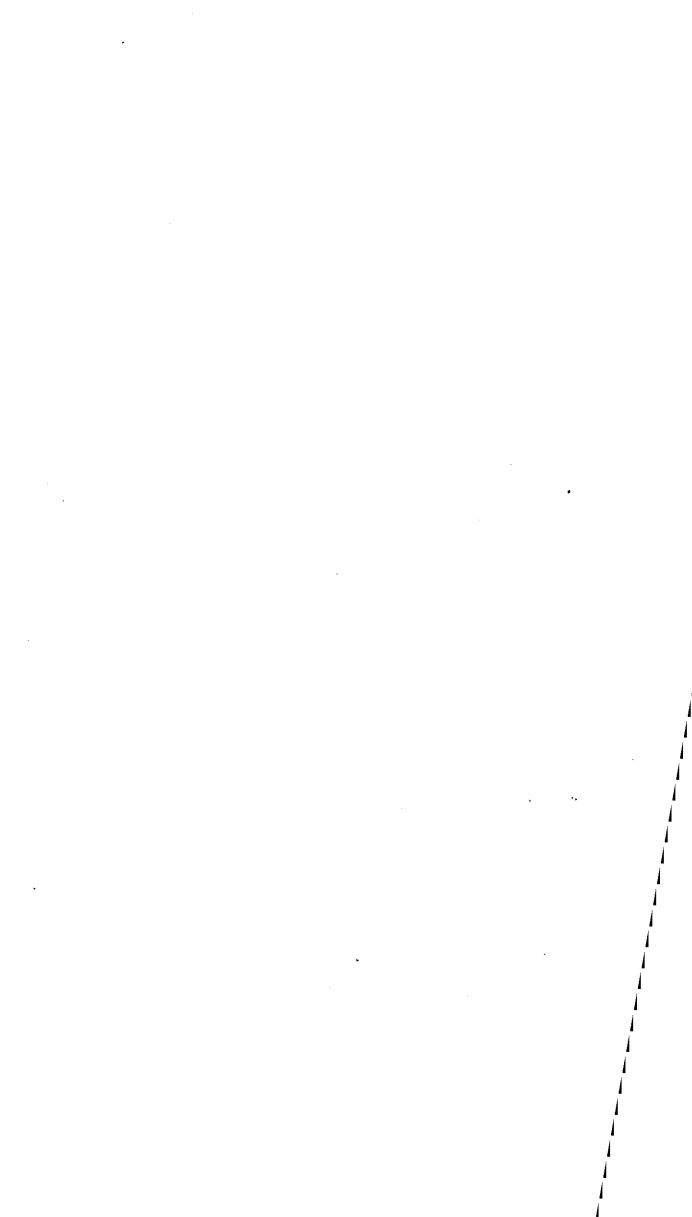
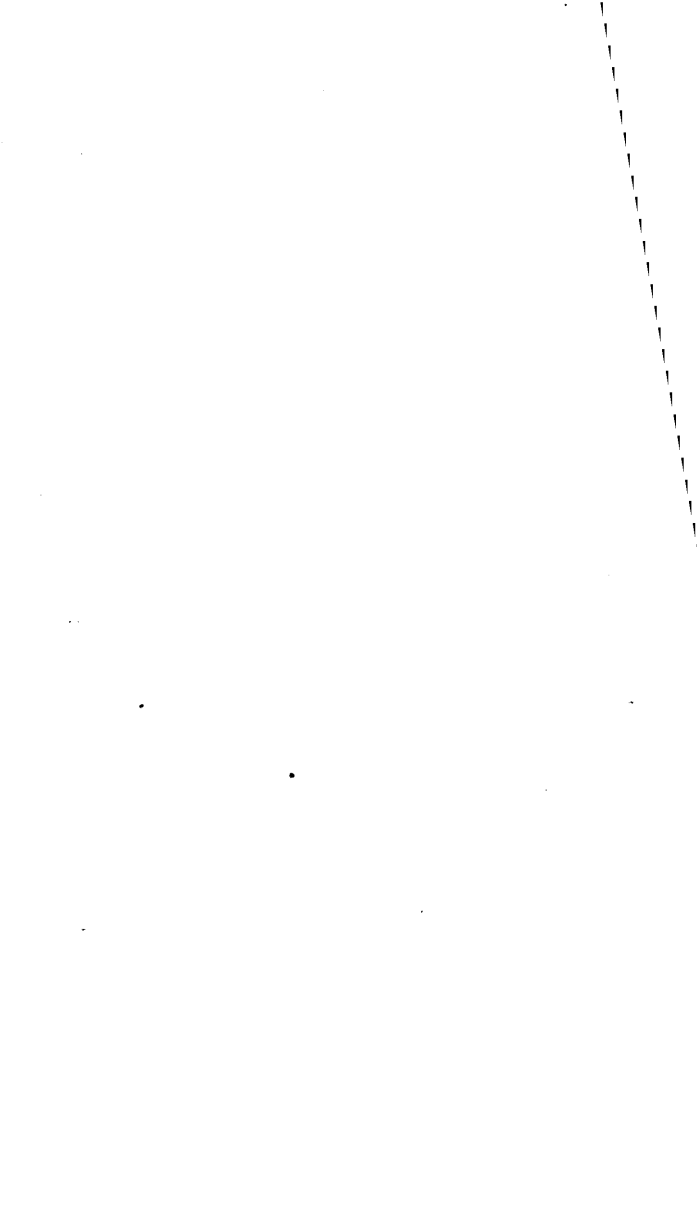


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III.

REPORT AND NOTES.

THE meteorographic and magnetographic instruments have been in continuous operation throughout the year and the curves have been satisfactory.

The usual meteorological reports have been sent to the Meteorological Office, and to the Registrar General.

A new shutter has been constructed for the Equatorial dome, under the direction of Br. Ronchetti, and gives the greatest satisfaction. The work including unavoidable delays, put the telescope out of employment from April 2nd to May 14th.

During the year a polarising solar eye-piece was obtained from Mr. Thorp, in order to study by direct vision the details of sun-spots using the full aperture of the 15 inch telescope. The eye-piece has, so far as experiments have gone, proved very efficient.

Special observations of clouds and wind are now made throughout three successive days of each month; and are sent to the International Meteorological Committee, through the London Meteorological Office. These days are selected by the International Committee, in connection with meteorological balloon ascents, which are made on the second of the three days. This meteorological co-operation was commenced in November.

IV.

The mean barometric pressure of the year was a little below the average; and the mean monthly range is nearly 0.4 inch above the average. The general state of atmospheric pressure fluctuations in each month may be estimated by the following table which gives the number of days in each month when the barometer showed less than 29 inches of the mercury column:—

Winter months	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
No. of days	3	9	2	2	7	6
Summer	April.	May.	June.	July.	Aug.	Sept.
No. of days	2	1	0	0	2	0

The low oscillating pressures of February were accompanied by Westerly Winds and low temperatures; but the total number of miles of winds and the rainfall were both below the averages for February.

December was remarkably mild, wet, and gloomy. Its mean temperature was 5^o.9 above the average. Its rainfall was 1.0 inch above the average, and its hours of bright sunshine were only 14.1, the least on the record of 20 years. It was also the roughest month with five gales of wind rising to velocities above 37 miles an hour.

October was the wettest month, with a rainfall of over half an inch on seven days; but its hours of bright sunshine were a little above the average for the month. It was followed closely by January and December. But the November rainfall and sunshine differed little from the mean of the month, and its wind mileage was considerably below the year's monthly average.

The mean temperature of the year differs little from the general average. The relatively warmer months were January, June, July, November and December. Their mean temperatures were 1^o.7, 2^o.0, 3^o.2, 2^o.2, and 5^o.9. above the respective averages. July was the warmest month, with the only days of the year in

which the temperature rose to 80° and over, viz., the 11th, 19th and 20th, the highest being $84^{\circ}.5$ on the 11th. The solar radiation thermometer, in vacuum tube, showed 140° and over on nine days, three in each of the months of June, July and August.

The coldest months were February and March, at $3^{\circ}.2$ and $2^{\circ}.4$ below their averages.

The Rainfall for the year was a full inch above the average. But the sunshine record shows nearly 47 hours of bright sunshine in excess of the 20 years' annual mean. There were Rainfalls of over half an inch on 21 days: 5 in October, 3 in November and in December, 2 in January, July and August, and 1 in February, April, June and September. October was the wettest month, with nearly $2\frac{3}{4}$ inches above the monthly average; but its hours of bright sunshine were also a little above the average. The other months of relatively greater rainfall were January with nearly 2 inches more than its average; and April, August and December, each with 1 inch above their averages. But in April there were over 30 hours of bright sunshine more than the average, and in August over 9 hours; while in March which was the driest month, with only 0.66 inch of rain, the duration of sunshine was less than the average by 7 hours.

There have been seven gales of wind attaining velocities above 37 miles an hour. These were on February 15th, 6 p.m., 51 miles an hour; April 13th, 3 p.m., 44 miles; December 15th, 9 p.m., 39 miles; 20th, 3 p.m., 43 miles; 21st, 6 a.m., 41 miles; 25th, 9 p.m., 38 miles; and 28th, 4 p.m., 57 miles. All these gales were associated with low readings of the barometer, except that of December 15th when the mercury showed only a small dip between 29.77 and 29.51 inches. The strong gale of February 15th occurred during a rapid fall of the mercury from 29.3 to 28.2 in 10 hours; and was followed, four days later, by the lowest reading of the barometer for the year, at 27.89 inches on the 19th 3.30 p.m., synchronously with a lesser gale of 36 miles an hour.

VI.

The greater gale of December 28th occurred during the rise of the mercury from 28.2 to 28.9 in 12 hours.

The Solar Surface drawings number 157 on as many days. The number is smaller than usual, owing mostly to the building alterations mentioned on page I. The mean spotted disc-area deduced from these drawings is 0.55, against 0.74 of last year.* It is not yet clear whether we have arrived at, or passed the minimum epoch; and there is the same uncertainty about the minimum epoch of magnetic disturbances. Taking the extreme range of the Declination magnet on each day as a measure of the magnetic disturbance on the day, the mean of these for the year is 9'7 against 12'9 for the preceding year. But a small spot-group was sketched on September 2nd and again on September 3rd in latitude— 25° and longitude 105° ; and this appearance in high latitude, according to past experience, may be the forerunner of the expected revival of solar surface activity.

The work, which was commenced last year, of comparison between individual sun-spots and earth-magnetic storms was brought to a conclusion in September; and the results were presented to the Royal Astronomical Society in a paper read at their December meeting. This will appear in the next volume of the Memoirs of the Society; an abstract of the same is given in the January number of "The Observatory," 1901. The comparison covers the 18 years from January, 1881, to December, 1898, during which period we have a daily record of the Sun's Surface in the Greenwich Volumes from photographs taken at Greenwich, at Dehra Dun, India, and at the Royal Alfred Observatory, Mauritius.

The tabulations occupied a considerable part of the past year and the early months of this year, 1900. They contain the complete histories of the principal spots from first appearance to final extinction; and in this form they have been found of great service both for the comparison between sun spots and magnetism, and

* The unit being $1/5000$ th of the visible disc.

VII.

for the study of characteristic differences between separate spots, and between the same spots at different ages. The latter study was undertaken by Fr. Cortie; and his conclusions are given in the May number of the Monthly Notices R. A. Soc. in a paper "On the greater Sun-spot Disturbances for the years 1881-99;" and "On the Types of sun-spot disturbances" in a paper read at the meeting of British Association at Bradford, in September.

The tabulations of magnetic storms has also led to a special study of these, independently of their connection with Sun-spots. Comparative measures of their magnitude at different positions on the earth's surface have been commenced, and fair progress has been made; but the work will need considerable time.

The watch for the Leonids was kept throughout the night of the 14-15th November when it was mostly clear; but very few meteors were seen. The nights 12th and 13th were very cloudy throughout.

During the progress of the Solar Eclipse of May 28th, the solar prominences were measured with the spectroscope; and the time of last contact was observed satisfactorily. These were communicated to the R. A. Soc. in June and are published in that number of their monthly notices.

The Grating Spectrographs of the H. K. region of the solar spectrum number 57. The instrument has been partly dismounted since the end of October in order to make use of its quartz lens telescope in connection with some experiments in stellar spectrography. These experiments have occupied all the available nights of November and December. They are not yet complete; for progress is slow, on account of the many photographs required, and the few clear nights. At present they promise well to be a valuable addition to the spectrographs already obtained, by a considerable extension of the spectra in the ultra violet-region.

WALTER SIDGREAVES, S.J.

Stonyhurst Observatory.

Lat. 53° 50' 40"N. Long. 9m. 52s. 68. W. Height of the
Barometer above the sea 381 ft.

METEOROLOGICAL REPORT.

JANUARY, 1900.

Results of Observations taken during the Month	Mean for the last 53 years.	
Mean Reading of the Barometer inches	29·459	29·452
Highest „ „ on the 11th „	30·039	30·277
Lowest „ „ on the 28th „	28·863	28·600
Range of Barometer Readings „	1·176	1·677
Highest Reading of a Max. Ther. on the 23 & 27	49·1	51·4
Lowest Reading of a Min. Therm. on the 10th	27·0	20·7
Range of Thermometer Readings	22·1	30·7
Mean of all the Highest Readings	43·7	42·3
Mean of all the Lowest Readings	33·8	32·5
Mean Daily Range.....	9·9	9·8
Deduced Monthly Mean (from Mean of Max. and Min.).....	38·6	37·1
Mean Temperature from Dry Bulb	39·1	37·2
Adopted Mean Temperature	38·9	37·2
Mean Temperature of Evaporation	37·6	36·0
Mean Temperature of Dew point	35·9	33·8
Mean elastic force of Vapour .....inches	0·212	0·196
Mean weight of Vapour in a cub.ft. of air grains	2·5	2·4
Mean additional weight required for saturation,,	0·5	0·4
Mean degree of Humidity (saturation 1·00) ...	0·90	0·86
Mean weight of a cubic foot of air ...grains	547·7	549·7
Fall of Rain	6·067	4·137
Number of days on which rain fell.....	27	20·7

JANUARY, 1900.

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	3	6	0	0	5	5	11	1
Mean Velocity in miles per hour	7.7	7.0	0	0	11.2	11.3	11.3	1.7
Total No. of miles for each Direction	551	1008	0	0	1348	1353	3976	40

The total No. of miles registered during the month was 8276.
 The max. Velocity of the wind was 38 miles per hour, W., on the 25th at 1-0 a.m.

Mean amount of Cloud (an overcast sky being indicated by 10 0) 8.6

In the month of January the highest reading of the Barometer during 53 years, was on the 9th, in 1896, and was ... 30.597

The Lowest " " 26th, 1884 " " 27.803

The highest Temperature " " 7th, 1887 " " 59.9

The lowest " " 15th, 1881 " " 4.6

The highest adopted mean temperature of the month, 1898 43.7

The lowest " " 1881 29.2

Greatest fall of rain for the month in " " 1852 8.147 in

Least " " 1881 0.472 in

Greatest number of days on which rain fell " " 1872 31

Least " " 1879 8

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly average.

Mean barometric pressure ...	...	+	0.007 inches
Monthly range " " ...	...	-	0.501 "
Mean of highest temperatures ...	...	+	1.4 degrees
Mean of lowest " " ...	...	+	1.3 "
Mean daily range " " ...	...	+	0.1 "
Adopted mean temperature ...	...	+	1.7 "
Total rainfall ...	...	+	1.930 inches

Ground Frost on 1st, 4th—11th, 16th—21st, 27th—31st.

Snow on 18th, 27th, 28th, 30th and 31st.

Hail on 17th, 18th and 27th. Lunar Halo on 15th.

Heavy Rain on 6th and 21st. Gales of Wind on 24th and 25th.

FEBRUARY, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years.
Mean Reading of the Barometer.....inches 29·127	29·508
Highest ,, on the 28th ,, 29·806	30·068
Lowest ,, on the 19th ,, 27·870	28·687
Range of Barometer Readings..... ,, 1·936	1·381
Highest Reading of Max. Therm. on the 23rd 57·0	52·3
Lowest Reading of a Min. Therm. on the 7th 12·5	22·1
Range of Thermometer Readings 44·5	30·2
Mean of all the Highest Readings..... 42·0	44·3
Mean of all the Lowest Readings 28·5	33·4
Mean Daily Range..... 13·5	10·9
Deduced Monthly Mean (from Mean of Max. and Min.) 34·9	38·2
Mean Temperature from Dry Bulb 35·2	38·3
Adopted Mean Temperature 35·0	38·2
Mean Temperature of Evaporation 33·4	36·8
Mean Temperature of Dew Point 30·8	34·5
Mean elastic force of Vapour .....inches 0·171	0·193
Mean weight of Vapour in a cub. ft. of air grains 2·0	2·4
Mean additional weight required for saturation,, 0·4	0·4
Mean degree of Humidity (saturation 1·00) 0·84	0·87
Mean weight of a cubic foot of air....grains 546·1	548·9
Fall of rain .....inches 3·422	3·499
Number of days on which rain fell..... 18	18·1

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
		5	6	0	1	0	8	5	3
Mean Velocity in miles per hour	5·5	9·8	0	25·5	0	10·4	7·0	11·4
Total No. of Miles for each Direction	665	1403	0	613	0	1989	833	821

The total number of miles registered during the month was 6329.
The max. Velocity of the wind was 51 miles per hour, S.S.E., on the 15th, at 6 p.m.

FEBRUARY, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·4
In the month of February, the highest reading of the Barometer during 53 years, was on the 11th, in 1849, and was	.. 30·452
The lowest	19th, 1900 .. 27·870
The highest Temperature	8th, 1877 .. 58·3
The lowest	18th, 1895 .. 8·0
The highest adopted mean temperature of the month, 1869	.. 44·0
The lowest	1855 .. 28·6
Greatest fall of rain for the month in	1848 8·882in
Least	1858 0·306in
Greatest number of days on which rain fell	1868 28
Least	1858 and '95 6

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	.. ..	—	0·381 inches
Monthly range	.. ..	+	0·555 „
Mean of highest temperatures	.. ..	—	2·3 degrees
Mean of lowest	.. ..	—	4·9 „
Mean daily range	.. ..	+	2·6 „
Adopted mean temperature	.. ..	—	3·2 „
Total rainfall	.. ..	—	0·077 inches

The lowest reading of Barometer for month of February during the last 53 years occurred this month at 3·45 p.m. on the 19th, and was 27·870. Ground frost on 1st—15th, 17th, 18th, 20th, and 21st. Snow on 4th, 5th, 7th, 9th—11th, 13th—15th, 20th and 28th. Hail on 7th, 15th, and 17th. Heavy rain on 10th, and 15th. Thunder on 24th. Gales of wind on 15th and 19th.

MARCH, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years	
Mean Reading of the Barometer . . . inches	29·626	29·466
Highest „ on the 13th „	30·283	30·072
Lowest „ on the 18th „	28·794	28·661
Range of Barometer Readings „	1·489	1·411
Highest Reading of a Max. Therm. on the 14th	54·6	57·2
Lowest Reading of a Min. Therm. on the 16th	19·6	22·4
Range of Thermometer Readings	35·0	34·8
Mean of all the Highest Readings	45·4	47·3
Mean of all the Lowest Readings	30·5	34·0
Mean Daily Range	14·9	13·3
Deduced Monthly Mean (from Mean of Max. and Min.)	37·0	39·7
Mean Temperature from Dry Bulb	38·0	40·0
Adopted Mean Temperature	37·5	39·9
Mean Temperature of Evaporation	35·0	37·9
Mean Temperature of Dew Point	31·6	35·4
Mean elastic force of Vapour inches	0·178	0·206
Meanweight of Vapour in a cub. ft. of air grains	2·0	2·4
Mean additional weight required for saturation, „	0·6	0·5
Mean degree of Humidity (saturation 1·00)	0·80	0·85
Mean weight of a cubic foot of air .. grains	552·7	546·6
Fall of rain inches	0·661	3·263
Number of days on which Rain fell	10	17·9

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	10	7	6	0	1	0	6	1
Mean Velocity in miles per hour	6·3	7·6	9·0	0	1·9	0	11·5	4·8
Total No. of miles for each Direction.	1515	1270	1290	0	45	0	1649	116

The total number of miles registered during the month was 5885.
 The max. Velocity of the wind was 36 miles per hour, W. on the 15th at 10 p.m.

MARCH, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·9
In the month of March, the highest reading of the Barometer during 53 years, was on the 6th in 1852, and was . . .	30·401
The lowest	3rd, 1897 . . . 28·157
The highest Temperature	25th, 1871 . . . 68·0
The lowest	6th, 1886 . . . 11·5
The highest adopted mean temperature of the month, 1871..	44·0
The lowest	1855 and 1892.. 35·6
Greatest fall of rain during the month in	1896...7·079 in
Least	1852...0·352 in
Greatest number of days on which rain fell, 1859, 61, 68 & 72	28
Least	1852.. 3

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	... ..	+ 0·160 inches
Monthly range	.. ..	+ 0·078 „
Mean of highest temperatures	... ..	— 1·9 degrees
Mean of lowest	„	— 3·5 „
Mean daily range	„	+ 1·6 „
Adopted mean temperature	... ..	— 2·4 „
Total rainfall	... ..	— 2·602 inches

Ground frost on the 1st, 2nd, 7th, 8th, 10th—14th, 16th—19th, 21st, 22nd, 24th—31st. Snow on the 1st, 16th, 17th, 19th, 24th, 25th—28th. Hail on the 16th and 17th. Fog on the 12th.

APRIL, 1900.

Results of Observations taken during the Month.		Mean for the last 53 years.
Mean Reading of the Barometer.....inches	29·515	29·485
Highest „ on the 19th „	30·148	29·968
Lowest „ on the 4th „	28·745	28·808
Range of Barometer Readings..... „	1·403	1·160
Highest Reading of a Max. Therm. on the 21st	70·2	66·0
Lowest Reading of a Min. Therm. on the 7th	25·8	28·0
Range of Thermometer Readings.....	44·4	38·0
Mean of all the Highest Readings.....	55·0	55·8
Mean of all the Lowest Readings.....	36·9	37·7
Mean Daily Range	18·1	18·1
Deduced Monthly Mean (from Mean of Max. and Min.)	44·5	44·5
Mean Temperature from Dry Bulb	45·4	44·7
Adopted Mean Temperature	45·0	44·6
Mean Temperature of Evaporation	42·4	41·7
Mean Temperature of Dew Point.....	39·4	38·2
Mean elastic force of Vapour.....inches	0·241	0·236
Meanweight of Vapour in a cub.ft.of air grains	2·8	2·7
Meanadditionalweight required for saturation.,	0·6	0·7
Mean degree of Humidity (saturation 1·00)	0·81	0·80
Mean weight of a cubic foot of air .. grains	542·1	542·0
Fall of Rain	3·549	2·406
Number of Days on which rain fell	18	15·8

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	2	2	1	0	3	2	20	0
Mean Velocity in miles per hour	6·1	4·1	6·3	0	6·0	21·8	11·7	0
Total No. of miles for each Direction	291	195	151	0	435	1045	5635	0

The total number of miles registered during the month was 7752.
 The max. Velocity of the wind was 44 miles per hour, W.N.W.
 on the 13th at 3 p.m.

APRIL, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	6·6
In the month of April, the highest reading of the Barometer during 53 years, was on the 17th, in 1887, and was.....	30·251
The lowest ,, 20th, 1868 ,,	28·358
The highest Temperature 14th, 1852 ,,	74·1
The lowest ,, 13th, 1892 ,,	20·8
The highest adopted mean temperature of the month, 1865 ..	48·5
The lowest ,, ,, 1879 ..	40·7
Greatest fall of rain during the month in 1867	5·672 in
Least ,, ,, 1852	0·478 in
Greatest number of days on which rain fell 1867	26
Least ,, ,, 1852	8

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly average.

Mean barometric pressure	+ 0·030 inches
Monthly range ,,	+ 0·243 ,,
Mean of highest temperatures	- 0·8 degrees
Mean of lowest ,,	- 0·8 ,,
Mean daily range ,,	0·0 ,,
Adopted mean temperature	+ 0·4 ,,
Total rainfall	+ 1·143 inches

Ground frost on the 1st, 2nd, 5th-9th, 14th, 18th, 25th, 26th and 28th. Hail on the 4th. Heavy rain on the 12th. Gales of wind on the 13th, 15th and 16th. Lunar halo on the 9th. Solar halo on the 26th.

MAY, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years.	
Mean Reading of the Barometer.....inches	29·550	29·518
Highest ,, on the 31st ,,	29·994	29·959
Lowest ,, on the 3rd ,,	28·796	28·944
Range of Barometer Readings	1·198	1·015
Highest Reading of a Max. Therm. on the 29th	65·5	71·9
Lowest Reading of a Min. Therm. on the 18th	32·0	31·3
Range of Thermometer Readings	32·5	40·6
Mean of all the Highest Readings	58·9	59·8
Mean of all the Lowest Readings	41·9	42·0
Mean Daily Range	17·0	17·8
Deduced Monthly Mean (from Mean of Max. and Min.).....	48·7	49·1
Mean Temperature from Dry Bulb	49·3	49·6
Adopted Mean Temperature	49·0	49·3
Mean Temperature of Evaporation	45·5	46·1
Mean Temperature of Dew Point	41·8	42·5
Mean elastic force of Vapour	0·266	0·275
Mean weight of Vapour in a cub.ft. of air grains	3·0	3·1
Mean additional weight required for saturation,,	1·0	0·9
Mean degree of Humidity (saturation 1·00)..	0·76	0·76
Mean weight of a cubic foot of air ....grains	538·4	537·2
Fall of Rain. ....inches	1·767	2·630
Number of days on which Rain fell	12	15·4

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	0	11	2	0	5	3	10	0
Mean velocity in miles per hour	0	7·2	8·3	0	15·2	19·4	9·0	0
Total No. of miles for each Direction	0	1903	400	0	1829	1395	2164	0

The total number of miles registered during the month was 7691.
 The max. Velocity of the wind was 37 miles per hour, S.S.E.,
 on the 3rd at 9·0 p.m.

MAY, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·8
In the month of May, the highest reading of the Barometer	
during 53 years, was on the 2nd in 1895, and was	30·217
The lowest " 28th, 1877 "	28·559
The highest Temperature 19th, 1864 "	82·5
The lowest " 4th, 1855 "	23·5
The highest adopted mean temperature of the month, 1848	55·1
The lowest " " 1855	45·0
Greatest fall of rain during the month in 1886	6·224 in
Least " " 1859	0·249 in
Greatest number of days on which rain fell 1872	28
Least " " 1853 and 1896	5

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	+ 0·032 inches
Monthly range "	+ 0·183 "
Mean of highest temperatures	— 0·9 degrees
Mean of lowest "	— 0·1 "
Mean daily range "	— 0·8 "
Adopted Mean temperature	— 0·3 "
Total rainfall 	— 0·863 inches

Ground Frost on 17th and 19th. Hail on 3rd. Gale of Wind on 3rd.

JUNE, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years	
Mean Reading of the Barometer.....inches	29.498	29.546
Highest " on the 1st "	29.990	29.901
Lowest " on the 25th "	29.082	29.032
Range of Barometer Readings	0.908	0.869
Highest Reading of a Max. Therm. on the 10th	79.8	77.7
Lowest Reading of a Min. Therm. on the 1st	42.1	38.9
Range of Thermometer Readings	37.7	38.8
Mean of all the Highest Readings	68.6	66.1
Mean of all the Lowest Readings	49.5	48.0
Mean Daily Range.....	19.1	18.1
Deduced Monthly Mean (from Mean of Max. and Min.) ..	57.3	55.2
Mean Temperature from Dry Bulb	57.2	55.3
Adopted Mean Temperature	57.3	55.3
Mean Temperature of Evaporation	53.5	52.1
Mean Temperature of Dew Point	50.0	48.7
Mean elastic force of Vapour .....inches	0.361	0.354
Mean weight of Vapour in a cub.ft. of air grains	4.0	3.9
Mean additional weight required for saturation,,	1.2	1.0
Mean degree of Humidity (saturation 1.00) ..	0.77	0.78
Mean weight of cubic foot of air ....grains	519.3	530.9
Fall of Rain .....inches	2.776	3.529
Number of days on which Rain fell	16	16.5

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	3	5	0	2	1	3	16	0
Mean Velocity in miles per hour	7.3	9.1	0	12.6	13.1	5.4	8.4	0
Total No. of miles for each Direction	522	1091	0	603	315	386	3210	0

The total number of miles registered during the month was 6127.
 The max. Velocity of the wind was 29 miles per hour, S.S.E. on the 10th at noon.

JUNE, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)				8·4
In the month of June, the highest reading of the Barometer during 53 years, was on the 15th, in 1874, and was				
		30·219		
The lowest	"	23rd, 1893	"	.....28·813
The highest Temperature	"	18th, 1893	"	..... 88·7
The lowest	"	17th, 1892	"	..... 34·1
The highest adopted mean temperature of the month, 1858..				
		59·0		
The lowest	"	"	1856 and 1860..	52·2
Greatest fall of rain during the month in				
		1848		7·125 in
Least	"	"	1887	0·525 in
Greatest number of days on which rain fell				
		1862		27
Least	"	"	1887	4

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	..	—	0·048 inches
Monthly range	"	..	+ 0·039 "
Mean of highest temperatures	..	+	2·5 degrees
Mean of lowest	"	..	+ 1·5 "
Mean daily range	"	..	+ 1·0 "
Adopted mean temperature	..	+	2·0 "
Total rainfall	..	—	0·753 inches

Hail on 14th. Heavy rain on 21st. Thunder on 11th 12th 14th, 15th, 21st and 22nd. Lightning on 6th, 7th, 11th, 12th, 14th and 21st. Solar Halo on 5th.

JULY, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years	
Mean Reading of the Barometer.....inches	29·577	29·512
Highest " on the 17th ,,	29·876	29·887
Lowest " on the 1st ,,	29·045	29·003
Range of Barometer Readings	0·831	0·884
Highest Reading of a Max. Therm. on the 11th	84·5	78·8
Lowest Reading of a Min. Therm. on the 7th	41·9	42·1
Range of Thermometer Readings	42·6	36·7
Mean of all the Highest Readings.....	71·7	68·0
Mean of all the Lowest Readings	53·2	50·7
Mean Daily Range.....	18·5	17·3
Deduced Monthly Mean (from Mean of Max. and Min.).....	60·6	57·8
Mean Temperature from Dry Bulb	61·4	57·9
Adopted Mean Temperature	61·0	57·8
Mean Temperature of Evaporation	57·4	54·8
Mean Temperature of Dew Point	54·3	52·1
Mean elastic force of Vapour	0·422	0·380
Mean weight of Vapour in a cub. ft. of air grains	4·7	4·5
Mean additional weight required for saturation,,	1·4	1·0
Mean degree of Humidity (saturation 1·00)	0·79	0·81
Mean weight of a cubic foot of air .. grains	523·8	527·4
Fall of Rain	3·146	4·096
Number of days on which Rain fell	16	18

	N	NE	E	SE	S	SW	W	NW
No. of days in the month on which the prevailing wind was	2	4	0	0	1	2	22	0
Mean Velocity in miles per hour	9·0	7·3	0	0	8·9	6·9	8·9	0
Total No. of Miles for each Direction	433	700	0	0	214	331	4668	0

The total number of miles registered during the month was 6346.
 The max. Velocity of the wind was 31 miles per hour, W.N.W.
 on the 30th at 1 p.m.

JULY, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·9
In the month of July, the highest reading of the Barometer during 53 years, was on the 24th, in 1868, and was.....	30·112
The lowest „ 15th, 1877 „	28·564
The highest Temperature 22nd, 1873 „	88·2
The lowest „ 1st, 1857 „	36·0
The highest adopted mean temperature of the month, 1852	63·0
The lowest „ „ 1888	54·5
Greatest fall of rain during the month in ...	1888 8·602 in
Least „ „ ...	1868 0·669 in
Greatest number of days on which rain fell ...	1861 30
Least „ „ ...	1868 9

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	...	+	0·065 inches
Monthly Range	„	...	— 0·053 „
Mean of highest temperatures	...	+	3·7 degrees
Mean of lowest	„	...	+ 2·5 „
Mean daily range	„	...	+ 1·2 „
Adopted mean temperature	...	+	3·2 „
Total rainfall	...	...	— 0·950 inches

Heavy rain on the 21st and 27th. Thunder on 3rd, 12th, 16th, 20th, 21st, 27th and 29th. Lightning on 3rd, 16th, 20th and 21st.

AUGUST, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years.	
Mean Reading of the Barometer . . . inches	29.542	29.403
Highest ,, on the 13th ,,	30.025	29.888
Lowest ,, on the 6th ,,	28.642	28.951
Range of Barometer Readings ,,	1.383	0.937
Highest Reading of a Max. Therm on the 14th	78.4	77.3
Lowest Reading of a Min. Therm. on the 25th	43.2	41.4
Range of Thermometer Readings	35.2	35.9
Mean of all the Highest Readings	66.5	67.3
Mean of all the Lowest Readings	49.9	50.5
Mean Daily Range	16.6	16.8
Deduced Monthly Mean (from Mean of Max. and Min.)	56.5	57.2
Mean Temperature from Dry Bulb	57.2	57.6
Adopted Mean Temperature	56.9	57.4
Mean Temperature of Evaporation	53.8	54.6
Mean Temperature of Dew Point	50.9	51.8
Mean elastic force of Vapour inches	0.373	0.388
Mean weight of Vapour in a cub. ft. of air grains	4.2	4.3
Mean additional weight required for saturation, ,,	0.8	0.9
Mean degree of Humidity (saturation 1.00) ..	0.80	0.82
Mean weight of a cubic foot of air . . . grains	529.3	527.4
Fall of Rain inches	6.130	5.113
Number of days on which Rain fell	17	19.8

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	6	9	2	0	3	2	7	2
Mean Velocity in miles per hour	4.6	6.8	5.5	0	7.5	9.6	9.3	14.4
Total No. of miles for each Direction	658	1477	263	0	543	459	1559	691

The total number of miles registered during the month was 5650.
 The max. Velocity of the wind was 35 miles per hour, N. on the 3rd, at 5 p.m.

AUGUST, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	8·0
In the month of August, the highest reading of the Barometer during 53 years, was on the 21st, in 1874, and was	30·114
The lowest ,, 31st, 1876 ,,	28 555
The highest Temperature 2nd, 1868 ,,	88·0
The lowest ,, 13th, 1887 ,,	33·4
The highest adopted mean temperature of the month, 1899	61·7
The lowest ,, ,, 1848	52·5
Greatest fall of rain during the month in 1891	9·869 in
Least ,, ,, 1871	2·085 in
Greatest number of days on which rain fell 1860	28
Least ,, ,, 1880	6

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	+	0·049 inches
Monthly range ,,	+	0·446 ,,
Mean of highest temperatures	—	0·8 degrees
Mean of the lowest ,,	—	0·6 ,,
Mean daily range ,,	—	0·2 ,,
Adopted mean temperature	—	0·5 ,,
Total rainfall	+	1·017 inches

Heavy Rain on 2nd, 3rd, 6th, 21st and 31st. Thunder on 1st, 3rd, 6th, 7th, 9th, 21st, 22nd and 23rd. Lightning on 1st, 3rd, 6th, 21st and 22nd.

SEPTEMBER, 1900.

Result of Observations taken during the Month.	Mean for the last 53 years.
Mean Reading of the Barometer inches 29·676	29·521
Highest „ on the 12th „ 30·144	30·026
Lowest „ on the 27th „ 29·020	28·855
Range of Barometer Readings „ 1·124	1·171
Highest Reading of a Max. Therm. on the 16th 73·9	72·7
Lowest Reading of a Min. Therm. on the 2nd 35·5	36·3
Range of Thermometer Readings 38·4	36·4
Mean of all the Highest Readings 64·4	62·5
Mean of all the Lowest Readings 46·7	47·0
Mean Daily Range 17·7	15·5
Deduced Monthly Mean (from Mean of Max. and Min.) 54·3	53·5
Mean Temperature from Dry Bulb 54·5	54·1
Adopted Mean Temperature 54·4	53·8
Mean Temperature of Evaporation 51·9	51·0
Mean Temperature of Dew Point 49·5	48·4
Mean elastic force of Vapour inches 0·353	0·340
Mean weight of Vapour in a cub. ft. of air grains 4·0	4·0
Mean additional weight required for saturation, 0·8	0·8
Mean degree of Humidity (saturation 1·00) . 0·83	0·82
Mean weight of a cubic foot of air grains 534·6	532·3
Fall of rain inches 3·024	4·632
Number of Days on which rain fell 15	18·8

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	7	0	0	0	1	7	15	0
Mean Velocity in miles per hour	4·9	0	0	0	14·1	9·3	7·7	0
Total No. of miles for each Direction	823	0	0	0	338	1556	2782	0

The total number of miles registered during the month was 5499.
The max. Velocity of the wind was 28 miles per hour, S.S.W., on the 26th at 7 p.m.

SEPTEMBER, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·0
In the month of September, the highest reading of the Barometer during 53 years, was on the 15th, in 1851, and was...30·274	
The lowest	25th, 1896 ,, ...28·314
The highest Temperature	6th, 1868 ,, ... 85·0
The lowest	25th, 1885, and 30th, 1888... 29·8
The highest adopted mean temperature of the month, 1865	... 59·1
The lowest	,, ,, 1863 ... 50·9
Greatest fall of rain during the month in	.. 1869 9·539in
Least	,, ,, .. 1894 0·801in
Greatest number of days on which rain fell	.. 1866 30
Least	,, , 1851 and 1894 6

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly average.

Mean barometric pressure	.. ..	+ 0·155 inches
Monthly range	.. ..	- 0·047 ,,
Mean of highest temperatures	.. ..	+ 1·9 degrees
Mean of lowest	,, ..	- 0·3 ,,
Mean daily range	,, ..	+ 2·2 ,,
Adopted mean temperature	.. ..	+ 0·6 ,,
Total rainfall	,, ..	- 1·608 inches

Ground frost on 3rd and 25th. Hoar frost on 12th. Heavy rain on 26th. Fog on 12th, 14th, 16th and 17th. Lightning on 16th. Lunar Halo on 8th and 11th.

OCTOBER, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years	
Mean Reading of the Barometer inches	29·476	29·430
Highest " on the 22nd "	30·201	30·026
Lowest " on the 26th "	28·775	28·647
Range of Barometer Readings..... "	1·426	1·370
Highest Reading of a Max. Therm. on the 7th	66·7	64·5
Lowest Reading of a Min. Therm. on the 21st	29·4	28·8
Range of Thermometer Readings	37·3	35·7
Mean of all the Highest Readings.....	56·0	54·7
Mean of all the Lowest Readings	41·4	41·5
Mean Daily Range.....	14·6	13·2
Deduced Monthly Mean (from Mean of Max. and Min.).....	47·7	47·1
Mean Temperature from Dry Bulb	48·7	47·6
Adopted Mean Temperature	48·2	47·4
Mean Temperature of Evaporation	45·6	45·2
Mean Temperature of Dew Point	42·8	42·7
Mean elastic force of Vapour	0·275 inches	0·275
Mean weight of Vapour in a cub.ft. of air grains	3·2	3·1
Mean additional weight required for saturation,,	0·7	0·6
Mean degree of Humidity (saturation 1·00) ..	0·82	0·84
Mean weight of a cubic foot of air....grains	538·0	537·6
Fall of Rain.....inches	7·750	5·013
Number of days on which Rain fell	25	21·2

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	4	1	1	1	0	8	16	0
Mean Velocity in miles per hour	5·6	2·5	13·8	5·8	0	12·5	10·4	0
Total No. of miles for each Direction.	539	59	330	140	0	2403	3976	0

The total No. of miles registered during the month was 7447.
The max. Velocity of the wind was 31 miles per hour, N.W. by W., on the 26th at 11-0 p.m.

OCTOBER, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	8·0
In the month of October the highest reading of the Barometer during 53 years, was on the 5th, in 1884, and was ..	30·306
The lowest .. 19th, 1862 ..	28·139
The highest Temperature .. 9th, 1869 ..	72·8
The lowest .. 28th, 1895 ..	17·8
The highest adopted mean temperature of the month, 1861 & '76	51·6
The lowest .. 1895 ..	42·8
Greatest fall of rain during the month in .. 1870	13·437 in
Least .. 1856	1·328 in
Greatest number of days on which rain fell .. 1873	31
Last .. 1881-'87-'97-'99	12

 TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	+ 0·046 inches
Monthly range	+ 0·047 ..
Mean of highest temperatures	+ 1·3 degrees
Mean of lowest	— 0·1 ..
Mean daily range	+ 1·4 ..
Adopted mean temperature	+ 0·8 ..
Total rainfall	+ 2·737 inches

Ground Frost on 3rd, 4th, 11th, 16th, 19th—22nd. Hail on 6th, 14th, 25th and 27th. Heavy rain on 5th, 6th, 9th, 16th, 24th, 25th and 28th. Thunder on 10th. Lightning on 26th. Lunar halo on 3rd

NOVEMBER, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years.
Mean Reading of the Barometer inches 29·300	29·469
Highest „ „ on the 18th 30·092	30·066
Lowest „ „ on the 15th 28·681	28·562
Range of Barometer Readings 1·411	1·504
Highest Reading of a Max. Therm. on the 1st 62·4	56·1
Lowest Reading of a Min. Therm. on the 23rd 30·0	25·6
Range of Thermometer Readings 32·4	30·5
Mean of all the Highest Readings 49·4	47·4
Mean of all the Lowest Readings 39·0	36·5
Mean Daily Range 10·4	10·9
Deduced Monthly Mean (from Mean of Max. and Min.) 43 8	41·6
Mean Temperature from Dry Bulb 44·2	41·9
Adopted Mean Temperature 44·0	41·8
Mean Temperature of Evaporation 42·2	39·6
Mean Temperature of Dew Point 40·0	38·2
Mean elastic force of Vapour inches 0·248	0·232
Mean weight of Vapour in a cub. ft. of air grains 2·8	2·7
Mean additional weight required for saturation, „ 0·5	0·4
Mean degree of Humidity (saturation 1·00) . . 0·86	0·87
Mean weight of a cubic foot of air grains 539·2	544·8
Fall of Rain inches 4·345	4·344
Number of days on which Rain fell 20	19·9

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
		1	6	3	4	3	7	6	0
Mean Velocity in miles per hour	13·1	6·6	13 0	5·1	2·9	12·0	7·2	0
Total No. of miles for each Direction	315	946	936	488	207	2009	1037	0

The total number of miles registered during the month was 5938.
 The max. Velocity of the wind was 36 miles per hour, E. by N, on the 29th at 2·0 p.m.

NOVEMBER, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0) 8·4					
In the month of November, the highest reading of the Barometer during 53 years was on the 12th, in 1857, and was 30·350					
The lowest	"	11th, 1891	"	27·938	
The highest Temperature		1st, 1900	"	62·4	
The lowest	"	17th, 1861	"	19·1	
The highest adopted mean temperature of the month,					
1881 and 1899	..	..	..	..	47·0
The lowest	"	"	"	1851	36·7
Greatest fall of rain during the month in .. 1866 9·026in					
Least " " " 1855 1·158in					
Greatest number of days on which rain fell .. 1872 29					
Least " " " 1855 8					

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly average.

Mean barometric pressure	..	..	-	0·169 inches
Monthly range	"	..	-	0·093 "
Mean of highest temperatures		..	+	2·0 degrees
Mean of lowest	"	..	+	2·5 "
Mean daily range	"	..	-	0·5 "
Adopted mean temperature	..	..	+	2·2 "
Total rainfall	..	..	+	0·001 inches

The highest temperature for the month of November during 53 years, occurred this year, on the 1st, and was 62·4.

Ground Frost on 10th, 11th, 14th, 18th, 19th, 23rd, 24th and 27th. Hail on 9th, 10th and 12th. Fog on 2nd, 23rd, 24th and 25th. Thunder on 9th. Lightning on 9th. Heavy rain on 3rd, 9th and 12th.

DECEMBER, 1900.

Results of Observations taken during the Month.	Mean for the last 53 years.	
Mean Reading of the Barometer inches	29·370	29·454
Highest " on the 16th "	30·003	30·073
Lowest " on the 28th "	28·174	28·568
Range of Barometer Readings "	1·829	1·505
Highest Reading of a Max. Therm. on the 20th	57·0	53·2
Lowest Reading of a Min. Therm. on the 22nd	29·3	20·3
Range of Thermometer Readings	27·7	32·9
Mean of all the Highest Readings	49·1	43·3
Mean of all the Lowest Readings	39·2	33·0
Mean Daily Range	9·9	10·2
Deduced Monthly Mean (from Mean of Max. and Min.)	44·2	38·2
Mean Temperature from Dry Bulb	44·5	38·8
Adopted Mean Temperature	44·4	38·5
Mean Temperature of Evaporation	42·7	36·9
Mean Temperature of Dew Point	40·7	35·0
Mean Elastic force of Vapour inches	0·254	0·206
Mean weight of Vapour in a cubic ft. of air grains	2·9	2·4
Mean additional weight required for saturation, ,	0·4	0·4
Mean degree of Humidity (saturation 1·00) . .	0·87	0·87
Mean weight of a cubic foot of air grains	530·1	547·9
Fall of Rain inches	5·573	4·530
Number of days on which Rain fell	26	20·8

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	1	0	3	0	7	8	11	1
Mean Velocity in miles per hour	12·8	0	4·5	0	16·0	12·6	14·6	7·1
Total No. of miles for each Direction	308	0	322	0	2691	2411	3854	170

The total number of miles registered during the month was 9756.
The max. Velocity of the wind was 57 miles per hour, W.N.W.
on the 28th, at 4 p.m.

DECEMBER, 1900.

Mean amount of Cloud (an overcast sky being indicated by 10·0 9·3
 In the Month of December, the highest reading of the Bar-
 ometer during 53 years, was on the 22nd, in 1849, and was 30·378

The lowest	„	8th, 1886	„	....	27·350
The highest Temperature		9th, 1876	„	....	58·1
The lowest	„	24th, 1860	„	....	6·7
The highest adopted mean temperature of the month		1857			44·6
The lowest	„	1878	„	....	30·3
Greatest fall of rain during the month		1880			9·211 in
Least	„	1890			0·550 in
Greatest number of days on which rain fell		1868			31
Least	„	1890			8

TABLE OF DIFFERENCES.

The signs + and — mean respectively above and below the monthly average.

Mean barometric pressure	...	...	—	0·084 inches
Monthly range	„	...	+	0·324 „
Mean of highest temperatures	...	...	+	5·8 degrees
Mean of lowest	„	...	+	6·2 „
Mean daily range	„	...	—	0·4 „
Adopted mean temperature	...	...	+	5·9 „
Total rainfall	...	...	+	1·043 inches

Ground frost on 19th, 22nd, 23rd, 29th and 30th. Hoar frost on 23rd. Fog on 5th and 24th. Gales of wind on 15th, 20th, 21st, 25th and 28th. Heavy rain on 3rd, 5th and 7th.

Summary of Observations, 1900.

Results of Observations taken during the Year.	Mean for the last 53 years.
Mean Reading of the Barometer .....inches 29·476	29·493
Highest „ on March 13th „ 30·283	30·283
Lowest „ on February 19th „ 27·870	28·251
Range of Barometer Readings „ 2·413	2·032
Highest Reading of a Max. Therm. on July 11th 84·5	81·8
Lowest Reading of a Min. Therm. on Feb. 7th 12·5	15·4
Range of Thermometer Readings 72·0	66·4
Mean of all the Highest Readings..... 55·9	54·9
Mean of all the Lowest Readings..... 40·9	40·6
Mean Daily Range 15·0	14·3
Deduced Yearly Mean (from Mean of Max. and Min.) 47·3	46·8
Mean Temperature (from Dry Bulb)..... 47·9	46·8
Adopted Mean Temperature 47·6	46·8
Mean Temperature of Evaporation 45·1	44·5
Mean Temperature of Dew Point 42·3	42·1
Mean elastic force of Vapour .....inches 0·280	0·273
Mean weight of Vapour in a cub. ft. of air grains 3·2	3·3
Mean additional weight required for saturation,, 0·7	0·7
Mean degree of Humidity (saturation 1·00)... 0·82	0·84
Mean weight of a cubic foot of air. ...grains 536·8	539·2
Total fall of rain in the year inches 48·210	47·192
Number of days per month on which Rain fell 18·3	18·5

SUMMARY OF WIND.

No of days in the year on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	44	57	18	8	30	55	145	8
Mean Velocity in miles per hour	6·3	7·3	8·5	9·6	11·1	11·6	10·2	9·6
Total No. of miles for each Direction	6620	10052	3692	1844	7965	15337	35348	1838

The total No. of miles registered during the year was 82696.
 The max. Velocity of the wind was 57 miles per hour, W.N.W., on 28th December, at 4·0 p.m.

SUMMARY, 1900.

The Maximum monthly mean height of the Barometer was in February, 1891, and was.....inches	29.997
The Minimum ,, ,, in December, 1868, and was	28.984
The Maximum yearly mean height of the Barometer was in 1896, and was.....inches	29.544
The Minimum ,, ,, in 1886, and was	29.380
The greatest monthly range of the Barometer was in January, 1884, and was	2.409
The least ,, ,, in July, 1852, and was ,,	0.505
The highest reading of the Barometer during 53 years was on January 9th, 1896, and was.....inches	30.597
The lowest ,, ,, on December 8th, 1886, and was	27.350
Extreme range	3.247
The highest temperature was on June 18th, 1893, and was..	88.7
The lowest ,, ,, January 15th, 1881	4.6
The highest adopted mean temperature of a month, July 1868, and was	62.4
The lowest ,, ,, ,, February, 1855 ..	28.6
The highest adopted mean temperatures of a year, 1868 ..	49.1
The lowest ,, ,, ,, 1879 ..	44.1
The greatest monthly mean weight of vapour } in a cubic foot of air grains } July, 1852..	5.1
The least ,, ,, February, 1855, and 1895 grains	1.4
The greatest fall of rain in a month was in October, 1870, and was	13.437
The least ,, ,, ,, May, 1859 ,,	0.249
The greatest number of days on which rain fell in one month, January, 1872, October, 1873, December, 1868	31
The least ,, ,, ,, March, 1852	3
The greatest fall of rain in one year in 1866 inches	62.183
The least ,, ,, ,, 1887 ,,	31.250
The greatest number of days in one year on which rain fell .. 1872.....	319
The least ,, ,, ,, 1855.....	148

MONTHLY TABLES FOR EACH HOUR OF RECORDED SUNSHINE

Local apparent time.	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
January	0	0	0	0	0.4	2.6	4.1	6.1	6.0	5.1	4.4	0.5	0	0	0	0	0
February	0	0	0	1.0	2.7	6.1	7.8	8.9	8.8	10.0	9.5	6.6	2.0	0	0	0	0
March	0	0	1.1	5.4	9.3	10.6	12.1	14.4	11.4	10.5	9.5	7.9	5.8	1.3	0	0	0
April	0	0	2.5	8.4	11.7	13.5	14.0	14.1	17.2	20.2	20.2	21.7	17.8	11.7	3.3	0	0
May	0.5	4.2	7.6	11.0	12.1	11.6	12.0	12.9	13.2	15.0	18.0	13.3	14.7	12.9	8.5	1.6	0
June	1.0	4.3	6.7	9.2	12.5	15.2	15.7	19.4	19.1	18.7	15.9	16.5	16.2	14.6	10.4	3.7	0
July	2.4	8.0	11.2	12.2	15.3	18.2	16.8	16.0	16.9	17.6	13.9	12.2	12.3	9.2	10.5	4.2	0
August	0	0.9	7.0	10.2	11.2	13.5	15.4	14.6	14.5	14.4	13.4	13.6	11.5	10.7	5.7	0.6	0
September	0	0	1.1	7.1	10.0	13.5	14.9	16.8	15.4	16.7	17.9	17.6	14.3	8.5	1.9	0	0
October	0	0	0.8	1.4	6.5	10.7	13.5	12.5	11.2	11.3	11.1	7.5	3.4	0	0	0	0
November	0	0	0	0	0.9	4.8	6.3	8.3	8.2	5.2	4.4	1.2	0	0	0	0	0
December	0	0	0	0	0	0.7	2.0	2.2	3.7	3.3	2.2	0	0	0	0	0	0
Total	3.9	17.4	38.0	65.9	92.6	121.0	134.6	146.2	145.6	148.0	140.4	118.6	98.0	68.9	40.3	10.1	0

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY.

MONTH.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
January	1.2	0	0	1.5	0	0	4.5	2.5	3.3	6.0	0	0	0	0	0	0	0
February	0.7	7.0	0	0.3	0	8.3	2.3	4.0	0	0	4.5	1.5	0	4.8	0	1.9	4.0
March	3.4	3.3	0	1.1	0	1.5	0	0	0	4.9	4.8	2.7	9.4	3.7	0.2	10.1	2.8
April	7.8	8.9	2.8	3.9	4.9	7.8	10.3	2.9	3.6	2.9	1.2	1.6	5.8	4.5	4.5	6.8	5.3
May	5.4	0	2.0	1.8	6.7	0.3	4.1	3.0	4.5	10.9	0	0	7.7	4.4	9.1	14.1	9.3
June	13.6	14.9	13.4	9.3	3.4	10.6	8.7	11.7	0	9.2	8.4	4.5	2.6	4.3	4.2	3.8	10.5
July	4.2	4.4	4.0	0.7	6.4	4.0	14.0	7.2	0.4	13.8	14.2	3.8	6.4	1.6	8.2	7.7	11.5
August	7.6	6.9	0	8.8	0	0	0.3	5.6	0	1.8	6.5	6.9	9.7	12.7	10.9	8.8	3.9
September	0.2	10.2	9.8	6.5	6.8	8.8	0	5.9	9.2	6.8	12.0	8.5	7.8	8.6	8.8	5.0	0
October	2.7	2.8	8.3	0.6	2.0	0.9	3.7	2.2	0	3.4	3.0	2.8	1.7	7.4	7.8	1.8	3.5
November	2.8	1.6	0	0.3	0	0	0.2	0.8	3.2	0.5	3.2	0	4.4	0	0	3.0	2.2
December	0	0	0	0	0	0	0.7	0	0.6	0	0	0	2.2	0	1.8	0	2.8

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY.
(Continued)

MONTH.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Monthly Total.	Per centge each month.
January - -	3.2	0	0.2	0	0	0	0	1.4	0.2	2.2	0	3.0	0	0	29.2	11.8
February - -	1.3	0.4	1.7	7.5	0	7.1	0.3	3.8	0	0	2.0	0	0	0	63.4	23.3
March - -	2.7	4.2	6.8	1.6	0	1.6	0.3	2.5	4.2	4.7	7.7	6.8	4.7	4.6	99.3	27.1
April - -	0	8.3	10.4	12.2	5.3	0.8	6.7	9.2	10.1	9.2	11.6	0.7	6.3	0	176.3	42.1
May - -	1.8	10.8	9.1	0	3.2	7.3	8.4	7.4	6.8	1.7	7.3	12.0	8.6	1.4	169.3	34.3
June - -	8.5	2.9	9.5	0.9	7.2	9.5	1.2	2.0	7.0	5.2	6.1	0.7	5.3	0	199.1	39.2
July - -	11.5	11.8	5.4	0.7	0	4.2	5.5	4.8	6.1	9.6	1.7	7.0	9.6	6.5	196.9	38.7
August - -	6.4	0	7.3	1.1	2.7	8.3	3.5	1.1	2.8	7.3	8.8	9.5	5.2	2.6	157.0	34.4
September -	0.2	7.9	2.4	1.4	0	2.3	5.4	8.4	0	1.3	4.3	4.0	3.2	0	155.7	41.1
October - -	0	4.7	3.6	5.8	3.6	0	0	2.9	2.1	6.3	5.4	0.4	0.5	0	89.9	27.6
November -	3.0	1.8	2.4	0	0	3.1	0	0	0	5.3	0	0.5	1.0	0	39.3	15.4
December -	0	0	0	0.2	0	0	0	0.5	2.4	0.6	0	1.6	0	0.7	14.1	6.1

SUMMARY OF SUNSHINE.

1900.	Number of days on which Sunshine was recorded.	Amount or Total Number of Hours	Per centage of possible Sunshine.	Mean for the last 20 Years.		
				Days.	Amount hours	Per centage of possible Sunshine
January ...	12	29·2	11·8	13·7	34·7	14·0
February...	19	63·4	23·3	17·7	60·0	21·9
March ...	25	99·3	27·1	23·9	106·6	29·1
April ...	29	176·3	42·1	26·0	145·8	34·8
May ...	27	169·3	34·3	27·7	194·4	39·5
June ...	29	199·1	39·2	27·5	193·7	38·1
July ...	30	196·9	38·7	28·5	177·9	34·9
August ...	26	157·0	34·4	27·6	147·6	32·3
September	26	155·7	41·1	25·5	124·3	32·8
October ...	26	89·9	27·6	23·2	88·6	27·2
November	18	39·3	15·4	16·6	43·2	16·9
December	11	14·1	6·1	12·7	25·7	11·1
Year	278	1389·5	31·1	270·1	1342·7	30·1

SUMMARY OF SUNSHINE

(Continued).

EXTREMES FOR THE LAST 20 YEARS.

MONTH	Number of Days on which Sunshine was recorded.				Amount or Total number of Hours.				Percentage of possible Sunshine.			
	GREATEST		LEAST		GREATEST		LEAST		GREATEST		LEAST	
	Days	Year	Days	Year	Hours	Year	Hours	Year	o/o	Year	o/o	Year
Jan	21	1881	8	1898	64.2	1881	14.9	1885	30.0	1881	6.0	1885
Feb.	24	1895	11	1882	89.3	1887	29.6	1882	32.8	1887	10.9	1882
Mar	28	1894	19	1881 1882	162.1	1893	67.0	1895	44.2	1893	18.3	1895
Apr.	29	1900	23	1883 1885 1888 1897	223.7	1893	95.7	1889	53.4	1893	22.8	1889
May	30	1881 1884 1888	22	1886	266.6	1881	127.0	1886	54.1	1881	25.8	1886
June	30	1896	24	1888 1897	272.5	1887	115.0	1890	53.6	1887	22.6	1890
July	31	1882	8	1888	247.2	1887	98.0	1888	48.6	1887	19.3	1888
Aug	31	1886 1893	23	1894	235.2	1899	88.4	1891	51.5	1899	19.3	1891
Sept	29	1895 1899	21	1897	170.0	1895	62.9	1896	44.9	1895	16.6	1896
Oct.	28	1891	17	1889	134.9	1899	50.0	1889	41.4	1899	15.3	1889
Nov	23	1883	9	1897	60.5	1884	18.5	1891	23.6	1884	7.2	1891
Dec.	18	1886	6	1882	60.1	1886	14.1	1900	26.0	1886	6.1	1900
Year	290	1887	252	1885	1613.7	1887	1132.1	1888	36.1	1387	25.3	1888

OBSERVATIONS OF UPPER CLOUDS (CIRRUS).

Date. 1900.	G. M. T.	Cloud.		Wind.		Direction of Lower Clouds.	
		Direction	Velocity (0-6.)	Direction.	Force (0-12.)		
January	4	Noon.	NW	2	N	3	W
"	9	9 a.m.	WSW	2	W	2	SW
"	26	4-30 p.m.	S	3	W b S	5	
February	21	4 p.m.	W	2	W b S	1	WSW
"	28	3-30 p.m.	E	2	NNE	2	NE
March	26	9 a.m.	NE	2	N	2	N
April	1	11 a.m.	SE	2	S b E	3	
"	6	5-30 p.m.	SE	2	SSE	1	W
"	7	10 a.m.	S	2	NE b E	1	NE
"	17	5-40 p.m.	NW	3	WNW	3	W
May	7	4-30 p.m.	N b E	2	WSW	1	SW
"	8	8-30 a.m.	N	2	NNE	1	NE
"	16	9 a.m.	N	2	NE	2	NE
"	26	9 a.m.	NW	2	E	1	W
June	3	9 a.m.	NE	2	NE	2	SE
"	4	9 a.m.	NE	3	NE	2	SE
"	8	9 a.m.	NW	2	W	2	W
"	17	11-30 a.m.	E b S	2	WSW	3	SW
"	18	9 a.m.	SE	2	WSW	1	SW
"	28	5-30 p.m.	NW	2	W	1	W
"	30	Noon.	NW	3	WSW	3	W b S
July	2	8-30 a.m.	SW b S	2	W b S	1	W
"	3	9 a.m.	NW	2	W b S	2	W
"	10	10 a.m.	S b W	2	WSW	1	WSW
"	11	3-45 p.m.	S	2	SW b W	1	SW
"	24	4 p.m.	SW b S	2	W	2	W
"	27	9 a.m.	S	2	N b E	1	
August	3	9 a.m.	N	3	E	2	NW
"	13	3 p.m.	WNW	2	W	2	W
"	14	9 a.m.	WNW	2	NE	1	
"	16	8 a.m.	NNW	2	NNE	1	
"	18	Noon.	NW	2	WSW	2	W
"	23	8 a.m.	S	3	S	4	SW
"	27	4 p.m.	S b W	2	NE	2	NE

OBSERVATIONS OF UPPER CLOUDS (Continued).

Date. 1900.	G. M. T.	Cloud.		Wind.		Direction of Lower Clouds.
		Direction.	Velocity (0-6.)	Direction.	Force. (0-12.)	
September 2	10 a.m.	W	2	NW	1	NW
" 4	4 p.m.	NW	2	W	2	SW
" 5	4 p.m.	NW	2	W b S	3	W
" 8	9 a.m.	N b W	2	NE b N	0	NW
" 11	Noon.	NNE	2	E	1	W
" 12	4 p.m.	N	2	W	2	NE
" 16	9 45 a.m.	NW	2	NNE	1	W
" 18	5 30 p.m.	SE b S	3	W b S	2	W b S
" 20	9 a.m.	W b S	2	WSW	1	W
October 15	10 a.m.	NW	2	WNW	3	W
" 16	8-30 a.m.	NW b N	2	N	1	N
" 17	4 p.m.	SE	3	W	1	W
" 19	8 a.m.	NE	3	ENE	0	N
" 26	3 p.m.	E b S	2	W	2	W
" 28	9 a.m.	NW	2	SW	1	W
" 29	10 a.m.	E b S	3	W b S	1	W
November 4	11-15 a.m.	N	2	W	2	W b S
" 7	2 p.m.	ENE	2	W b N	1	W
" 8	9 a.m.	W	2	SSW	2	SW
" 9	11 a.m.	NNE	2	WSW	4	W
" 11	9 a.m.	NW	2	W b N	2	W
" 13	8 a.m.	SW	3	SW b W	2	W
" 16	9-30 a.m.	N b E	2	ENE	2	E
" 17	10-15 a.m.	S	2	N	3	N
" 22	9 a.m.	SE	3	NW b W	1	NW
December 6	2 p.m.	SE	3	WSW	3	SW
" 7	3 p.m.	N	2	W	0	NW
" 10	2 p.m.	NW	2	WSW	1	W
" 18	Noon.	S	2	NW b W	1	SW
" 19	9 a.m.	NE	2	W b S	1	W
" 23	11 a.m.	N	2	SW	0	SW
" 26	11 a.m.	NW	3	SW b S	2	SW
" 29	9 a.m.	NE	2	W	1	W

OBSERVATIONS OF EARTH-MAGNETISM.

ABSOLUTE measures of Horizontal Magnetic Force have been made once each month, by the method of Vibration and Deflection.

In these observations the same Magnet has been employed from the beginning of the series in March. 1863. The weight of the Magnet with its stirrup is 825 grains, and its length 3.94 inches nearly. Its moment of inertia, measured by the method of vibrations, with and without a known increase of the moment, is 5.27303 to the English foot—second—grain units, at the temperature 35° Fahr., and its rate of increase is 0.00078 for increase of 10°

The temperature corrections have been obtained from the formula $q(t^\circ - 32^\circ) + q'(t^\circ - 32^\circ)^2$ where t° is the observed temperature and 32° Fahr. the adopted standard temperature. The values of the co-efficient q and q' are respectively 0.0001128 and 0.00000436.

The induction co-efficient μ is 0.000244

The correction for error of graduation of the Deflection bar at 1.0 foot is + 0.00004ft. at 1.3 + 0.000064 ft.

The observed times of vibration are entered in the Table without corrections.

The time of one vibration has been obtained each month from the mean of twelve determinations of the time of 100 vibrations.

The angles of deflection are each the mean of two sets or readings with two exceptions.

In deducing from these observations the ratio and product of the magnetic moment m of the magnet, and the earth's horizontal magnetic intensity X , the induction and temperature corrections have always been applied, and the observed time of vibration has been corrected for the effect of torsion of the suspending thread; but no correction has been required for the rate of the chronometer, or for the arc of vibration, the former having been always under 1.5^s and the latter never over 50'.

The average deflection of the magnet caused by a twist of the torsion circle through 90° has been about 14'.0 of arc.

In the calculations of the ratio $\frac{m}{X}$, the third and subsequent

terms of the series $1 + \frac{P}{r^2} + \frac{Q}{r^4} + \text{\&c.}$, have always been omitted.

The value of the constant P was found to be -0.00190 .

The Vertical and Total Forces are deduced from the measures of the Horizontal Force, and the Angle of Inclination or Dip.

All the computations are in English foot—second—grain units; and in the final table the results are given also in C. G. S. units, in parallel columns.

The Dip, or angle between the direction of total force, and that of its horizontal component, has been measured with Barrow's Circle, once each month by two needles, always when possible on the days of vibration and deflection observations.

The Declination has been observed at the beginning of each week, usually on Mondays at 4 p.m. and is quoted as the angle between the horizontal direction of force and the Astronomical Meridian, measured from the North Point.

The Differential Instruments, or Photo-Magnetographs, are of the same pattern as those at the Kew Observatory, except that the radial distances between the centres of the magnets and the surfaces of the respective cylinders are shorter, and the clock is not provided with an automatic light-cut-off, for the time scale. The "cut-offs" are made by hand at the hours 0, 2, 20, and 22 of the astronomical day, to furnish two time marks at each end of the day's curves, the changes being made between 10.30 and 11 a.m., civil time.

The scale value of the Bifilar horizontal force torsion balance, has remained very constant at 0.00051 C. G. S. for one centimetre, during the last eight years.

The scale value of the Unifilar Declination Magnet is $11' 28$ arc per centimetre.

The corrections for diurnal range, employed in the tables, are taken from the Kew Reports 1891-99.

OBSERVATIONS OF DECLINATION AND DIP.

1900	G. M. T.	WEST DECLINATION		MAGNETIC DIP.		
MONTH	CIVIL DAY	Observations.	Monthly Mean.	Needle	DIP.	G. M. T. CIVIL DAY
	D. H. M.	° ' "	° ' "		° ' "	D. H. M.
Jan.	9 16 0	18 14.3	18 15.8	1	68 44.0	20 11 30
	15 16 0	18 14.5				
	22 16 0	18 14.7		3	68 59.1	,, 12 3
	31 15 45	18 19.8				
Feb.	5 16 0	18 13.9	18 12.0	1	68 53.1	19 11 47
	12 16 20	18 6.9				
	19 16 0	18 9.1		3	69 0.0	,, 12 14
	26 15 50	18 18.1				
March	5 16 5	18 7.9	18 12.0	1	68 51.1	13 10 50
	12 16 5	18 17.4				
	19 16 5	18 12.5		3	69 1.4	,, 11 30
	26 16 0	18 10.0				
April	2 16 0	18 11.9	18 9.4	1	68 45.3	28 17 0
	16 16 15	18 7.8				
	30 16 30	18 8.4		3	68 58.5	,, 17 40
May	7 16 0	18 11.2	18 8.8			
	14 16 5	18 9.4				
	21 16 15	18 6.7		3	68 55.8	,, 12 20
	28 16 0	18 7.7				
June	11 16 5	18 14.1	18 14.6	1	68 45.8	16 14 50
	18 16 5	18 12.7				
	25 16 0	18 17.0		3	68 53.3	,, 15 30
July	2 16 5	18 9.7	18 9.8				1	68 41.3	17 11 45
	9 16 5	18 8.1				
	15 16 5	18 11.7		3	68 48.7	,, 12 17
	23 16 5	18 10.7				
	30 16 5	18 8.6				

OBSERVATIONS OF DECLINATION AND DIP.

(Continued.)

1900 MONTH	G.M.T. CIVIL DAY	WEST DECLINATION		MAGNETIC DIP.		
		Observations	Monthly Mean.	Needle	DIP.	G.M.T. CIVIL DAY
	D. H. M.	° ' "	° ' "		° ' "	D. H. M.
Aug.	6 16 5	18 8·3	18 10·6	1	68 46·4	13 15 5
	20 16 20	18 12·3		3	68 52·2	„ 15 40
	27 16 0	18 11·2				
Sept.	11 16 0	18 6·5	18 9·1	1	68 41·5	14 14 55
	17 16 0	18 11·1		3	68 47·8	„ 15 20
	24 16 0	18 9·7				
Oct.	1 16 0	18 10·1	18 8·6	1 3	68 37·0 68 57·1	16 11 20 „ 11 37
	8 16 0	18 11·1				
	15 16 0	18 7·4				
	22 16 0	18 8·4				
Nov.	29 16·0	18 5·9				
	5 16 0	18 5·4	18 11·0	1 3	68 50·9 68 53·8	16 11 45 „ 12 20
	12 16 5	18 10·6				
	19 16 0	18 14·2				
26 16 5	18 13·7					
Dec.	3 16 0	18 12·8	18 9·9	1 3	68 45·8 68 51·5	17 11 0 „ 11 45
	10 16 0	18 11·4				
	17 16 0	18 5·2				
	24 16 0	18 10·3				
Yearly Mean			18 10·9		68 50·3	

OBSERVATIONS OF VIBRATIONS AND DEFLECTIONS
FOR ABSOLUTE MEASURE OF MAGNETIC FORCE.

1900. Month.	G. M. T. (Civil Day)		Temp. °	Time of one vibration s.	G. M. T.		Temp. °	Observed Deflection at 1·0 ft. at 1·3 ft.	Value of m.	
	D.	H.			M.	D.				H.	M.
Jan.	20	0	28	38·9	6·0300	20	{ 10 27 10 31	42·0 42·0	11 38·9 5 16·5	0·38009
Feb.	19	9	23	41·0	6·0342	19	{ 10 31 10 37	45·5 45·0	11 36·7 5 15·5	0·37934
Mar.	13	9	5	47·1	6·0458	13	{ 9 55 10 12	54·0 55·0	11 41·2 5 17·9	0·38023
Apr.	28	15	7	59·2	6·0506	28	{ 16 8 16 5	54·4 54·9	11 35·5 5 15·8	0·38001
May	19	9	39	49·3	6·0258	19	{ 10 33 10 30	50·5 50·0	11 37·1 5 15·9	0·37969
June	16	11	27	65·0	6·0335	16	{ 12 35 12 30	67·0 67·0	11 34·1 5 14·7	0·37967
July	17	9	42	65·6	6·0360	17	{ 10 38 10 38	66·0 66·0	11 36·4 5 15·4	0·38013
Aug.	13	9	59	63·4	6·0396	13	{ 11 14 11 35	68·0 68·0	11 37·1 5 15·5	0·38013
Sept.	14	9	51	55·6	6·0318	14	{ 10 43 10 43	57·5 57·8	11 36·4 5 15·8	0·37982
Oct.	16	9	19	41·3	6·0200	16	{ 10 8 10 10	45·4 45·5	11 37·4 5 16·1	0·37997
Nov.	16	10	0	43·5	6·0252	16	{ 10 58 10 56	47·0 47·0	11 37·2 5 15·8	0·37991
Dec.	17	9	3	44·3	6·0320	17	{ 9 57 9 58	46·0 46·0	11 36·2 5 15·4	0·37943

MAGNETIC INTENSITY.

BRITISH UNITS.				C. G. S. UNITS		
1900	Horizontal Force.	Vertical Force.	Total Force.	Horizontal Force.	Vertical Force.	Total Force
Jan. ...	3·7538	9·7072	10·4076	0·17308	0·44757	0·47987
Feb. ..	3·7567	9·7569	10·4552	0·17321	0·44987	0·48206
Mar. ...	3·7355	9·6996	10·3940	0·17224	0·44722	0·47924
April ...	3·7617	9·7303	10·4326	0·17344	0·44867	0·48102
May ...	3·7549	9·7045	10·4055	0·17313	0·44745	0·47977
June ...	3·7596	9·7055	10·4081	0·17335	0·44749	0·47989
July ..	3·7538	9·6531	10·3572	0·17308	0·44508	0·47755
Aug. ...	3·7493	9·6775	10·3784	0·17287	0·44621	0·47852
Sept. ...	3·7540	9·6506	10·3550	0·17309	0·44496	0·47745
Oct. ...	3·7578	9·6876	10·3845	0·17326	0·44635	0·47880
Nov. ...	3·7581	9·7253	10·4261	0·17328	0·44841	0·48072
Dec. ...	3·7597	9·6985	10·4016	0·17335	0·44717	0·47959
Means	3·7546	9·6992	10·4005	0·17312	0·44720	0·47954

HORIZONTAL MAGNETIC DIRECTION.

Horizontal Magnetic Direction, west of north, (from daily measures of the continuous curves.)

1900	Mean of the highest daily readings.	Mean of the lowest daily readings.	Means of a and b .	Means of daily readings at 4a.m. & 4p.m.	Differences $d-c$.	Difference of a and b , or Mean daily range.	Highest reading of the month.	Lowest reading of the month.	Monthly range.
	(a)	(b)	(c)	(d)			$18^{\circ}+$	$17^{\circ}+$	
January	17.4	5.5	11.5	13.1	1.6	11.9	27.4	40.4	47.0
February	16.4	7.7	12.1	12.3	.2	8.7	21.4	49.4	32.0
March	18.6	5.6	12.1	12.5	.4	13.0	31.4	51.4	40.0
April	16.4	6.1	11.3	11.7	.4	10.3	18.4	62.2	16.2
May	16.2	4.6	10.4	10.2	-.2	11.6	55.4	58.4	57.0
June	14.8	4.2	9.5	9.8	.3	10.6	16.7	61.9	14.8
July	14.1	3.5	8.8	9.0	.2	10.6	16.4	57.4	19.0
August	14.7	3.4	9.1	8.2	-.9	11.3	20.4	56.4	24.0
September	13.3	4.1	8.7	7.6	-1.1	9.2	18.9	59.7	19.2
October	12.9	4.1	8.5	8.4	-.1	8.8	21.7	58.4	23.3
November	10.7	5.0	7.9	8.2	.3	5.7	11.8	60.4	11.4
December	10.6	5.2	7.9	8.5	.6	5.4	15.7	56.4	19.3
Means ..	14.7	4.9	9.8	10.0	.2	9.8	23.0	56.0	26.9

Correction for diurnal range

-0.3

Mean for the year

$18^{\circ} 9' .7$

HORIZONTAL MAGNETIC FORCE.

Horizontal Magnetic Force in C. G. S. units (from daily measures of the continuous curves.)

The figures in the columns are entered to the unit 10⁻⁵ C. G. S.

1900.	Mean of the highest daily readings. (a)	Mean of the lowest daily readings. (b)	Means of a and b. (c)	Means of daily readings 4a.m. & 4p.m. (d)	Differences a-c	Differences of a and b or Mean daily Range.	Highest reading of the Month.	Lowest reading of the Month.	Monthly Range.
		17000 +	(c)	(d)	d-c	0 +	17000 +	17000 +	0 +
January -	345	298	322	320	-2	47	355	218	137
February -	335	303	319	320	1	32	374	260	114
March -	328	288	313	321	8	50	379	215	164
April -	346	300	323	333	10	46	375	290	85
May -	358	300	329	336	7	58	370	225	345
June -	361	310	336	346	10	51	398	298	100
July -	358	310	334	343	9	48	395	283	112
August -	352	304	328	345	17	48	390	278	112
September -	347	308	328	334	6	39	358	295	63
October -	344	308	326	335	9	36	364	270	94
November -	342	319	331	334	3	23	354	295	59
December -	341	323	332	334	2	18	350	200	50
Means -	347	306	326	333	7	41	389	269	120

Correction for diurnal range

— 00003

Mean Horizontal Force for the year 0-17330 C. G. S. units.

DATES OF MAGNETIC DISTURBANCES, 1900.

The disturbances are divided generally into three classes, *small*, *moderate*, and *greater*; these are indicated by the initial letters of the classes, and the letter c denotes *calm*. Very great disturbances are marked *vg*. The days are reckoned astronomically from noon to noon.

Month.	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	
Day 1	c	c	m	c	s	c	c	s	c	c	s	s	
2	c	c	s	c	s	s	c	s	c	c	s	c	
3	c	c	s	c	s	s	c	s	c	c	s	c	
4	c	m	c	s	H	c	c	c	s	c	c	c	
5	m	c	c	s	s	s	c	c	s	c	c	c	
6	c	c	c	c	s	s	c	s	c	c	c	c	
7	c	c	c	c	c	c	c	s	c	c	c	c	
8	c	s	H	s	c	s	c	s	c	c	c	c	
9	c	s	H	s	c	c	c	c	c	c	c	s	
10	s	s	c	s	c	c	c	c	c	s	c	s	
11	s	s	c	s	c	c	c	c	c	c	c	s	
12	s	s	m	s	s	s	c	s	c	c	s	c	
13	s	c	g	s	c	s	c	s	s	c	s	c	
14	m	s	s	s	c	c	c	c	e	c	c	c	
15	m	s	s	s	c	c	c	c	e	c	c	c	
16	s	c	c	s	c	c	s	s	s	c	c	c	
17	s	c	c	s	c	c	c	c	c	c	c	c	
18	s	c	s	s	s	c	c	s	c	c	s	c	
19	m	c	c	c	c	c	s	s	c	c	c	c	
20	m	c	c	c	c	c	s	s	c	c	c	c	
21	c	c	c	c	c	c	c	s	c	c	c	c	
22	s	c	c	c	c	c	c	c	s	c	c	c	
23	c	s	s	s	c	c	c	c	c	c	c	c	
24	s	s	c	c	c	c	m	c	c	s	c	c	
25	s	s	s	c	c	c	m	s	c	m	c	c	
26	m	s	c	s	c	c	s	c	c	s	c	s	
27	s	s	c	s	c	s	c	s	s	s	c	m	
28	s	c	c	c	s	s	s	s	s	c	c	s	
29	s		s	s	s	s	s	c	s	c	c	c	
30	c		s	s	s	c	c	c	c	s	c	c	
31	c		s		c		s	c		c		c	
Totals	c s m g vg	12 13 6 0 0	14 13 1 0 0	15 11 4 1 0	10 20 0 1 0	20 9 1 1 0	19 11 0 0 0	21 8 2 0 0	16 15 0 0 0	21 9 0 0 0	23 7 1 0 0	24 6 0 0 0	25 5 1 0 0

The figures express, in decimals of a day, the Greenwich Civil time at which the drawing was made.

1900.	January	February	March	April	May	June	July	August	September	October	November	December
1	.48	.42		.84		.88	.42	.40	.55	.48	.88	
2		.42	.58	.88		.45	.71		.52	.34		
3				.68		.88		.38				
4	.44					.88	.42					
5		.42				.50						
6					.58	.40	.44	.34	.46	.48	.39	.41
7	.45	.51		.68		.40	.40		.44	.46		.48
8	.55			.42		.46	.38	.38	.48	.40	.41	.43
9	.42		.51			.38	.38	.69	.37	.84	.44	
10			.44			.46		.52	.39			
11		.51	.39			.46		.36	.48	.40		
12		.52	.51		.65		.40	.47	.34	.42		
13		.53	.43		.50		.75	.37	.51	.52		
14					.41	.45		.47				
15		.67	.86		.42	.42	.75	.37				
16					.48	.38	.37		.53	.85	.54	.44
17					.32		.41		.39	.44	.43	
18					.44	.49	.34	.66		.45		
19		.53		.58		.51			.53	.38		
20				.58		.46			.39			
21		.45		.58		.53	.42	.37	.47			
22		.42			.41	.42	.62		.40			
23				.59	.48	.42	.51					
24				.62	.54	.42	.48					
25			.48		.36	.43	.38 & .68	.50		.48		
26			.46		.40	.52	.46		.49	.47		
27			.34		.72		.48		.47	.37	.38	.47
28			.66			.43			.49		.38	
29			.38			.52			.47		.45	
30			.58									
31	.42		.34				.46		.47			.47

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APPENDIX

RESULTS

OF

METEOROLOGICAL OBSERVATIONS

TAKEN AT

ST. IGNATIUS' COLLEGE, MALTA

BY THE

REV. J. F. DOBSON, S.J.

1900.

ST. IGNATIUS' COLLEGE, MALTA.

Lat. 35° 55' N.

Long. 14° 29' E.

Barometer Readings reduced to 32° F. at sea level.

METEOROLOGICAL REPORT. JANUARY, 1900.

Results of Observations taken during the Month	Mean for the last 17 years	
Mean Reading of the Barometer . . . inches	29·958	30·057
Highest „ on the 1st „	30·364	30·428
Lowest „ on the 13th „	29·496	29·585
Range of Barometer Readings „	0·868	0·843
Highest Reading of a Max. Ther. on the 2nd...	67·7	65·0
Lowest Reading of a Min. Therm. on the 14th	41·2	41·4
Range of Thermometer Readings	26·5	23·6
Greatest Range in 24 hours on the 14th	14·8	18·4
Mean of all the Highest Readings	60·2	59·2
Mean of all the Lowest Readings	50·7	48·6
Mean Daily Range.....	9·5	10·6
Mean Temperature (deduced from Max. & Min.)	54·8	53·2
Mean Temperature (deduced from Dry Bulb)	55·8	53·0
Adopted Mean Temperature	55·3	53·1
Mean Temperature of Evaporation	51·2	48·7
Mean Temperature of Dew Point	48·0	45·6
Mean elastic force of Vapour .....inches	0·335	0·306
Mean weight of Vapour in a cub. ft. of air grains	3·8	3·5
Mean additional weight required for saturation,,	1·0	0·9
Mean degree of Humidity	78	80
Mean weight of a cubic foot of air ...grains	537·4	542·3
Fall of Rain	5·509	3·349
Number of days on which rain fell.....	15	13
Mean amount of Cloud (an overcast sky=10)	4·7	5·3
Total number of miles of wind indicated.....	10080	8361
Mean Velocity of Wind per hour.....miles...	13·8	11·2

ST. IGNATIUS' COLLEGE, MALTA.
FEBRUARY, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.	
Mean Reading of the Barometer.....inches	29·969	30·041
Highest ,, on the 25th ,,	30·385	30·348
Lowest ,, on the 2nd ,,	29·680	29·628
Range of Barometer Readings..... ,,	0·655	0·730
Highest Reading of Max. Therm. on the 14th	73·3	66·7
Lowest Reading of a Min. Therm. on the 1st	43·5	41·5
Range of Thermometer Readings	29·8	25·2
Greatest Range in 24 hours on the 1st	19·0	19·2
Mean of all the Highest Readings.....	68·0	60·3
Mean of all the Lowest Readings	50·3	49·4
Mean Daily Range.....	12·7	10·9
Mean Temperature (deduced from Max. & Min.)	55·7	53·8
Mean Temperature (deduced from Dry Bulb)	57·0	54·1
Adopted Mean Temperature	56·3	54·0
Mean Temperature of Evaporation	51·9	49·7
Mean Temperature of Dew Point	48·7	46·9
Mean elastic force of Vapour .....inches	0·344	0·322
Mean weight of Vapour in a cub.ft. of air grains	3·9	3·6
Mean additional weight required for saturation,,	1·1	0·8
Mean degree of Humidity	79	82
Mean weight of a cubic foot of air....grains	536·7	541·0
Fall of rain	1·041	2·013
Number of days on which rain fell.....	8	9
Mean amount of Cloud (an overcast sky =10)	2·8	5·0
Total number of miles of wind indicated	8960	7933
Mean Velocity of Wind per hour	13·3	11·8

ST. IGNATIUS' COLLEGE, MALTA.
MARCH, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years
Mean Reading of the Barometer.....inches 29·984	29·990
Highest " on the 10th ,, 30·546	30·341
Lowest " on the 17th ,, 29·588	29·521
Range of Barometer Readings ,, 0·958	0·820
Highest Reading of a Max. Therm. on the 28th 71·7	74·2
Lowest Reading of a Min. Therm. on the 12th 41·8	43·4
Range of Thermometer Readings 29·9	30·8
Greatest Range in 24 hours on the 12th 19·6	22·4
Mean of all the Highest Readings..... 62·4	63·3
Mean of all the Lowest Readings 49·8	51·0
Mean Daily Range 12·6	12·3
Mean Temperature (deduced from Max. & Min.) 55·4	56·4
Mean Temperature (deduced from Dry Bulb) 54·6	55·4
Adopted Mean Temperature 55·0	55·9
Mean Temperature of Evaporation 50·1	51·8
Mean Temperature of Dew Point 45·9	48·7
Mean elastic force of Vapour 0·309	0·344
Mean weight of Vapour in a cub.ft. of air grains 3·5	3·8
Mean additional weight required for saturation,, 1·2	1·1
Mean degree of Humidity 73	79
Mean weight of a cubic foot of air.... grains 538·1	537·2
Fall of rain..... inches 1·085	1·029
Number of days on which Rain fell 7	7
Mean amount of Cloud (an overcast sky=10) 4·0	4·5
Total number of miles of wind indicated.... 8035	8173
Mean Velocity of Wind per hour 10·8	10·9

ST. IGNATIUS' COLLEGE, MALTA.

APRIL, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.	
Mean Reading of the Barometer.....inches	30·011	29·954
Highest ,, on the 16th ,,	30·362	30·262
Lowest ,, on the 9th ,,	29·641	29·553
Range of Barometer Readings..... ,,	0·721	0·709
Highest Reading of a Max. Therm.on the 29th	75·9	76·6
Lowest Reading of a Min. Therm. on the 3rd	45·4	47·9
Range of Thermometer Readings	33·2	28·7
Greatest Range in 24 hours on the 5th	19·0	21·6
Mean of all the Highest Readings.....	65·6	67·8
Mean of all the Lowest Readings.....	52·4	54·8
Mean Daily Range	13·2	13·0
Mean Temperature (deduced from Max. & Min.)	58·2	59·8
Mean Temperature (deduced from Dry Bulb.)	58·0	59·4
Adopted Mean Temperature	58·1	59·6
Mean Temperature of Evaporation	54·4	55·6
Mean Temperature of Dew Point.....	51·2	52·2
Mean elastic force of Vapour.....inches	0·377	0·291
Mean weight of Vapour in a cub.ft.of air grains	4·2	4·4
Mean additional weight required for saturation,,	1·2	1·4
Mean degree of Humidity	78	78
Mean weight of a cubic foot of air .. grains	536·1	531·9
Fall of Rain	inches 2·180	0·989
Number of Days on which rain fell	9	6
Mean amount of Cloud (an overcast sky=10)	2·6	4·6
Total number of miles of wind indicated....	7609	8419
Mean Velocity of Wind per hour.....miles	10·6	11·8

ST. IGNATIUS' COLLEGE, MALTA.

MAY, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.	
Mean Reading of the Barometer inches	29.951	29.981
Highest ,, on the 6th ,,	30.184	30.181
Lowest ,, on the 14th ,,	29.673	29.632
Range of Barometer Readings	0.511	0.549
Highest Reading of a Max. Therm. on the 25th	80.4	81.8
Lowest Reading of a Min. Therm. on the 7th	55.4	55.3
Range of Thermometer Readings	25.0	28.5
Greatest Range in 24 hours on the 25th	24.7	23.3
Mean of all the Highest Readings	72.3	72.6
Mean of all the Lowest Readings	59.1	58.5
Mean Daily Range	13.2	14.1
Mean Temperature (deduced from Max. & Min.)	65.6	64.4
Mean Temperature (deduced from Dry Bulb)	64.1	63.9
Adopted Mean Temperature	64.9	64.2
Mean Temperature of Evaporation	60.8	60.1
Mean Temperature of Dew Point	57.4	56.5
Mean elastic force of Vapour inches	0.472	0.457
Mean weight of Vapour in a cub.ft. of air grains	5.2	5.0
Mean additional weight required for saturation,,	1.5	1.7
Mean degree of Humidity	78	76
Mean weight of a cubic foot of air grains	525.7	526.9
Fall of Rain. inches	0.549	0.633
Number of days on which Rain fell	2	3
Mean amount of Cloud (an overcast sky = 10)	2.1	3.9
Total number of miles of wind indicated. . . .	8254	7452
Mean Velocity of Wind per hour miles	11.1	10.0

ST. IGNATIUS' COLLEGE, MALTA.

JUNE, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.
Mean Reading of the Barometer.....inches 30·009	30·017
Highest „ on the 14th „ 30·181	30·175
Lowest „ on the 4th „ 29·688	29·800
Range of Barometer Readings „ 0·493	0·375
Highest Reading of a Max. Therm. on the 27th 94·0	90·6
Lowest Reading of a Min. Therm. on the 5th 56·7	58·4
Range of Thermometer Readings 37·3	32·2
Greatest Range in 24 hours on the 27th..... 23·6	25·3
Mean of all the Highest Readings 80·7	80·7
Mean of all the Lowest Readings 64·9	64·8
Mean Daily Range..... 15·8	15·9
Mean Temperature (deduced from Max. & Min.) 72·1	72·0
Mean Temperature (deduced from Dry Bulb) 71·4	71·2
Adopted Mean Temperature 71·8	71·6
Mean Temperature of Evaporation 66·3	66·0
Mean Temperature of Dew Point 62·2	61·8
Mean elastic force of Vapour .....inches 0·560	0·552
Mean weight of Vapour in a cub.ft. of air grains 6·0	6·0
Mean additional weight required for saturation,, 2·4	2·4
Mean degree of Humidity..... 72	72
Mean weight of cubic foot of air grains 519·2	519·7
Fall of Rain.....inches 0·379	0·089
Number of days on which Rain fell 4	1
Mean amount of Cloud (an overcast sky=10) 1·9	2·2
Total number of miles of wind indicated.... 5526	6302
Mean Velocity of Wind per hour miles 7·7	8·8

ST. IGNATIUS' COLLEGE, MALTA.
JULY, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years	
Mean Reading of the Barometer inches	30·025	30·005
Highest ,, on the 17th ,,	30·216	30·143
Lowest ,, on the 14th ,,	29·871	29·836
Range of Barometer Readings ,,	0·345	0·307
Highest Reading of a Max. Therm. on the 4th	92·1	97·6
Lowest Reading of a Min. Therm. on the 12th	59·1	64·4
Range of Thermometer Readings	33·0	33·2
Greatest Range in 24 hours on the 4th	25·3	26·7
Mean of all the Highest Readings	88·0	86·8
Mean of all the Lowest Readings	70·6	69·7
Mean Daily Range	17·4	17·1
Mean Temperature (deduced from Max. & Min.)	78·8	77·8
Mean Temperature (deduced from Dry Bulb)	78·3	76·8
Adopted Mean Temperature	78·6	77·3
Mean Temperature of Evaporation	72·7	70·2
Mean Temperature of Dew Point	68·4	65·6
Mean elastic force of Vapour inches	0·694	0·631
Mean weight of Vapour in a cub. ft. of air grains	7·5	6·7
Mean additional weight required for saturation,,	3·0	3·4
Mean degree of Humidity	70	67
Mean weight of a cubic foot of air . . grains	484·7	513·4
Fall of Rain inches	0·0	1
Number of days on which Rain fell	0	1
Mean amount of Cloud (an overcast sky = 10)	0·8	0·9
Total number of miles of wind indicated.....	5849	5709
Mean Velocity of Wind per hour..... miles	7·9	7·7

ST. IGNATIUS' COLLEGE, MALTA.

AUGUST, 1900.

Results of Observations taken during the Month.		Mean for the last 17 years.
Mean Reading of the Barometer inches	29·975	30·015
Highest „ on the 28th „	30·075	30·162
Lowest „ on the 4th „	29·836	29·869
Range of Barometer Readings „	0·239	0·293
Highest Reading of a Max. Therm on the 27th	89·7	96·0
Lowest Reading of a Min. Therm. on the 17th	64·3	65·5
Range of Thermometer Readings	25·4	30·5
Greatest Range in 24 hours on the 28th	22·0	25·4
Mean of all the Highest Readings	84·9	87·0
Mean of all the Lowest Readings	70·7	70·8
Mean Daily Range	14·2	16·2
Mean Temperature (deduced from Max. & Min.)	77·0	78·1
Mean Temperature (deduced from Dry Bulb)	76·4	77·9
Adopted Mean Temperature	76·7	78·0
Mean Temperature of Evaporation	72·0	71·3
Mean Temperature of Dew Point	68·8	66·8
Mean elastic force of Vapour inches	0·704	0·656
Mean weight of Vapour in a cub. ft. of air grains	7·6	7·0
Mean additional weight required for saturation.,	2·3	3·3
Mean degree of Humidity	77	68
Mean weight of a cubic foot of air grains	513·0	512·6
Fall of Rain inches	0·022	0·085
Number of days on which Rain fell	1	1
Mean amount of Cloud (an overcast sky=10)	1·3	1·1
Total number of miles of wind indicated	6783	5368
Mean Velocity of Wind per hour miles	9·1	7·2

ST. IGNATIUS' COLLEGE, MALTA.
SEPTEMBER, 1900.

Result of Observations taken during the Month.	Mean for the last 17 years.
Mean Reading of the Barometer inches 30·150	30·058
Highest " on the 15th " 30·320	30·246
Lowest " on the 11th " 30·026	29·828
Range of Barometer Readings " 0·294	0·418
Highest Reading of a Max. Therm. on the 10th 92·4	92·6
Lowest Reading of a Min. Therm. on the 26th 63·8	62·8
Range of Thermometer Readings 28·6	29·8
Greatest Range in 24 hours on the 26th 20·3	23·6
Mean of all the Highest Readings 83·3	83·4
Mean of all the Lowest Readings 68·7	68·9
Mean Daily Range 14·6	14·5
Mean Temperature (deduced from Max. & Min.) 75·1	75·3
Mean Temperature (deduced from Dry Bulb) 74·5	74·7
Adopted Mean Temperature 74·8	75·0
Mean Temperature of Evaporation 70·3	69·3
Mean Temperature of Dew Point 67·1	65·6
Mean elastic force of Vapour inches 0·664	0·626
Mean weight of Vapour in a cub. ft. of air grains 7·2	6·8
Mean additional weight required for saturation,, 2·1	2·6
Mean degree of Humidity 77	73
Mean weight of a cubic foot of air grains 518·1	516·8
Fall of rain inches 0·100	1·090
Number of Days on which rain fell 1	4
Mean amount of Cloud (an overcast sky=10) 3·1	2·4
Total number of miles of wind indicated . . . 4975	5571
Mean Velocity of Wind per hour miles 6·9	7·7

ST. IGNATIUS' COLLEGE, MALTA.
OCTOBER, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.	
Mean Reading of the Barometer inches	30·106	30·048
Highest " on the 31st " "	30·325	30·269
Lowest " on the 19th " "	29·898	29·748
Range of Barometer Readings..... "	0·427	0·521
Highest Reading of a Max. Therm. on the 23rd	91·3	87·2
Lowest Reading of a Min. Therm. on the 31st	60·3	55·9
Range of Thermometer Readings	31·0	31·3
Greatest Range in 24 hours on the 3rd	22·5	19·5
Mean of all the Highest Readings.....	81·7	76·7
Mean of all the Lowest Readings	67·3	64·5
Mean Daily Range.....	14·4	12·2
Mean Temperature (deduced from Max. & Min.)	73·4	69·8
Mean Temperature (deduced from Dry Bulb)	72·3	68·9
Adopted Mean Temperature	72·8	69·4
Mean Temperature of Evaporation	68·0	64·7
Mean Temperature of Dew Point	64·9	61·2
Mean elastic force of Vapour	0·615	0·546
Mean weight of Vapour in a cub. ft. of air grains	6·7	5·9
Mean additional weight required for saturation.,	1·8	1·7
Mean degree of Humidity	78	77
Mean weight of a cubic foot of air.... grains	520·3	523·1
Fall of Rain..... inches	0·600	3·075
Number of days on which Rain fell	1	7
Mean amount of Cloud (an overcast sky = 10)	2·8	4·2
Total number of miles of wind indicated....	6000	6625
Mean Velocity of Wind per hour..... miles	8·1	8·9

ST. IGNATIUS' COLLEGE, MALTA.
NOVEMBER, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years.	
Mean Reading of the Barometer inches	29·980	30·0·2
Highest " on the 1st "	30·317	30·322
Lowest " on the 13th "	29·498	29·703
Range of Barometer Readings "	0·819	0·619
Highest Reading of a Max. Therm. on the 5th	77·4	76·8
Lowest Reading of a Min. Therm. on the 28th	51·7	50·2
Range of Thermometer Readings "	25·7	26·7
Greatest Range in 24 hours on the 2nd.	16 7	18·3
Mean of all the Highest Readings "	71·7	68·9
Mean of all the Lowest Readings "	59·0	57·9
Mean Daily Range.	12·1	11 0
Mean Temperature (deduced from Max. & Min.)	64·0	62·5
Mean Temperature (deduced from Dry Bulb)	63·3	61·9
Adopted Mean Temperature "	63·7	62·2
Mean Temperature of Evaporation "	59·9	57·7
Mean Temperature of Dew Point "	57·4	54·4
Mean elastic force of Vapour "	0·472	0·424
Mean weight of Vapour in a cub.ft. of air grains	5·3	4·8
Mean additional weight required for saturation, ..	1·1	1·3
Mean degree of Humidity "	83	80
Mean weight of a cubic foot of air "	528·4	531·9
Fall of Rain "	3·640	3·323
Number of days on which Rain fell "	13	11
Mean amount of Cloud (an overcast sky=10)	3·5	5·2
Total number of miles of wind indicated. . . .	7435	6638
Mean Velocity of Wind per hour "	10·3	9·3

ST. IGNATIUS' COLLEGE, MALTA.
DECEMBER, 1900.

Results of Observations taken during the Month.	Mean for the last 17 years	
Mean Reading of the Barometer inches	30.136	30.046
Highest " on the 15th "	30.465	30.402
Lowest " on the 1st "	29.642	29.581
Range of Barometer Readings..... "	0.823	0.821
Highest Reading of a Max. Therm. on the 7th	64.6	68.4
Lowest Reading of a Min. Therm. on the 16th	45.3	43.9
Range of Thermometer Readings	19.3	24.5
Greatest Range in 24 hours on the 16th.....	16.2	17.5
Mean of all the Highest Readings	62.6	61.8
Mean of all the Lowest Readings	52.2	52.2
Mean Daily Range.....	10.4	9.6
Mean Temperature (deduced from Max. & Min.)	56.7	56.4
Mean Temperature (deduced from Dry Bulb)	56.2	56.1
Adopted Mean Temperature	56.5	56.8
Mean Temperature of Evaporation	53.0	52.0
Mean Temperature of Dew Point	50.6	48.8
Mean Elastic force of Vapour inches	0.369	0.345
Mean weight of Vapour in a cubic ft. of air grains	4.2	3.9
Mean additional weight required for saturation,,	0.8	1.1
Mean degree of Humidity	85	79
Mean weight of a cubic foot of air grains	589.4	538.4
Fall of Rain	1.240	4.400
Number of days on which Rain fell.....	9	15
Mean amount of Cloud (an overcast sky = 10)	2.8	5.8
Total number of miles of wind indicated	7685	8272
Mean Velocity of Wind per hour	10.3	11.2

ST. IGNATIUS' COLLEGE, MALTA.
Summary of Observations, 1900.

Results of Observations taken during the Year.	Mean for the last 17 years.
Mean Reading of the Barometer .....inches 30·021	30·027
Highest " on March 10th ,, 30·546	30·506
Lowest " on January 13th ,, 29·496	29·332
Range of Barometer Readings " 1·050	1·124
Highest Reading of a Max. Therm. on June 27th 94·0	99·1
Lowest Reading of a Min. Therm. on Jan.14th 41·2	40·5
Range of Thermometer Readings 52·8	58·6
Greatest Range in 24 hours on the 4th July.. 25·8	28·4
Mean of all the Highest Readings..... 73·0	72·5
Mean of all the Lowest Readings..... 59·6	59·3
Mean Daily Range 13·4	13·2
Mean Temperature (deduced from Max. & Min.) 65·6	65·0
Mean Temperature (deduced from Dry Bulb) 65·2	64·5
Adopted Mean Temperature 65·4	64·8
Mean Temperature of Evaporation 60·9	59·8
Mean Temperature of Dew Point 57·8	56·2
Mean elastic force of Vapour .....inches 0·479	0·453
Mean weight of Vapour in a cub. ft. of air grains 5·4	5·1
Mean additional weight required for saturation,, 1·6	1·8
Mean degree of Humidity 78	76
Mean weight of a cubic foot of air. ...grains 524·8	528·0
Total fall of rain in the year inches 16·295	20·106
Number of days on which Rain fell 70	77
Mean amount of Cloud (an overcast sky=10) 2·7	3·8
Total number of miles of wind indicated 87190	84824
Mean Velocity of Wind per hour .....miles 10·0	9·7

SINCE MAY, 1883.

The Maximum monthly mean height of the Barometer was
in January, 1898, and wasinches 30·347
The Minimum " " in January, 1886, and was 29·844

The Maximum yearly mean height of the Barometer was in 1897, and was	inches	30·058
The Minimum ,, ,, in 1890, and was.....		29·996
The greatest monthly range of the Barometer was in January, 1886, and was	inches	1·201
The least ,, ,, in August, 1883, and was ,, ..		0·188
The highest reading of the Barometer was on January 29th, 1898, and was.....	inches	30·688
The lowest ,, ,, on January 17th, 1886, and was ..		29·155
Extreme range	inches	1·488
The highest temperature was on August 11th, 1896, and was ..		104·8
The lowest ,, ,, February 19th, 1895		34·2
The highest mean temperature of a month, was in August, 1885, and was		68 2
The lowest ,, ,, ,, February, 1891 ..		49·5
The greatest monthly mean weight of vapour } in a cubic foot of air	grains } August, 1885	7·9
The least ,, January and February, 1891, and was grs		3·0
The highest observed Dew point was on August 30th, 1885, and was		78·7
The lowest ,, ,, February 19th, 1895, and was ..		27·9
The greatest fall of rain in a month was in December, 1889, and was	inches	8·952
The greatest number of days on which rain fell in one month, January, 1889.....		24
The greatest fall of rain in one year in 1898, and was inches		29·178
The smallest ,, ,, ,, 1895 ,, ..		11·384
The greatest number of rainy days in a year was in 1894 and was		90
The least ,, ,, ,, 1888 ,, ..		59
The highest temperature registered in sunshine was on the 15th July, 1897, and was.....		159·7
The lowest temperature registered on ground was on the 19th February, 1895, and was		31·7
The highest observed sea temperature was on the 5th August, 1887, and was		85·0
The lowest ,, ,, 30th January, 1895, and was ..		55·5
The smallest mean amount of cloud observed in one month was in August, 1890, and was		0·0
The greatest ,, ,, in January, 1894, and was ..		7·2

ST. IGNATIUS' COLLEGE, MALTA.

NOTES FOR THE SEPARATE MONTHS.

JANUARY.

THE Dew-point ranged between $59\cdot6^{\circ}$ on the 1st, and $36\cdot3^{\circ}$ on the 30th.

In Sunshine, the highest reading was $114\cdot4^{\circ}$ on the 16th, 17th, 18th, and 22nd.

On Ground, the lowest reading was $39\cdot8^{\circ}$ on the 16th

The Sea has averaged $65\cdot0^{\circ}$.

Thunderstorms passed on the 12th, 13th, and 20th.

Lightning was seen on the 9th, 10th, 14th, and 21st.

Hail fell on the 8th, 12th, 13th, 20th, and 21st.

Total Rainfall since last June, 18·908 inches; the average of 17 years, 15·354 inches.

FEBRUARY.

Dew-point ranged between $55\cdot3^{\circ}$ on the 2nd, and $40\cdot7^{\circ}$ on the 22nd.

In Sunshine, the highest reading was $131\cdot7^{\circ}$ on the 14th.

On Ground, the lowest reading was $38\cdot6^{\circ}$ on the 1st.

The Sea has averaged $60\cdot0^{\circ}$.

Hail fell on the 15th and 18th.

Total Rainfall since last June, 19·944 inches; the average of 17 years, 17·367 inches.

MARCH.

Dew point ranged between $32\cdot0^{\circ}$ on the 16th, and $58\cdot2^{\circ}$ on the 28th.

In Sunshine, the highest reading was $133\cdot7^{\circ}$ on the 31st.

On Ground, the lowest reading was $36\cdot1^{\circ}$ on the 12th.

The Sea has averaged $61\cdot4^{\circ}$.

Thunderstorms passed on the 6th and 18th.

Lightning was seen on the 5th and 28th.

Hail fell on the 5th, 7th, and 18th.

Total Rainfall since last June, 20·979 inches; the average of 17 years, 18·396 inches.

ST. IGNATIUS' COLLEGE, MALTA.

APRIL.

Dew-point ranged between $41\cdot2^{\circ}$ on the 2nd, and $59\cdot1^{\circ}$ on the 30th.

In Sunshine, the highest reading was $139\cdot5$ on the 13th.

On Ground, the lowest reading was $42\cdot5^{\circ}$ on the 3rd.

The Sea has averaged $62\cdot2^{\circ}$.

Thunderstorms passed on the 2nd, 3rd, 7th, 10th, and 11th.

Lightning was seen on the 1st and 20th.

Hail fell on the 2nd, 7th, and 10th.

Total Rainfall since last June, $23\cdot159$ inches ; the average of 17 years, $19\cdot885$ inches.

MAY.

Dew-point ranged between $63\cdot2^{\circ}$ on the 21st, and $50\cdot0^{\circ}$ on the 10th.

In Sunshine, the highest reading was $138\cdot5^{\circ}$ on the 8th.

On Ground, the lowest reading was $49\cdot8^{\circ}$ on the 7th.

The Sea has averaged $68\cdot0^{\circ}$.

Thunderstorms passed on the 2nd, 3rd, 15th, and 28th.

Lightning was seen on the 17th and 23rd.

Total Rainfall since last June, $23\cdot708$ inches ; the average of 17 years, $20\cdot018$ inches.

JUNE.

Dew-point ranged between $51\cdot0^{\circ}$ on the 1st, and $72\cdot9^{\circ}$ on the 28th.

In Sunshine, the highest reading was $146\cdot9^{\circ}$ on the 29th.

On Ground, the lowest reading was $54\cdot2^{\circ}$ on the 10th.

The Sea has averaged $72\cdot3^{\circ}$.

Thunderstorms passed on the 5th and 29th.

Lightning was seen on the 4th.

Total Rainfall since last June $24\cdot087$ inches ; the average of 17 years, $20\cdot107$ inches.

JULY.

Dew-point ranged between $53\cdot4^{\circ}$ on the 9th, and $73\cdot0^{\circ}$ on the 27th.

In Sunshine, the highest reading was $149\cdot0^{\circ}$ on the 5th.

On Ground, the lowest reading was $53\cdot0^{\circ}$ on the 12th.

The sea has averaged $77\cdot0^{\circ}$.

Lightning was seen on the 1st, 18th, and 18th.

AUGUST.

Dew point ranged between $60\cdot0^{\circ}$ on the 13th, and $76\cdot1^{\circ}$ on the 25th.

In Sunshine, the highest reading was $148\cdot2^{\circ}$ on the 2nd.

On Ground, the lowest reading was $62\cdot0^{\circ}$ on the 28th.

The Sea has averaged $78\cdot6^{\circ}$.

Thunderstorms passed on the 19th.

Lightning was seen on the 17th.

Total Rainfall since last June $0\cdot022$ inches ; the average of 17 years, $0\cdot117$ inches.

SEPTEMBER.

Dew-point ranged between $75\cdot2^{\circ}$, on the 10th, and $56\cdot0^{\circ}$ on the 13th.

In Sunshine, the highest reading was $148\cdot4^{\circ}$ on the 7th.

On Ground, the lowest reading was $59\cdot0^{\circ}$ on the 26th.

The Sea has averaged $77\cdot4^{\circ}$.

Thunderstorms passed on the 4th and 15th.

Lightning was seen on the 19th.

Total Rainfall since last June, $0\cdot122$ inches ; the average of 17 years, $1\cdot207$ inches.

OCTOBER.

Dew-point ranged between $73\cdot9^{\circ}$ on the 21st, and $57\cdot7^{\circ}$ on the 29th.

In Sunshine, the highest reading was $189\cdot4^{\circ}$ on the 3rd.

On Ground, the lowest reading was $51\cdot2^{\circ}$ on the 31st.

The Sea has averaged $76\cdot3^{\circ}$.

Thunderstorms passed on the 8th and 9th.

Total Rainfall since last June $0\cdot722$ inches ; the average of 17 years, $4\cdot282$ inches.

NOVEMBER.

Dew-point ranged between $68\cdot4^{\circ}$ on the 20th, and $45\cdot6^{\circ}$ on the 30th.

In Sunshine, the highest reading was $131\cdot1^{\circ}$ on the 2nd.

On Ground, the lowest reading was $49\cdot0$ on the 13th.

The Sea has averaged $70\cdot9^{\circ}$.

Thunderstorms passed on the 5th, 8th, 10th, 11th, 12th, 13th and 20th.

Lightning was seen on the 2nd, 4th, 16th and 22nd.

Total Rainfall since last June $4\cdot862$ inches; the average of 17 years, $7\cdot605$ inches.

DECEMBER.

Dew-point ranged between $59\cdot7^{\circ}$ on the 6th, and $45\cdot4^{\circ}$ on the 18th.

In Sunshine, the highest reading was $122\cdot0^{\circ}$ on the 3rd.

On Ground, the lowest reading was $42\cdot8^{\circ}$ on the 16th.

The Sea has averaged $63\cdot7^{\circ}$.

Thunderstorms passed on the 8th.

Lightning was seen on the 3rd.

Hail fell on the 2nd.

Total Rainfall since last June $5\cdot602$ inches; the average of 17 years, $12\cdot005$ inches.

NOTES FOR THE YEAR.

Dew-point ranged between $32\cdot0^{\circ}$ on the 16th March, and $76\cdot1^{\circ}$ on the 25th August.

In Sunshine, the highest reading was $149\cdot0^{\circ}$ on the 5th July.

On Ground, the lowest reading was $36\cdot1^{\circ}$ on the 12th March.

The Sea has averaged $69\cdot2^{\circ}$.

Thunderstorms passed on 29 days.

Lightning was seen on 21 days.

Hail fell on 14 days.

Erratum Corrigendum—

February, 1899.

Mean Temperature of Evaporation—for $55\cdot5^{\circ}$ read $51\cdot5^{\circ}$.

J. F. DOBSON, S.J.