

STONYHURST COLLEGE
OBSERVATORY

RESULTS

OF

METEOROLOGICAL & MAGNETICAL
OBSERVATIONS

WITH REPORT AND NOTES OF THE DIRECTOR,

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

1901.

CLITHEROE :

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1902.

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III.

REPORT AND NOTES.

THE total rainfall of the year was 8 inches below the average; which was a loss of 17 per cent. to the annual water supply. But the scarcity felt in the autumn was the result of the greater loss of 10.4 inches between May 1st and September 30th, which is over 50 per cent. of the average fall in this period. Two heavy rainfalls in October, on the 5th and 8th, brought up the amount in this month to the average. In November an excess of over $3\frac{3}{4}$ inches, or 87 per cent. of its average, fell on two days, the 11th and 12th; and the total fall on this month was 8.19 inches in 11 days. In December 5.7 inches of rain fell on 25 days. The total fall in the year was just under 39 inches; and of this amount 15 inches fell on 13 days.

The mean temperature of the year was very nearly the annual average. The relatively warmer months were April, May, July, and September. July was the warmest month, at a mean temperature $5^{\circ}.3$ above the average. The shade temperature reached 80° and over on 9 days, and just touched 89° on the 20th, which is the highest recorded at Stonyhurst.

IV.

The mean barometric pressure of the year was about the average. In the rainy month of December the pressure was generally low; less than 29 inches on 10 days, and never up to 30 inches, the mean height being 0.29 inch below the month's average.

Strong winds at 37 miles per hour and over, were recorded on 14 days—January 26th, 27th, 28th, March 2nd, April 2nd, 4th, October 6th, 18th, November 19th, 20th,, December 6th, 8th, 9th, 23rd—all with low barometric pressure, except on November 19th and December 6th when the readings were close upon the annual average. The strongest of these gales was at 53 miles per hour on December 23rd.

The special observations of clouds and wind, in connection with the meteorological balloon ascents have been sent every month to the International Meteorological Committee through the London Meteorological Office; and quarterly statements of Magnetic calm days have been sent to the same Committee through the Secretary of the Magnetic Section at Upsal.

The solar surface drawings during the year number, technically 235 on as many days, including 91 blank sheets recording a perfectly clean surface. The mean spotted disc-area, deduced from these, is 0.29 (the unit being 1-5000 of the visible disc) against 0.55 of the preceding year. And the mean daily range of the Magnetic Declination is 9'.1 against 9'.7 of the preceding year.

The experiments with a small prismatic camera, mentioned in our last year's report, were completed just before the appearance of the New Star in Perseus. A detailed description of the

V.

instrument is given in the introduction to a paper on the spectrum of Nova Persei, read at the December meeting of the Royal Astronomical Society, and printed in the December Number of the Monthly Notices. 86 photographs of this spectrum have been obtained on 51 dates since February 28th. Half of these were taken before the end of April; and the other half between August 24th and December 20th. Several attempts were made in May which failed through the loss of light at the low altitude of the star.

In the intervening summer months the prismatic camera was employed on Arcturus and α Cygni for the construction of its wave-length curve; and on β Lyrae and γ Cassiopeiae for the extension of their spectra into the shorter wave-lengths.

The visual spectrum of the Nova was also observed on 15 nights in March and April, and the results are published in the Monthly Notices of the Royal Astronomical Society, May, 1901.

Other papers published during the year are as follows:—

“On the connexion between Solar Spots and Earth Magnetic Storms.”—Memoirs R. A. S. Vol. LIV.

“Notes on the spectrum of Nova Persei observed at the Stonyhurst College Observatory.”—Monthly Notices R. A. S., March.

“The Spectrum of Nova Persei, Note 2.”—Monthly Notices R. A. S., April.

“The Spectrum of Nova Persei, Note 3.”—Monthly Notices R. A. S., April.

“The Spectrum of Nova Persei, Note 4.” Monthly Notices R. A. S., May.

VI.

"The Spectrum of Nova (3.1901) Persei."—*Astronomische Nachrichten*, Vol. 155, No. 3714.

"The Spectrum of Nova (3.1901) Persei on August 24th, 27th, and September 5th."—*Astr. Nach.*, Vol. 156, No. 3741.

"The Spectrum of Nova Persei on 1901 August 27th and September 5th, compared with the spectrum in March and April."—*Astr. Nach.*, Vol. 157, No. 3756.

"Nova Persei, February 28th to April 4th."—*Astrophysical Journal*, May.

"The New Star of the New Century."—"The Observatory," May.

"The Spectrum of Nova Persei from 1901 February 28th to April 26th. With Appendix in the Spectrum in September."—*Monthly Notices R. A. S.*, December.

"On the Types of Sun-spot disturbances."—*Astrophysical Journal*, May.

"On Drift in longitude of groups of faculæ on the Sun's Surface."—*Astrophysical Journal*, December.

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, 1901.

Results of Observations taken during the Month	Mean for the last 54 years	
Mean Reading of the Barometer . . . inches	29.556	29.455
Highest .. on the 23rd ,,	30.191	30.275
Lowest .. on the 27th ,,	28.676	28.602
Range of Barometer Readings ..	1.515	1.673
Highest Reading of a Max. Therm. on the 22nd	52.0	51.4
Lowest Reading of a Min. Therm. on the 8th	23.0	20.8
Range of Thermometer Readings	29.0	30.6
Mean of all the Highest Readings	43.0	42.3
Mean of all the Lowest Readings	31.9	32.5
Mean Daily Range.....	11.1	9.8
Deduced Monthly Mean (from Mean of Max. and Min).....	37.3	37.1
Mean Temperature from Dry Bulb	38.1	37.2
Adopted Mean Temperature	37.7	37.2
Mean Temperature of Evaporation	36.0	36.0
Mean Temperature of Dew Point	33.7	33.8
Mean elastic force of Vapour .....inches	0.193	0.196
Mean weight of Vapour in a cub. ft. of air grains	2.2	2.4
Mean additional weight required for saturation,,	0.4	0.4
Mean degree of Humidity (saturation 1.00) ...	0.85	0.86
Mean weight of a cubic foot of air ...grains	551.1	549.7
Fall of Rain	2.896	4.114
Number of days on which rain fell.....	19	20.7

JANUARY, 1901.

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	1	3	6	2	3	4	11	1
Mean Velocity in miles per hour	7.5	8.6	10.2	7.0	8.6	5.7	18.9	8.9
Total No. of miles for each Direction	181	621	1462	335	618	551	4980	213

The total No. of miles registered during the month was 8961.

The max. Velocity of the wind was 49 miles per hour, W. by N. on the 27th at 4-0 p.m.

Mean amount of Cloud (an overcast sky being indicated by 10.0) 7.8

In the month of January the highest reading of the Barometer during 54 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

Least ,, ,, 1881 0.472

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 ...	...	+	0.101 inches
Monthly range ,, ...	...	—	0.158 ,,
Mean of highest temperatures ...	...	+	0.7 degrees
Mean of lowest ,, ...	...	—	0.6 ,,
Mean daily range ,, ...	...	+	1.3 ,,
Adopted mean temperature ...	...	+	0.5 ,,
Total rainfall ...	...	—	1.218 inches

Ground frost on 1st, 2nd, 4th—10th, 12th, 14th—16th, 18th, 23rd, 24th, 26th, 28th—31st. Snow on 7th, 8th, 19th, 20th, 27th, 29th and 30th. Hail on 25th and 29th. Heavy rain on 19th and 26th. Gales of wind on 26th, 27th, and 28th. Lunar halo on 1st. Fog on 2nd, 3rd, and 18th.

FEBRUARY, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years	
Mean Reading of the Barometer.....inches	29·643	29·511
Highest „ on the 15th „	30·214	30·071
Lowest „ on the 27th „	28·794	28·689
Range of Barometer Readings..... „	1·420	1·382
Highest Reading of Max. Therm. on the 27th	49·1	52·2
Lowest Reading of a Min. Therm. on the 13th	16·4	22·0
Range of Thermometer Readings	32·7	30·2
Mean of all the Highest Readings.....	41·6	44·2
Mean of all the Lowest Readings	28·6	33·3
Mean Daily Range.....	13·0	10·9
Deduced Monthly Mean (from Mean of Max. and Min).....	34·7	38·1
Mean Temperature from Dry Bulb	35·4	38·2
Adopted Mean Temperature	35·1	38·2
Mean Temperature of Evaporation	33·8	36·7
Mean Temperature of Dew Point	31·8	24·4
Mean elastic force of Vapour .....inches	0·179	0·192
Mean weight of Vapour in a cub.ft. of air grains	2·1	2·4
Mean additional weight required for saturation,,	0·3	0·4
Mean degree of Humidity (saturation 1·00)	0·87	0·87
Mean weight of a cubic foot of air....grains	555·8	549·0
Fall of rain .....inches	2·136	3·474
Number of days on which rain fell.....	19	18·1

	N	NE	E	SE	S	SW	W	NW
No. of days in the month on which the prevailing wind was	10	2	1	0	1	1	11	2
Mean Velocity in miles per hour	7·3	6·8	5·2	0	14·5	10·4	5·9	11·2
Total No. of Miles for each Direction	1743	324	124	0	347	250	1556	539

The total number of miles registered during the month was 4883.
 The max. Velocity of the wind was 28 miles per hour, W. by S.,
 on the 24th, at 4 p.m.

FEBRUARY, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0) 7·2				
In the month of February, the highest reading of the Barometer during 54 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	0·806in
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	..	..	+	0·132 inches
Monthly range	„	..	+	0·038 „
Mean of highest temperatures	..	..	—	2·6 degrees
Mean of lowest	„	..	—	4·7 „
Mean daily range	„	..	+	2·1 „
Adopted mean temperature	..	..	—	3·1 „
Total rainfall	„	..	—	1·338 inches

Ground frost on 1st—7th, 9th, 11th—22nd. Snow on 1st—4th, 6th, 13th, 17th and 18th. Hail on 1st. Fog 7th, 8th, 19th, 21st and 22nd. Lunar Halo on 25th.

MARCH, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years	
Mean Reading of the Barometer.....inches	29·349	29·464
Highest „ on the 23rd „	30·131	30·073
Lowest „ on the 2nd „	28·268	28·654
Range of Barometer Readings	1·863	1·419
Highest Reading of a Max. Therm. on the 13th	56·0	57·2
Lowest Reading of a Min. Therm. on the 28th	15·8	22·2
Range of Thermometer Readings	40·2	35·0
Mean of all the Highest Readings.....	46·3	47·3
Mean of all the Lowest Readings	31·6	33·9
Mean Daily Range	14·7	13·4
Deduced Monthly Mean (from Mean of Max. and Min.).....	38·0	39·7
Mean Temperature from Dry Bulb	39·0	39·9
Adopted Mean Temperature	38·5	39·8
Mean Temperature of Evaporation	36·2	37·9
Mean Temperature of Dew Point	33·1	35·3
Mean elastic force of Vapour	0·189	0·205
Mean weight of Vapour in a cub.ft. of air grains	2·2	2·4
Mean additional weight required for saturation,,	0·6	0·5
Mean degree of Humidity (saturation 1·00)..	0·82	0·84
Mean weight of a cubic foot of air.... grains	546·4	546·6
Fall of rain..... inches	3·495	3·267
Number of days on which Rain fell	13	17·9

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	3	5	5	0	2	3	10	3
Mean Velocity in miles per hour	10·5	11·7	9·3	0	17·1	14·0	11·6	10·3
Total No. of miles for each Direction	757	1406	1119	0	820	1006	2785	738

The total number of miles registered during the month was 8631.
 The max. Velocity of the wind was 39 miles per hour, S, on the 2nd at 2 p.m.

MARCH, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)				8·0
In the month of March, the highest reading of the Barometer during 54 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	...	—	0·115 inches
Monthly range	,, ..	..	+ 0·444 ,,
Mean of highest temperatures	...	—	1·0 degrees
Mean of lowest	,, ...	..	— 2·3 ,,
Mean daily range	,, ...	..	+ 1·3 ,,
Adopted mean temperature	... ..	..	— 1·3 ,,
Total rainfall	... ..	..	+ 0·228 inches

Ground frost on the 1st, 2nd, 4th, 9th, 13th, 16th—19th, 21st—30th. Snow on the 3rd, 18th, 19th, 25th, 26th—29th. Hail on the 5th, 25th and 30th. Heavy rain on the 2nd, 4th and 29th. Gale of Wind on the 2nd. Thunder on the 30th. Fog on the 10th and 12th.

APRIL, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years.	
Mean Reading of the Barometer..... inches	29·386	29·483
Highest " on the 17th "	29·831	29·965
Lowest " on the 15th & 16th "	28·886	28·810
Range of Barometer Readings..... "	0·945	1·155
Highest Reading of a Max. Therm. on the 22nd	73·0	66·1
Lowest Reading of a Min. Therm. on the 16th	27·6	28·0
Range of Thermometer Readings	45·4	38·1
Mean of all the Highest Readings.....	56·9	55·8
Mean of all the Lowest Readings.....	37·1	37·7
Mean Daily Range	19·8	18·1
Deduced Monthly Mean (from Mean of Max. and Min.).....	45·5	44·5
Mean Temperature from Dry Bulb.....	46·2	44·7
Adopted Mean Temperature	45·9	44·6
Mean Temperature of Evaporation	42·0	41·8
Mean Temperature of Dew Point.....	37·5	38·2
Mean elastic force of Vapour.....inches	0·226	0·236
Mean weight of Vapour in a cub.ft. of air grains	2·6	2·7
Mean additional weight required for saturation,,	1·0	0·7
Mean degree of Humidity (saturation 1·00)..	0·73	0·80
Mean weight of a cubic foot of air .. grains	538·7	542·0
Fall of Rain	2·538	2·408
Number of Days on which rain fell	17	15·9

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	2	2	3	1	6	4	11	1
Mean velocity in miles per hour	9·2	8·1	13·7	11·6	10·5	11·3	13·5	9·5
Total No. of miles for each Direction	440	387	987	278	1511	1083	3563	228

The total number of miles registered during the month was 8477.
The max. Velocity of the wind was 43 miles per hour, W.
on the 4th at noon.

APRIL, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	6·8
In the month of April, the highest reading of the Barometer during 54 years, was on the 17th, in 1887, and was	30·251
The lowest	20th, 1868
The highest Temperature	14th, 1852
The lowest	13th, 1892
The highest adopted mean temperature of the month, 1865 ...	48·5
The lowest	1879 ...
Greatest fall of rain during the month in	1867
Least	1852
Greatest number of days on which rain fell	1867
Least	1852

TABLE OF DIFFERENCES.

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

Mean barometric pressure	...	...	—	0·097 inches
Monthly range	..	...	—	0·210 ..
Mean of highest temperatures	...	...	+	1·1 degrees
Mean of lowest	..	...	—	0·6 ..
Mean daily range	..	...	+	1·7 ..
Adopted mean temperature	...	...	+	1·3 ..
Total rainfall	...	...	+	0·130 inches

Ground frost on the 2nd, 4th—9th, 12th, 13th, 17th, and 19th.
Hail on the 1st, 12th, 15th, 16th, and 27th. Gales of wind on the 2nd, and 4th. Thunder on the 14th. Lightning on the 14th.

MAY, 1901.

Results of Observations taken during the Month.		Mean for the last 54 YEARS.
Mean Reading of the Barometer	inches 29·703	29·21
Highest	„ on the 23rd „, 30·113	29·962
Lowest	„ on the 7th „, 28·776	28·941
Range of Barometer Readings	1·337	1·021
Highest Reading of a Max. Therm. on the 29th	72·0	71·9
Lowest Reading of a Min. Therm. on the 7th	35·9	31·4
Range of Thermometer Readings	36·1	40·5
Mean of all the Highest Readings	64·3	59·9
Mean of all the Lowest Readings	42·9	42·0
Mean Daily Range	21·4	17·9
Deduced Monthly Mean (from Mean of Max. and Min)	51·9	49·1
Mean Temperature from Dry Bulb	52·3	49·6
Adopted Mean Temperature	52·1	49·4
Mean Temperature of Evaporation	47·6	46·1
Mean Temperature of Dew Point	43·0	42·5
Mean elastic force of Vapour	inches 0·278	0·275
Mean weight of Vapour in a cub. ft. of air grains	3·2	3·1
Mean additional weight required for saturation,,	1·2	0·9
Mean degree of Humidity (saturated 1·00)	0·72	0·76
Mean weight of a cubic foot of air	grains 538·0	537·2
Fall of Rain.....	inches 0·818	2·596
Number of days on which Rain fell	10	15·3

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	3	8	9	1	2	1	7	0
Mean Velocity in miles per hour	5·5	8·0	8·5	4·8	18·0	9·7	6·8	
Total No. of miles for each Direction	393	1538	1843	116	864	232	1147	0

The total number of miles registered during the month was 6133
 The max. Velocity of the wind was 31 miles per hour, S. by E.
 on the 30th, at 4 p.m.

MAY, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)		5·8
In the month of May, the highest reading of the Barometer during 54 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	..	..	+	0·182 inches
Monthly range	..	..	+	0·316 "
Mean of highest temperatures	..	..	+	4·4 degrees
Mean of lowest	..	..	+	0·9 "
Mean daily range	..	..	+	3·5 "
Adopted Mean temperature	..	..	+	2·7 "
Total rainfall	..	..	—	1·778 inches

Hail on 7th. Thunder on 3rd, 29th, and 30th. Lightning on 29th.

JUNE, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years.
Mean Reading of the Barometer.....inches	29·618
Highest ,, on the 25th ,,	30·062
Lowest ,, on the 13th ,,	29·044
Range of Barometer Readings ,,	1·018
Highest Reading of a Max. Therm. on the 8 & 28	76·3
Lowest Reading of a Min. Therm. on the 9th	38·6
Range of Thermometer Readings	37·7
Mean of all the Highest Readings	66·5
Mean of all the Lowest Readings	46·0
Mean Daily Range.....	20·5
Deduced Monthly Mean (from Mean of Max. and Min.).....	55·3
Mean Temperature from Dry Bulb	54·5
Adopted Mean Temperature	54·9
Mean Temperature of Evaporation	50·6
Mean Temperature of Dew Point	46·5
Mean elastic force of Vapour .....inches	0·316
Mean weight of Vapour in a cub.ft. of air grains	3·6
Mean additional weight required for saturation,,	1·3
Mean degree of Humidity (saturation 1·00)..	0·73
Mean weight of cubic foot of air ....grains	533·1
Fall of Rain.....inches	2·087
Number of days on which Rain fell	12

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
		3	2	3	0	4	3	15	0
Mean Velocity in miles per hour	6·1	6·0	8·3	0	10·8	9·9	12·0	0
Total No. of miles for each Direction	436	289	596	0	1032	712	4310	0

The total number of miles registered during the month was 7375.
 The max. Velocity of the wind was 34 miles per hour, S. by E. on the 23rd at 9 a.m.

JUNE, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)		7·5
In the month of June, the highest reading of the Barometer during 54 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	..	+ 0·071 inches
Monthly range	..	+ 0·146 "
Mean of highest temperatures	..	+ 0·4 degrees
Mean of lowest	..	— 1·9 "
Mean daily range	..	+ 2·3 "
Adopted mean temperature	..	— 0·4 "
Total rainfall	..	— 1·416 inches

Heavy rain on 20th. Thunder on 9th.

JULY, 1901.

Results of Observations taken during the Month.		Mean for the last 54 years.
Mean Reading of the Barometer inches	29·615	29·514
Highest " on the 31st " "	29·972	29·889
Lowest " on the 24th " "	29·176	29·007
Range of Barometer Readings "	0·796	0·882
Highest Reading of a Max. Therm. on the 20th	89·0	79·0
Lowest Reading of a Min. Therm. on the 15th	45·2	42·2
Range of Thermometer Readings	43·8	36·8
Mean of all the Highest Readings	75·3	68·2
Mean of all the Lowest Readings	54·0	50·8
Mean Daily Range	21·3	17·4
Deducted Monthly Mean (from Mean of Max. and Min.)	62·8	57·9
Mean Temperature from Dry Bulb	63·5	58·0
Adopted Mean Temperature	63·2	57·9
Mean Temperature of Evaporation	58·9	54·9
Mean Temperature of Dew Point	55·3	52·2
Mean elastic force of Vapour inches	0·438	0·390
Mean weight of Vapour in a cub.ft. of air grains	4·9	4·5
Mean additional weight required for saturation, ..	1·6	1·0
Mean degree of Humidity (saturation 1·00) ...	0·76	0·81
Mean weight of a cubic foot of air .. grains	524·1	527·4
Fall of Rain inches	1·864	4·055
Number of days on which Rain fell	11	17·9

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
		0	7	3	0	0	4	15	2
Mean Velocity in miles per hour	0	8·1	6·2	0	0	5·1	6·9	5·0
Total No. of miles for each Direction.	0	1368	448	0	0	492	2495	239

The total number of miles registered during the month was 5042
The max. Velocity of the wind was 20 miles per hour, W. on the 15th at 3 p. m.

JULY, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	6 9
In the month of July, the highest reading of the Barometer during 54 years, was on the 24th, in 1868, and was.....	30·112
The lowest „ 15th, 1877 „	28·564
The highest Temperature 20th, 1901 „	89 0
The lowest „ 1st, 1857 „	36·0
The highest adopted mean temperature of the month, 1901	63·2
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	...	+	0·101 inches
Monthly Range „	...	—	0·086 „
Mean of highest temperatures	...	+	7·1 degrees
Mean of lowest „	...	+	3·2 „
Mean daily range „	...	+	3 9 „
Adopted mean temperature	...	+	5·3 „
Total rainfall	...	—	2·191 inches

Heavy rain on the 21st. Thunder on 11th, 21st, 26th and 27th.
Lightning on 20th and 21st.

The highest recorded reading of a Max. Thermometer in the shade occurred this month, and was 89°·0 on the 20th, at 2 p.m., also the Mean Temperature 63°·2 is the highest monthly mean.

AUGUST, 1901.

Results of Observations taken during the Month.		Mean for the last 54 years.
Mean Reading of the Barometer . . . inches	29.597	29.495
Highest „ on the 20th „	30.110	29.892
Lowest „ on the 26th „	28.905	28.951
Range of Barometer Readings „	1.205	0.941
Highest Reading of a Max. Ther. on the 22 & 25	78.9	77.3
Lowest Reading of a Min. Therm. on the 19th	42.5	41.5
Range of Thermometer Readings	36.4	35.8
Mean of all the Highest Readings	68.3	67.4
Mean of all the Lowest Readings	50.0	50.5
Mean Daily Range	18.3	16.9
Deduced Monthly Mean (from Mean of Max and Min.)	57.5	57.2
Mean Temperature from Dry Bulb	58.4	57.6
Adopted Mean Temperature	58.0	57.4
Mean Temperature of Evaporation	54.2	54.6
Mean Temperature of Dew Point	50.8	51.8
Mean elastic force of Vapour inches	0.372	0.388
Mean weight of Vapour in a cub. ft. of air grains	4.2	4.3
Mean additional weight required for saturation, „	1.2	0.9
Mean degree of Humidity (saturation 1.00) ..	0.77	0.82
Mean weight of a cubic foot of air grains	529.1	527.4
Fall of Rain inches	3.327	5.080
Number of days on which Rain fell	18	19.8

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	1	1	0	1	4	4	19	1
Mean Velocity in miles per hour	4.5	5.8	0	8.1	11.6	8.9	10.1	17.2
Total No. of miles for each Direction	107	140	0	194	1116	859	4589	412

The total number of miles registered during the month was 7417.
 The max Velocity of the wind was 35 miles per hour, N.W by W.,
 on the 26th at 10.0 p.m.

AUGUST, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	6·5
In the month of August, the highest reading of the Barometer during 54 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	... ..	+	0·102 inches
Monthly range	„	+	0·264 „
Mean of highest temperatures	... ..	+	0·9 degrees
Mean of lowest	„	-	0·5 „
Mean daily range	„	+	1·4 „
Adopted mean temperature	... ..	+	0·6 „
Total rainfall	... ..	-	1·753 inches

Heavy rain on 7th. Thunder on 10th, 11th, 12th, 25th, and 26th. Lightning on 11th, and 26th.

SEPTEMBER, 1901.

Result of Observations taken during the Month.	Mean for the last 54 years.
Mean Reading of the Barometer inches 29.493	29.529
Highest „ on the 2nd „ 29.827	30.023
Lowest „ on the 20th „ 28.864	28.856
Range of Barometer Readings „ 0.963	1.167
Highest Reading of a Max. Therm. on the 9 & 28 69.0	72.7
Lowest Reading of a Min. Therm. on the 15th 36.2	36.3
Range of Thermometer Readings 32.8	36.4
Mean of all the Highest Readings 65.4	62.5
Mean of all the Lowest Readings 48.7	47.0
Mean Daily Range 16.7	15.5
Deduced Monthly Mean (from Mean of Max. and Min.) 55.8	53.6
Mean Temperature from Dry Bulb 56.3	54.2
Adopted Mean Temperature 56.1	53.9
Mean Temperature of Evaporation 52.6	51.1
Mean Temperature of Dew Point 49.3	48.4
Mean elastic force of Vapour inches 0.354	0.340
Mean weight of Vapour in a cub. ft. of air grains 4.0	4.0
Mean additional weight required for saturation, „ 1.1	0.8
Mean degree of Humidity (saturation 1.00).. 0.78	0.82
Mean weight of a cubic foot of air grains 529.5	532.2
Fall of rain inches 1.313	4.571
Number of Days on which rain fell 13	18.7

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	5	3	7	2	7	2	3	1
Mean Velocity in miles per hour	4.8	7.0	9.2	8.0	11.7	12.2	7.9	6.6
Total No. of miles for each Direction	572	502	1550	382	1970	585	568	159

The total number of miles registered during the month was 6288.
 The max. Velocity of the wind was 36 miles per hour, S. S. E.,
 on the 20th at 7 a. m.

SEPTEMBER, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·6
In the month of September, the highest reading of the Barometer during 54 years, was on the 15th, in 1851, and was...30·274	
The lowest	25th, 1896
The highest Temperature	6th, 1868
The lowest	25th, 1885, and 30th, 1888...
The highest adopted mean temperature of the month, 1865	59·1
The lowest	1863
Greatest fall of rain during the month in	1869
Least	1894
Greatest number of days on which rain fell	1866
Least	1851 and 1894

TABLE OF DIFFERENCES.

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

Mean barometric pressure	...	...	-	0·027 inches
Monthly range	...	...	-	0·204 "
Mean of highest temperatures	...	...	+	2·9 degrees
Mean of lowest	..	..	+	1·7 "
Mean daily range	..	..	+	1·2 "
Adopted mean temperature	..	..	+	2·2 "
Total rainfall	..	..	-	3·258 inches

Thunder on 23rd and 30th. Lightning on 23rd.

OCTOBER, 1901.

Results of Observations taken during the Month.		Mean for the last 54 years.
Mean Reading of the Barometer inches	29.472	29.431
Highest " on the 31st ,"	30.065	30.027
Lowest " on the 18th ,"	28.686	28.647
Range of Barometer Readings..... "	1.379	1.380
Highest Reading of a Max. Therm. on the 2nd	66.0	64.5
Lowest Reading of a Min. Therm. on the 21st	32.1	28.9
Range of Thermometer Readings	33.9	35.6
Mean of all the Highest Readings.....	56.1	54.7
Mean of all the Lowest Readings	41.3	41.5
Mean Daily Range.....	14.8	13.2
Deduced Monthly Mean (from Mean of Max. and Min.)	47.7	47.1
Mean Temperature from Dry Bulb	48.7	47.7
Adopted Mean Temperature	48.2	47.4
Mean Temperature of Evaporation	45.8	45.2
Mean Temperature of Dew Point	43.2	42.7
Mean elastic force of Vapour	0.279	0.275
Mean weight of Vapour in a cub. ft. of air grains	3.2	3.1
Mean additional weight required for saturation,,	0.6	0.6
Mean degree of Humidity (saturation 1.00)..	0.83	0.84
Mean weight of a cubic foot of air....grains	537.8	537.7
Fall of Rain.....inches	4.597	5.005
Number of days on which Rain fell	17	21.1

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	6	3	2	2	2	10	6	0
Mean Velocity in miles per hour	4.4	13.6	5.0	9.4	10.6	8.4	13.2	0
Total No. of miles for each Direction	627	980	238	453	507	2027	1906	0

The total No. of miles registered during the month was 6738.
The max. Velocity of the wind was 40 miles per hour, S.E. on the 18th at 11.0 a.m.

OCTOBER, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0)	7·3
In the month of October the highest reading of the Barometer during 54 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
Least 1881-'87-'97-'99	12

TABLE OF DIFFERENCES.

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

Mean barometric pressure	+ 0·041 inches
Monthly range	— 0·001 ..
Mean of highest temperatures	+ 1·4 degrees
Mean of lowest	— 0·2 ..
Mean daily range	+ 1·6 ..
Adopted mean temperature	+ 0·8 ..
Total rainfall	— 0·408 inches

Ground Frost on 9th—11th, 15th, 19th, 20th, 22nd, 24th—27th.
 Heavy rain on 5th and 7th. Gales of wind on 6th and 18th. Fog on 15th. Thunder on 1st and 22nd. Lightning on 1st, 19th, 21st, and 22nd. Lunar halo on 26th.

NOVEMBER, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years.	
Mean Reading of the Barometer ....inches	29·719	29·473
Highest " on the 25th "	30·245	30·070
Lowest " on the 12th "	28·486	28·561
Range of Barometer Readings	1·759	1·509
Highest Reading of a Max. Therm. on the 10th	54·1	56·0
Lowest Reading of a Min. Therm. on the 15th	17·5	25·4
Range of Thermometer Readings	36·6	30·6
Mean of all the Highest Readings	46·7	47·4
Mean of all the Lowest Readings	33·4	36·5
Mean Daily Range.....	13·3	10·9
Deduced Monthly Mean (from Mean of Max. and Min.).....	39·7	41·6
Mean Temperature from Dry Bulb	40·6	41·9
Adopted Mean Temperature	40·2	41·7
Mean Temperature of Evaporation	38·7	39·5
Mean Temperature of Dew Point	36·8	38·1
Mean elastic force of Vapour .....inches	0·218	0·231
Mean weight of Vapour in a cub.ft.of air grains	2·5	2·7
Mean additional weight required for saturation,,	0·4	0·4
Mean degree of Humidity (saturation 1·00)..	0·88	0·87
Mean weight of a cubic foot of air ....grains	551·4	544·9
Fall of Rain	8·185	4·415
Number of days on which Rain fell	11	19·7

No. of days in the month on which the prevailing wind was	N	NE	E	SE	S	SW	W	NW
	10	1	1	0	0	10	4	4
Mean Velocity in miles per hour	7·0	16·8	8·0	0	0	17·2	7·2	6·6
Total No. of miles for each Direction	1671	402	193	0	0	4137	688	629

The total number of miles registered during the month was 7720.
The max. Velocity of the wind was 43 miles per hour, S.W., on the 20th at 3 a.m.

NOVEMBER, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0) 6·3			
In the month of November, the highest reading of the Bar-			
ometer during 54 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	„	15th, 1901	„ 17·5
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	.. ..	+ 0·246 inches
Monthly range	„	+ 0·250 „
Mean of highest temperatures	.. ..	— 0·7 degrees
Mean of lowest	„	— 3·1 „
Mean daily range	„	+ 2·4 „
Adopted mean temperature	.. ..	— 1·5 “
Total rainfall	.. ..	+ 3·770 inches

Ground Frost on 2nd, 6th, 14th—17th, and 22nd—29th. Hail on 17th. Heavy rain on 11th, 12th, 18th, 19th and 20th. Gales of wind 19th and 20th. Fog on 3rd, 5th, 6th, 15th and 16th.

The lowest recorded reading of a Min. Thermometer for the month of November occurred on the 15th. and was 17°·5.

DECEMBER, 1901.

Results of Observations taken during the Month.	Mean for the last 54 years.	
Mean Reading of the Barometer inches	29.157	29.448
Highest ,, on the 3rd & 4th ,,	29.973	30.071
Lowest ,, on the 25th ,,	28.277	28.562
Range of Barometer Readings ,,	1.696	1.509
Highest Reading of a Max. Therm. on the 7th	53.0	53.2
Lowest Reading of a Min. Therm. on the 21st	16.0	20.2
Range of Thermometer Readings	37.0	33.0
Mean of all the Highest Readings	42.6	43.3
Mean of all the Lowest Readings	32.0	33.0
Mean Daily Range.	10.6	10.3
Deduced Monthly Mean (from Mean of Max. and Min.)	37.3	38.1
Mean Temperature from Dry Bulb	37.8	38.8
Adopted Mean Temperature	37.6	38.5
Mean Temperature of Evaporation	36.0	36.9
Mean Temperature of Dew Point	33.8	35.0
Mean Elastic force of Vapour inches	0.194	0.206
Mean weight of Vapour in a cubic ft. of air grains	2.2	2.4
Mean additional weight required for saturation, .	0.4	0.4
Mean degree of Humidity (saturation 1.00)..	0.86	0.87
Mean weight of a cubic foot of air grains	543.7	547.8
Fall of Rain inches	5.724	4.552
Number of days on which Rain fell.	25	20.9

	N	NE	E	SE	S	SW	W	NW
No. of days in the month on which the prevailing wind was	6	0	0	2	2	11	8	2
Mean Velocity in miles per hour	11.2	0	0	14.1	16.4	12.1	17.1	4.5
Total No. of Miles for each Direction	1615	0	0	679	786	3192	3292	217

The total number of miles registered during the month was 9761.
The max. Velocity of the wind was 53 miles per hour, S.E., on the 23rd, at 7.0 p.m.

DECEMBER, 1901.

Mean amount of Cloud (an overcast sky being indicated by 10·0				8·5
In the Month of December, the highest reading of the Bar-				
ometer during 54 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	...	...	-	0·291 inches
Monthly range	„	...	+	0·187 „
Mean of highest temperatures		...	-	0·7 degrees
Mean of lowest	„	...	-	1·0 „
Mean daily range	„	...	+	0·3 „
Adopted mean temperature	...	...	-	0·9 „
Total rainfall	...	...	+	1·172 inches

Ground frost on 3rd, 4th, 6th, 9th—12th, 14th—29th. Snow on 9th, 10th, 12th, 14th, 15th, 19th, 20th, 21st, 23rd, and 27th. Hail on 8th, 9th, 10th, 11th, 18th, 20th, 24th, and 26th. Fog on 17th and 18th. Lighting on 8th. Thunder on 8th. Heavy rain on the 7th. Gales of wind on 6th, 8th, 9th, and 23rd.

Summary of Observations, 1901.

Results of Observations taken during the Year.	Mean for the last 54 years
Mean Reading of the Barometer .....inches 29.526	29.493
Highest " on Nov. 25th " 30.245	30.282
Lowest " on March 2nd " 28.268	28.252
Range of Barometer Readings " 1.973	2.030
Highest Reading of a Max. Therm. on July 20th 89.0	81.9
Lowest Reading of a Min. Therm. on March 28th 15.8	15.4
Range of Thermometer Readings 73.2	66.5
Mean of all the Highest Readings..... 56.1	54.9
Mean of all the Lowest Readings..... 39.8	40.6
Mean Daily Range 16.3	14.3
Deducted Yearly Mean (from Mean of Max. and Min.) 47.0	46.9
Mean Temperature (from Dry Bulb) 47.6	46.8
Adopted Mean Temperature 47.3	46.9
Mean Temperature of Evaporation .. 44.4	44.5
Mean Temperature of Dew Point 41.2	42.1
Mean elastic force of Vapour .....inches 0.270	0.273
Mean weight of Vapour in a cub. ft. of air grains 3.1	3.3
Mean additional weight required for saturation,, 0.8	0.7
Mean degree of Humidity (saturation 1.00)... 0.80	0.83
Mean weight of a cubic foot of air....grains 539.9	539.2
Total fall of rain in the year inches 38.980	47.040
Number of days per month on which Rain fell 15.4	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
.....	50	37	40	11	33	57	120	17
Mean Velocity in miles per hour	7.1	9.0	8.9	9.2	12.1	11.1	11.1	8.3
Total No. of miles for each Direction	8542	7957	8560	2437	9571	15126	31879	3374

The total No. of miles registered during the year was 87446.

The max. Velocity of the wind was 53 miles per hour, S.E., on 23rd December, at 7.0 p.m.

TABLE OF DIFFERENCES, 1901.

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

Mean barometric pressure	..	..	+	0.033 inches
Yearly range	..	..	-	0.057 "
Mean of highest temperatures	..	..	+	1.2 degrees
Mean of lowest	..	..	-	0.8 "
Mean daily range	..	..	+	2.0 "
Adopted mean temperature	..	..	+	0.4 "
Total rainfall	..	..	-	8.060 inches

EXTREME READINGS IN THE LAST 54 YEARS.

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	29.584
The Minimum " " in 1886, and was		29.389
The greatest monthly range of the Barometer was in January, 1884, and was	inches	2.409
The least " " in July, 1852, and was		0.605
The highest reading of the Barometer during 54 years was on January 9th, 1896, and was	inches	30.597
The lowest " " on December 8th, 1886, and was		27.350
Extreme range	inches	3.247
The highest temperature was on July 20th, 1901, and was		89.0
The lowest " " January 15th, 1881.....		4.6
The highest adopted mean temperature of a month, July, 1901, and was		63.2
The lowest " " " February, 1855 ..		28.6
The highest adopted mean temperature 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	inches	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

DATES OF OCCASIONAL PHENOMENA.

1901.	Frost.	Hoar Frost.	Snow.	Hail.	Heavy Rain.	
January	1, 2, 4-10, 12, 14-16, 18, 23, 24, 26, 28-31		7, 8, 19, 20, 27, 29, 30	25-29	19, 26	
February	1-7, 9, 11, 22		1-4, 6, 13, 17, 18	1		
March	1, 2, 4, 9, 13, 16-19, 21-30		3, 18, 19, 25, 26-29	5, 25, 30	2, 4, 29	
April	2, 4-6, 12, 13, 17, 19			1, 12, 15, 16, 27		
May				7		
June					20	
July					21	
August					7	
September					5, 7	
October	9-11, 15, 19, 20, 22, 24-27			17	11, 12, 18, 19, 20	
November	2-6, 14-17, 22-29		9, 10, 12, 14, 15, 19-21	7, 8, 9, 10, 11, 18, 20, 24	7	
December	3, 4, 6, 9-12, 14-29					
1901	Gales of Wind.	Fog.	Thunder	Lightning.	Lunar Halo.	Solar Halo.
January	26, 27, 28	2, 3, 18			1	
February		7, 8, 19, 21, 22			25	
March	2	10, 12	30			
April	2, 4		14	14		
May			3, 29, 30	29		
June			9			
July				20, 21		
August				11, 21, 26, 27		
September				10, 11, 12, 25, 26		
October	6, 18	15		23, 30		
November	19, 20	3, 5, 6, 15, 16		1, 19, 21, 22	26	
December	6, 8, 9, 23	17	8	8		

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	1.7	3.6	4.8	7.3	6.5	7.2	2.7	0.2	0	0	0	0	0
February	0	0	0	0.5	3.2	5.5	7.9	9.0	9.4	7.0	5.2	4.8	0.9	0	0	0	0
March	0	0	2.4	7.8	11.2	10.7	11.3	14.2	13.5	14.9	15.6	13.5	9.4	3.2	0.6	0	0
April	0	1.4	7.7	10.7	15.4	17.4	17.4	19.2	20.5	17.8	18.2	18.4	16.2	11.9	3.6	0	0
May	1.6	10.4	14.9	19.0	21.1	20.5	19.9	23.1	21.8	22.3	21.1	17.8	16.5	15.4	11.3	2.5	0
June	1.7	5.8	12.4	16.4	18.0	17.9	18.2	15.5	14.7	15.4	15.0	14.6	14.1	13.6	7.7	3.0	0
July	2.1	5.1	11.6	14.9	16.2	18.1	17.5	16.5	18.2	18.7	17.1	16.6	16.3	13.6	10.4	4.7	0
August	0	2.6	10.8	15.8	17.5	20.8	18.7	19.0	18.6	18.2	17.3	17.1	15.2	11.7	5.7	0.4	0
September	0	0	1.5	7.5	12.1	13.8	15.9	12.9	11.4	12.2	12.8	9.8	8.7	4.5	0	0	0
October	0	0	0	1.5	7.2	10.4	11.4	12.6	13.0	10.2	8.9	9.4	4.9	0	0	0	0
November	0	0	0	0	1.1	5.6	8.9	9.6	9.9	9.3	6.8	1.5	0	0	0	0	0
December	0	0	0	0	0.6	4.0	6.1	6.0	7.2	4.7	2.6	0	0	0	0	0	0
Total	5.4	25.3	61.3	94.1	125.3	148.3	158.0	164.9	164.7	157.9	143.3	123.7	102.2	73.9	39.3	10.6	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
January	0.7	0.8	0	0	3.3	5.2	0	0	0	2.0	0	0	0	0	3.5	0
February	2.6	0	0	0	6.0	7.2	0	0	0	0	4.5	6.8	2.8	6.0	0.3	4.3
March	2.4	0	0.9	1.0	3.2	2.2	1.1	6.5	5.4	2.2	4.4	4.2	7.0	3.6	0	0.7
April	7.3	0	5.3	8.8	6.6	0	1.1	8.5	8.4	10.2	9.4	3.3	4.1	2.6	9.2	6.7
May	9.1	5.5	6.7	11.3	8.0	5.8	7.5	12.5	0	4.3	8.2	7.2	12.3	11.7	12.9	13.8
June	5.8	6.7	2.3	4.3	1.8	7.5	13.0	13.7	7.0	9.4	13.2	5.6	0.1	5.8	9.1	3.1
July	0	0	13.7	14.8	5.0	3.3	9.6	15.2	9.3	12.1	8.8	1.5	10.2	8.4	11.5	11.5
August	8.5	13.9	1.4	5.1	2.5	0.3	0	0	4.1	3.2	10.4	4.5	5.7	0	4.9	12.4
September	5.7	9.7	2.7	10.5	7.6	1.2	6.2	0	3.5	3.1	6.1	0	4.5	2.7	4.8	7.2
October	0	0.8	3.7	6.5	2.3	5.0	9.2	0	7.2	1.2	8.0	0	1.2	0.4	0	1.2
November	7.7	0.2	5.5	2.9	1.8	0	0.3	0.2	0	0	0.5	0	0	5.8	0	4.2
December	0	3.0	2.7	0	0	0.1	0	0.5	1.3	1.8	4.6	0	0	1.8	1.3	0

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 centage each month.
January	0	0	0	0	0.7	1.1	0	0	0	2.2	3.6	3.3	2.2	5.4	34.0	13.7
February	0	2.2	0	1.7	2.4	1.4	0	0	0	2.5	0	0	0	0	53.4	19.6
March	6.4	6.7	5.4	11.7	3.1	0.1	5.9	7.4	7.4	8.5	9.7	0	1.4	9.8	128.3	35.1
April	0	6.8	12.3	12.6	6.3	7.8	11.8	9.3	6.3	10.9	3.8	0	5.7	0	195.8	46.7
May	11.8	1.8	4.6	13.8	14.7	14.6	14.4	12.2	0	2.6	7.2	2.0	4.7	11.3	259.2	52.6
June	10.3	1.4	0	10.4	7.3	1.7	8.5	7.7	5.2	10.3	5.5	9.6	4.2	0	204.0	40.2
July	11.0	8.2	12.9	1.5	1.5	4.5	0	0	6.8	7.0	1.1	12.2	0	10.3	217.6	42.8
August	11.3	12.4	13.0	11.1	12.7	12.3	10.1	9.4	2.3	10.7	10.8	6.0	0	10.4	209.4	45.8
September	8.5	0	4.0	0	9.7	0	1.9	4.9	8.9	0	4.0	4.4	1.3	0	123.1	32.5
October	0.4	5.5	4.7	2.7	3.6	3.2	0	3.6	5.2	0.3	0	0	2.9	8.0	89.5	27.5
November	0	0	0	0	0.5	5.4	4.8	0	1.5	1.6	5.7	2.4	0	0	52.7	20.6
December	4.7	2.2	3.7	0	0	0	0	0	1.8	1.2	0	0	0	0.5	31.2	13.5

SUMMARY OF SUNSHINE.

1901.	Number of days on which Sunshine was recorded.	Amount or Total Number of Hours	Per centage of possible Sunshine.	Mean for the last 21 Years.		
				Days.	Amount hours	Percentage of possible Sunshine.
January ...	13	34·0	13·7	13·7	34·6	13·9
February ...	15	53·4	19·6	17·5	59·7	21·8
March ...	27	128·3	35·1	24·0	107·7	29·4
April ...	26	195·8	46·7	26·0	148·2	35·3
May ...	29	259·2	52·6	27·7	197·5	40·1
June ...	29	204·0	40·2	27·5	194·2	38·2
July ...	26	217·6	42·8	28·4	179·8	35·3
August ...	26	209·4	45·8	27·5	150·6	33·0
September	23	123·1	32·5	25·3	124·3	32·8
October ...	24	89·5	27·5	23·2	88·7	27·2
November	18	52·7	20·6	16·6	43·7	17·1
December	15	31·2	13·5	12·8	26·0	11·3
Year	271	1598·2	35·8	270·2	1354·9	30·3

SUMMARY OF SUNSHINE

(Continued).

EXTREMES FOR THE LAST 21 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	25.9	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 1882 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	25	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	1887	25.3	1888

OBSERVATIONS OF UPPER CLOUDS (CIRRUS).

Date. 1901.	G. M. T.	Cloud.		Wind.		Direction of Lower Clouds	
		Direction	Velocity (0-6.)	Direction.	Force (0-12.)		
January	10	9 a.m.	S	2	E b S	1	SE
"	10	10 a.m.	S b W	2	SE	1	SE
"	14	10 a.m.	S	2	NNE	1	NE
"	18	9 a.m.	S b E	2	S	0	
"	23	8 a.m.	E	3	W	1	W
"	28	10 a.m.	E b S	3	W	3	W
"	29	9 a.m.	E b S	2	NW	2	NW
"	30	9-15 a.m.	E	2	NW	3	W
"	31	10 a.m.	N	2	NNW	1	NW
February	5	9 a.m.	N	2	N b W	2	
"	6	10 a.m.	NNE	2	N	3	NW
"	7	2 p.m.	NE	2	W	1	W
"	8	3 p.m.	N	2	W	1	W
"	12	9 a.m.	N b E	2	N b W	1	
"	12	4 p.m.	ENE	2	NW	1	NW
"	14	Noon.	N	3	N	1	
"	16	12-30 p.m.	NW	3	NW b W	3	
"	23	Noon.	N	2	NW b W	4	NW
"	27	9 a.m.	N b E	3	NNE	0	
March	1	11 a.m.	NW	2	S b E	2	S b W
"	5	8-30 a.m.	W	3	WSW	6	WSW
"	6	Noon.	NW	1	W b N	3	W
"	7	3 p.m.	N	2	E	1	NE
"	8	2 p.m.	NNW	2	NE b N	2	NE
"	8	4 p.m.	NNE	2	NNE	1	NE
"	9	7-30 a.m.	NNE	2	N b W	0	NE
"	11	4 p.m.	W b N	2	W b S	2	W
"	20	3 p.m.	W	2	NE	3	NE
"	21	4 p.m.	E	2	ENE	4	NE
"	28	2 p.m.	N	3	WNW	5	
April	3	2 p.m.	NW	2	WSW	5	W
"	10	5 p.m.	W	2	W b S	3	
"	15	9 a.m.	NW	2	W b S	4	W
"	16	8-30 a.m.	WNW	2	N b W	2	NE
"	17	4 p.m.	S b E	1	W	2	S
"	17	5 p.m.	SSE	1	W	3	S
"	17	6 p.m.	S	1	W	3	S
"	19	7 a.m.	S	2	W b S	0	
"	19	9 a.m.	S b E	2	S	2	
"	19	3 p.m.	SSW	2	S	4	S

OBSERVATIONS OF UPPER CLOUDS (Continued).

Date. 1901.	G. M. T.	Cloud.		Wind.		Direction of Lower Clouds.	
		Direction.	Velocity (0-6.)	Direction.	Force. (0-12.)		
April	19	4 p.m.	SW	2	S	3	S
"	20	8 a.m.	S	2	S b E	1	
"	20	9 a.m.	SSE	2	SE	2	
"	22	9 a.m.	NNW	2	NE	1	NE
"	23	8 a.m.	S b E	2	S	1	S
"	25	9 a.m.	SSE	2	NE	1	NE
"	26	3-15 p.m.	N	2	NE	2	NE
"	27	10 a.m.	NW	2	NE	2	NE
"	30	9 a.m.	S	2	S	3	SE
May	1	10-50 a.m.	NNW	3	NE b E	2	NE
"	7	5 p.m.	E b S	2	W	1	W
"	8	9 a.m.	SSE	2	NE b E	2	NE
"	11	8 p.m.	W	2	W b S	1	W
"	15	9 a.m.	E b S	2	ENE	1	
"	19	9 p.m.	W	2	W	0	
"	23	Noon.	ENE	2	ENE	3	
"	24	8 a.m.	NE	2	NE b N	2	
"	24	5 p.m.	E	2	NE b E	3	
"	25	9 a.m.	NE	2	NE	2	
"	28	11-30 a.m.	W	2	WSW	2	W
"	31	5-45 p.m.	W	2	SW b S	4	SW
June	1	7-45 a.m.	SSW	2	S b W	4	S
"	3	2 p.m.	NE	2	W b S	2	SW
"	5	4-30 p.m.	SW	2	W b N	1	SW
"	8	9 a.m.	W	1	ENE	0	
"	11	5-50 p.m.	NW	3	W	4	W
"	12	8 a.m.	WNW	2	W	3	W
"	12	3 p.m.	W b N	2	W	3	W
"	14	8 a.m.	W	1	N b W	3	N
"	14	9 a.m.	W b N	1	N b W	3	NW
"	14	11 a.m.	WNW	1	N	2	W
"	21	2 p.m.	S b W	1	WSW	3	SW
"	22	1 p.m.	SW	2	S b W	2	SW
"	25	4 p.m.	SW b W	2	W b S	3	W
July	3	9 a.m.	NE	1	ENE	2	NE
"	4	9 a.m.	W b S	1	NNW	0	
"	4	8 p.m.	NW	1	W b N	1	W
"	5	9 a.m.	NW	1	W b N	1	W
"	8	9 a.m.	SE	1	E	0	

OBSERVATIONS OF UPPER CLOUDS (Continued).

Date. 1901.	G. M. T.	Cloud		Wind.		Direction of Lower Clouds	
		Direction.	Velocity (0-6)	Direction.	Force. (0-12)		
July	8	3 p.m.	ENE	2	W b S	1	
"	9	2 p.m.	SW	1	W	2	W
"	14	9 a.m.	E	1	E	1	
"	15	8 30 a.m.	W b N	1	WSW	1	W
"	16	Noon.	NW	1	SW	2	SW
"	17	3 p.m.	NW	1	W	1	SW
"	18	11 a.m.	S	1	SW b S	1	SW
"	19	9 a.m.	SSE	1	NE b N	1	S
"	23	3 p.m.	W	1	W	2	SW
"	28	9 a.m.	NE	2	ENE	1	W
"	28	5 p.m.	W	1	NE b N	1	W
August	1	3-30 p.m.	SW	2	WNW	2	W
"	18	8 p.m.	W	2	SW	0	
"	23	4 p.m.	W b S	2	W b N	2	W
"	24	Noon.	W	2	W b S	1	W
Sept.	3	5 p.m.	NW	1	NE b E	1	ENE
"	5	8 a.m.	NW	2	E b N	2	E
"	11	4 p.m.	NW	2	N	1	N
"	18	8 a.m.	W	3	NW b W	1	
"	18	4 p.m.	SW	3	W b S	2	W
"	20	2 p.m.	SE	3	SW b S	2	S
"	24	5-15 p.m.	NE	3	SW b S	0	
"	26	2 p.m.	NW	3	SW	3	W
October	1	9 p.m.	NE	2	E b N	0	
"	2	8 a.m.	N	1	SE	0	S
"	3	8 a.m.	W	2	SSW	1	SW
"	3	9 20 a.m.	WNW	2	SSW	1	
"	3	3 p.m.	WSW	1	SW	2	
"	4	8 a.m.	SW	2	WNW	1	NW
"	7	8 a.m.	NW	2	W	5	W
"	16	9 a.m.	E	1	N	1	S b W
"	22	9 a.m.	N	1	N	1	
"	25	2 p.m.	SW	1	WSW	3	W
November	8	11 a.m.	SE	2	SW b S	2	SW
"	11	12-40 p.m.	W	1	W b S	2	W
"	14	9 a.m.	NW	2	NW	2	NW
"	15	11 a.m.	WNW	2	NW b N	1	NW
"	28	11 a.m.	NW	2	NNW	4	
"	29	9 a.m.	NNW	2	NW	1	
December	2	9 a.m.	NW	2	WSW	4	W
"	6	8 a.m.	SW	2	SW	1	
"	18	10 a.m.	NW	3	W	4	W
"	19	2 p.m.	NNW	2	SW b S	0	SW

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 0.00073 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 0.000000436.

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 of 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 7.6 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 -0.00175 .

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 ten years.

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

The corrections for diurnal range, employed in the tables, are taken from the Kew Reports 1891-1900.

OBSERVATIONS OF DECLINATION AND DIP.

1901 MONTH	G.M.T. CIVIL DAY	WEST DECLINATION		MAGNETIC DIP.			
		Observations.	Monthly Mean.	Needle	DIP.	G.M.T. CIVIL DAY	
Jan.	D. H. M.	° ' "	° ' "		° ' "	D. H. M.	
		7 16 0	18 13.4	} 18 12.6	1	68 41.9	15 12 11
		14 15 45	18 11.2				
		21 16 0	18 11.9		} 3	68 48.7	,, 12 47
		28 16 20	18 13.9				
Feb.		5 16 0	18 16.2	} 18 14.2	1	68 36.9	23 10 17
		11 16 0	18 13.0				
		18 16 0	18 13.4		} 3	68 57.1	,, 10 58
		25 16 0	18 14.2				
March		4 16 0	18 9.4	} 18 10.9	1	68 39.4	16 10 0
		11 16 0	18 9.1				
		18 16 5	18 10.7		} 3	68 48.5	,, 10 42
		25 16 5	18 14.4				
April		1 16 5	18 10.9	} 18 11.9	1	68 35.3	16 11 28
		8 16 0	18 11.4				
		15 16 0	18 11.7		} 3	68 52.4	,, 12 15
		22 16 0	18 12.8				
May		29 16 0	18 12.7	} 18 12.7	1	68 35.6	15 16 0
		6 16 0	18 14.5				
		13 16 0	18 11.4		} 3	68 49.6	,, 16 53
		20 16 0	18 13.7				
June		29 16 0	18 11.3	} 18 9.0	1	68 37.4	15 11 47
		3 16 0	18 10.7				
		10 16 0	18 7.9		} 3	68 41.3	,, 12 25
	17 16 0	18 8.8					
	24 16 0	18 8.4					
July		1 16 0	18 5.7	} 18 8.3	1	68 44.3	15 11 52
		8 16 5	18 10.2				
		15 16 0	18 11.8		} 3	68 55.3	,, 12 40
		22 16 30	18 5.6				

OBSERVATIONS OF DECLINATION AND DIP.

(Continued.)

1901 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.	19 16 0	18 6.3	18 6.7	1	68 42.6	19 12 13	
	27 16 15	18 7.1		3	68 50.5	„ 12 40	
Sept.	9 16 0	18 7.3	18 5.9	1	68 47.4	16 11 45	
	16 16 0	18 4.2		3	68 57.4	„ 12 25	
	23 16 0	18 4.6					
	30 16 0	18 7.4					
Oct.	7 16 0	18 6.4	18 6.6	1	68 40.6	16 11 48	
	14 16 0	18 6.9		3	68 47.9	„ 12 27	
	23 16 5	18 5.6					
	29 16 5	18 7.4					
Nov.	4 16 0	18 7.8	18 8.4	1	68 42.5	14 12 58	
	11 16 0	18 8.0		3	68 45.8	„ 13 30	
	18 16 0	18 9.6					
	25 16 0	18 8.2					
Dec.	2 16 0	18 14.3	18 9.4	1	68 46.4	16 11 58	
	9 16 0	18 10.3		3	68 52.4	„ 12 35	
	16 16 0	18 6.2					
	24 16 15	18 9.8					
	30 16 0	18 6.4					
Yearly Mean			18 9.7		68 45.7		

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

1901. Month.	G. M. T. (Civil Day)	Temp.	Time of one vibration	G. M. T.	Temp.	Observed Deflection at 1.0 ft. at 1.3 ft.	Value of m.
	D. H. M.	°	s.	D. H. M.	°	° ' "	
Jan.	15 10 5	35.1	6.0256	15 { 11 8 11 8	38.1 38.0	11 36.9 5 15.3	0.37957
Feb.	22 10 39	39.1	6.0281	22 { 11 33 11 31	44.3 44.3	11 36.4 5 15.6	0.37951
Mar.	15 9 42	40.0	6.0273	15 { 10 29 10 30	41.0 41.0	11 37.0 5 15.8	0.37966
Apr.	16 9 53	45.2	6.0260	16 { 11 26 11 26	48.0 48.0	11 37.4 5 16.0	0.38018
May	15 9 47	56.3	6.0315	15 { 10 38 10 36	59.0 59.6	11 35.0 5 15.4	0.37982
June	15 9 34	54.5	6.0295	15 { 10 50 10 52	57.5 58.0	11 35.4 5 15.5	0.37995
July	15 9 32	65.0	6.0406	15 { 10 40 10 38	66.0 66.0	11 34.2 5 14.9	0.37957
Aug.	19 10 10	65.0	6.0428	19 { 11 15 11 8	66.8 67.0	11 32.3 5 14.1	0.37902
Sept.	15 10 7	52.6	6.0387	16 { 10 48 11 11	56.0 56.0	11 31.3 5 14.5	0.37824
Oct.	16 10 29	50.0	6.0398	16 { 10 57 11 14	52.0 53.0	11 34.5 5 11.8	0.37884
Nov.	14 10 28	51.8	6.0308	14 { 11 58 12 7	51.0 51.6	11 35.2 5 14.9	0.37969
Dec.	16 10 2	36.5	6.0358	16 { 11 10 11 10	37.0 37.0	11 32.9 5 14.2	0.37781

MAGNETIC INTENSITY.

BRITISH UNITS.				C. G. S. UNITS		
1901	Horizontal Force.	Vertical Force.	Total Force.	Horizontal Force.	Vertical Force.	Total Force.
Jan. ...	3·7631	9·6797	10·3856	0·17351	0·44631	0·47886
Feb. ..	3·7600	9·6855	10·3897	0·17337	0·44658	0·47904
Mar. ...	3·7605	9·6620	10·3679	0·17339	0·44549	0·47804
April ...	3·7597	9·6583	10·3644	0·17335	0·44532	0·47788
May ...	3·7604	9·6503	10·3572	0·17339	0·44495	0·47755
June ...	3·7612	9·6250	10·3338	0·17343	0·44379	0·47647
July ...	3·7584	9·7043	10·4067	0·17329	0·44744	0·47983
Aug. ...	3·7625	9·6880	10·3930	0·17349	0·44669	0·47920
Sept. ...	3·7647	9·7423	10·4444	0·17359	0·44919	0·48156
Oct. ...	3·7680	9·6837	10·3911	0·17374	0·44649	0·47911
Nov. ...	3·7653	9·6755	10·3823	0·17361	0·44611	0·47870
Dec. ...	3·7658	9·7201	10·4242	0·17364	0·44817	0·48063
Means	3·7625	9·6812	10·3867	0·17348	0·44638	0·47891

HORIZONTAL MAGNETIC DIRECTION.

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

	Mean of the highest daily readings. (a)	Mean of the lowest daily readings (b)	Means of a and b. (c)	Means of daily readings at 4a.m. & 4p.m. (d)	Differences d-c.	Difference of a and b, or Mean daily range.	Highest reading of the month.	Lowest reading of the month.	Monthly range.
1901							18°+	17°+	
January	13.4	6.7	10.1	10.9	0.8	6.7	20.7	56.7	24.0
February	13.6	5.8	9.7	11.0	1.3	7.8	20.3	55.7	24.6
March	15.2	5.2	10.2	10.4	.2	10.0	25.7	56.7	29.0
April	14.7	3.7	9.2	9.7	.5	11.0	19.0	55.7	23.3
May	13.3	2.1	7.7	8.6	.9	11.2	16.7	36.7	40.0
June	13.1	2.2	7.7	8.1	.4	10.9	17.7	51.7	26.0
July	13.0	2.4	7.7	8.4	.7	10.6	17.7	58.2	19.5
August	13.5	2.6	8.1	7.7	-.4	10.9	22.7	54.7	28.0
September	13.0	2.8	7.9	7.2	-.7	10.2	20.7	50.2	30.5
October	11.9	3.5	7.7	8.0	.3	8.4	15.2	50.7	24.5
November	10.7	4.8	7.8	8.1	.3	5.9	15.3	59.2	16.1
December	10.4	4.6	7.5	8.1	.6	5.8	15.7	56.7	19.0
Means ..	13.0	3.9	8.5	8.9	.4	9.1	19.0	53.6	25.4
Correction for diurnal range									
Mean for the year									
18° 8' .6									
-0.3									

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.

	Mean of the highest daily readings.	Mean of the lowest daily readings.	Means of <i>a</i> and <i>b</i> .	Means of daily readings 4a. m. & 4p. m.	Differences	Highest reading of the Month.	Lowest reading of the Month.	Monthly Range.
	(a)	(b)	(c)	(d)	of <i>a</i> and <i>b</i> or Mean daily Range.			
1901.								
		17000 +			0 +	17000 +		0 +
January -	368	345	357	358	1	391	316	75
February -	370	342	356	359	3	416	310	106
March -	369	337	353	360	7	393	279	114
April -	370	324	347	360	13	386	301	85
May -	388	336	362	373	11	446	316	130
June -	389	336	363	372	9	414	331	83
July -	380	331	356	365	9	421	306	115
August -	376	326	351	360	9	406	306	100
September -	374	327	351	361	10	431	306	125
October -	370	334	352	362	10	386	306	80
November -	373	348	363	366	3	389	319	70
December -	384	361	373	378	5	404	296	108
Means -	376	337	357	365	8	407	308	99

Correction for diurnal range

—00003

Mean Horizontal Force for the year 0.17362 C. G. S. units.

DATES OF MAGNETIC DISTURBANCES, 1901.

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	s	s	c	s	c	s	c	c	c	c	c	s	
2	s	m	c	c	c	s	c	c	c	c	c	s	
3	c	s	s	c	c	s	c	s	c	c	s	c	
4	s	c	c	c	c	c	s	s	c	c	s	c	
5	m	s	c	c	c	c	e	e	e	c	s	c	
6	s	s	c	c	c	e	e	c	c	c	c	c	
7	s	s	c	s	s	s	e	s	c	s	s	c	
8	c	c	c	e	s	s	s	c	c	m	s	c	
9	s	c	c	s	m	s	e	c	c	c	s	e	
10	e	c	c	s	s	s	s	c	m	c	c	c	
11	e	c	c	e	s	s	m	c	s	c	s	c	
12	c	s	s	e	e	s	s	s	s	s	c	c	
13	c	s	s	s	c	m	s	c	e	e	c	c	
14	e	c	c	s	c	s	c	m	c	e	c	c	
15	c	c	c	s	c	s	s	m	s	c	c	e	
16	c	e	c	s	c	s	s	s	s	c	s	e	
17	c	e	c	e	e	e	m	e	s	e	c	c	
18	c	c	s	e	c	e	s	e	s	c	c	c	
19	c	m	s	c	s	s	s	c	c	c	s	c	
20	e	s	c	c	c	s	s	c	c	c	c	c	
21	e	c	c	o	c	m	e	s	c	c	c	c	
22	m	m	c	s	c	c	s	c	c	c	e	c	
23	m	s	s	s	s	s	c	c	s	c	c	c	
24	s	c	m	s	s	e	c	c	e	c	c	c	
25	c	c	c	s	s	e	v	c	c	s	c	c	
26	s	c	c	e	s	c	c	c	c	c	c	c	
27	s	c	c	s	c	c	c	c	c	c	c	s	
28	s	c	c	s	s	c	c	c	c	c	c	s	
29	s		s	c	s	s	c	s	s	c	c	c	
30	s		c	e	c	s	c	c	s	c	c	c	
31	s		c		s		c	s		c		c	
Totals	c s m g vg	15 13 3 0 0	16 9 3 0 0	22 8 1 0 0	16 14 0 0 0	17 12 1 0 0	10 18 2 0 0	18 11 2 0 0	20 9 2 0 0	20 9 1 0 0	23 7 1 0 0	22 8 0 0 0	24 7 0 0 0

DATES OF SOLAR DRAWINGS.

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

1901.	January	February	March	April	May	June	July	August	September	October	November	December
1		.42	.45	.40	.37	.53		.54	.46		.40	.40
2			.50	.42	.43	.41		.42	.43	.38	.43	.41
3				.36	.45	.46	.34	.46	.69	.37	.48	
4			.52	.51	.34	.67	.34		.39	.48	.51	
5	.46	.39		.40	.40	.40	.34		.53	.66	.39	
6		.42		.41	.42	.40	.42		.32	.50		.45
7			.57	.54	.38	.38	.40		.40		.48	
8	.44		.45	.42	.33	.33	.39					
9			.48	.40	.38	.38	.43	.45	.69	.36		.45
10	.62	.46		.39	.33	.30	.39	.45	.71			.46
11		.47	.42	.41	.42	.38	.40	.41	.39	.36	.53	.38
12	.51	.38	.62	.46	.37	.76						
13		.53	.35		.32		.40		.44	.51		
14	.49	.41	.60		.39	.34	.37		.40		.45	.44
15				.42	.38	.41	.60	.73	.47	.51	.51	.40
16		.52		.37	.38	.31	.36	.38	.36	.38	.41	
17		.45		.34	.47		.67			.42	.53	
18			.42		.32	.32	.38	.38	.55			.40
19			.38	.34	.48		.42	.34		.53		.48
20			.40	.34			.45	.38	.65	.47		.41
21		.46	.39	.42	.42	.34		.46		.42		
22		.41	.37	.33	.30	.30		.36	.47	.36	.47	
23	.44	.50		.51	.34	.36	.65	.42		.44	.40	
24			.37	.38	.38	.48		.42	.44		.40	
25			.42	.68	.37	.34	.38	.39		.50		.44
26			.33	.53	.48	.48	.38	.50	.41	.37	.40	.46
27		.39	.36	.38	.36	.36	.48	.48	.46		.53	
28			.37		.29 & .46	.32					.39	
29			.42	.37	.37	.35	.37	.53	.42		.42	
30			.48	.36	.36					.38		
31		.42	.42	.38	.35			.50		.39		.45

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APPENDIX
RESULTS
OF
METEOROLOGICAL OBSERVATIONS
TAKEN AT
ST. IGNATIUS' COLLEGE, MALTA
BY THE
REV. J. F. DOBSON, S.J.

1901.

ST. IGNATIUS' COLLEGE, MALTA.

Lat. 35° 55' N.

Long. 14° 29' E.

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

METEOROLOGICAL REPORT. JANUARY, 1901.

Results of Observations taken during the Month	Mean for the last 18 years	
Mean Reading of the Barometer inches	30·096	30·051
Highest ,, on the 24th ,,	30·503	30·424
Lowest ,, on the 4th ,,	29·581	29·580
Range of Barometer Readings ,,	0·922	0·844
Highest Reading of a Max. Ther. on the 31st	62·9	65·2
Lowest Reading of a Min. Therm. on the 6th	39·5	41·4
Range of Thermometer Readings	23·4	23·8
Greatest Range in 24 hours on the 21st	17·1	18·2
Mean of all the Highest Readings	57·9	59·1
Mean of all the Lowest Readings	48·4	48·7
Mean Daily Range.....	9·5	10·4
Mean Temperature (deduced from Max & Min)	52·4	53·3
Mean Temperature (deduced from Dry Bulb)	53·4	53·2
Adopted Mean Temperature	52·9	53·3
Mean Temperature of Evaporation	49·1	48·8
Mean Temperature of Dew Point	46·0	45·7
Mean elastic force of Vapour .....inches	0·311	0·307
Mean weight of Vapour in a cub. ft. of air grains	3·5	3·5
Mean additional weight required for saturation,,	0·9	0·9
Mean degree of Humidity	80	80
Mean weight of a cubic foot of air ...grains	542·6	542·6
Fall of Rain inches	5·386	3·469
Number of days on which rain fell.....	16	13
Mean amount of Cloud (an overcast sky = 10)	3·9	5·3
Total number of miles of wind indicated.....	9595	8456
Mean Velocity of Wind per hour.....miles	12·9	11·3

ST. IGNATIUS' COLLEGE, MALTA.
FEBRUARY, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years
Mean Reading of the Barometer.....inches 29·978	30·037
Highest „ on the 9th „ 30·210	30·343
Lowest „ on the 16th „ 29·593	29·626
Range of Barometer Readings..... „ 0·617	0·717
Highest Reading of Max. Therm. on the 2nd 67·2	67·1
Lowest Reading of a Min. Therm. on the 15th 40·3	41·6
Range of Thermometer Readings..... 26·9	25·5
Greatest Range in 24 hours on the 22nd 19·3	19·2
Mean of all the Highest Readings..... 60·1	60·5
Mean of all the Lowest Readings..... 48·2	49·5
Mean Daily Range..... 11·9	11·0
Mean Temperature (deduced from Max. & Min) 53·2	53·9
Mean Temperature (deduced from Dry Bulb) 54·2	54·3
Adopted Mean Temperature 53·7	54·1
Mean Temperature of Evaporation 49·5	49·8
Mean Temperature of Dew Point 46·5	47·0
Mean elastic force of Vapour .....inches 0·317	0·323
Mean weight of Vapour in a cub.ft. of air grains 3·6	3·6
Mean additional weight required for saturation,, 0·9	0·8
Mean degree of Humidity 80	82
Mean weight of a cubic foot of air....grains 540·1	540·8
Fall of rain .....inches 3·676	2·067
Number of days on which rain fell..... 12	9
Mean amount of Cloud (an overcast sky=10) 4·6	4·9
Total number of miles of wind indicated.... 7403	7990
Mean Velocity of Wind per hour .....miles 11·0	11·9

ST. IGNATIUS' COLLEGE, MALTA.
MARCH, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years	
Mean Reading of the Barometer.....inches	30·002	29·990
Highest „ on the 30th „	30·300	30·352
Lowest „ on the 20th „	29·411	29·518
Range of Barometer Readings	0·889	0·834
Highest Reading of a Max. Therm. on the 26th	71·5	74·1
Lowest Reading of a Min. Therm. on the 25th	45·2	43·3
Range of Thermometer Readings	26·3	30·8
Greatest Range in 24 hours on the 9th	19·7	22·2
Mean of all the Highest Readings.....	64·4	63·3
Mean of all the Lowest Readings	51·1	50·9
Mean Daily Range.....	13·3	12·4
Mean Temperature (deduced from Max. & Min.)	57·1	56·3
Mean Temperature (deduced from Dry Bulb)	56·5	55·4
Adopted Mean Temperature	56·8	55·9
Mean Temperature of Evaporation	52·9	51·7
Mean Temperature of Dew Point	49·7	48·5
Mean elastic force of Vapour	0·353	0·342
Mean weight of Vapour in a cub.ft. of air grains	4·1	3·8
Mean additional weight required for saturation,,	1·0	1·1
Mean degree of Humidity	80	79
Mean weight of a cubic foot of air.... grains	536·2	537·3
Fall of rain..... inches	0·812	1·029
Number of days on which Rain fell	6	7
Mean amount of Cloud (an overcast sky = 10)	3·4	4·5
Total number of miles of wind indicated	8425	8165
Mean Velocity of Wind per hour	11·3	10·8

ST. IGNATIUS' COLLEGE, MALTA.

APRIL, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years.	
Mean Reading of the Barometer..... inches	30·065	29·957
Highest " on the 4th ,,	30·355	30·268
Lowest " on the 25th ,,	29·615	29·558
Range of Barometer Readings..... ,,	0·740	0·710
Highest Reading of a Max. Therm. on the 12th	87·7	76·6
Lowest Reading of a Min. Therm. on the 21st	50·4	47·8
Range of Thermometer Readings	37·3	28·8
Greatest Range in 24 hours on the 12th	33·1	21·5
Mean of all the Highest Readings.....	68·7	67·2
Mean of all the Lowest Readings.....	55·2	54·2
Mean Daily Range	13·5	13·0
Mean Temperature (deduced from Max. & Min.)	61·0	59·7
Mean Temperature (deduced from Dry Bulb)	60·1	59·3
Adopted Mean Temperature	60·6	59·5
Mean Temperature of Evaporation	56·1	55·5
Mean Temperature of Dew Point.....	52·6	52·1
Mean elastic force of Vapour.....inches	0·397	0·390
Mean weight of Vapour in a cub.ft.of air grains	4·4	4·4
Mean additional weight required for saturation,,	1·2	1·3
Mean degree of Humidity	76	78
Mean weight of a cubic foot of air .. grains	532·0	531·7
Fall of Rain	0·095	1·055
Number of Days on which rain fell	1	6
Mean amount of Cloud (an overcast sky=10)	2·8	4·5
Total number of miles of wind indicated ..	7737	8374
Mean Velocity of Wind per hour miles	10·7	11·6

ST. IGNATIUS' COLLEGE, MALTA.

MAY, 1901.

Results of Observations taken during the Month.		Mean for the last 18 years
Mean Reading of the Barometer	inches 30·072	29·979
Highest	„ on the 9th „ 30·151	30·181
Lowest	„ on the 7th „ 29·586	29·634
Range of Barometer Readings	0·565	0·747
Highest Reading of a Max. Therm. on the 30th	77·8	81·7
Lowest Reading of a Min. Therm. on the 13th	50·6	53·4
Range of Thermometer Readings	27·2	28·3
Greatest Range in 24 hours on the 17th	22·1	23·3
Mean of all the Highest Readings	71·2	72·6
Mean of all the Lowest Readings	57·2	58·5
Mean Daily Range	14·0	14·1
Mean Temperature (deduced from Max. & Min.)	63·2	64·5
Mean Temperature (deduced from Dry Bulb)	62·4	63·9
Adopted Mean Temperature	62·8	64·2
Mean Temperature of Evaporation	58·7	60·1
Mean Temperature of Dew Point	55·0	56·6
Mean elastic force of Vapour	inches 0·433	0·458
Mean weight of Vapour in a cub.ft. of air grains	4·7	5·0
Mean additional weight required for saturation,,	1·9	1·7
Mean degree of Humidity	78	76
Mean weight of a cubic foot of air	grains 528·8	526·9
Fall of Rain.....	inches 1·544	0·628
Number of days on which Rain fell	6	3
Mean amount of Cloud (an overcast sky=10)	2·8	3·8
Total number of miles of wind indicated.....	7163	7496
Mean Velocity of Wind per hour.....miles..	9·6	10·1

ST. IGNATIUS' COLLEGE, MALTA.

JUNE, 1901.

Results of Observations taken during the Month.		Mean for the last 18 years.
Mean Reading of the Barometer.....inches	30·019	30·017
Highest „ on the 25th „	30·165	30·175
Lowest „ on the 13th „	29·857	29·794
Range of Barometer Readings	0·308	0·381
Highest Reading of a Max. Therm. on the 30th	91·8	90·8
Lowest Reading of a Min. Therm. on the 23rd	60·5	58·3
Range of Thermometer Readings	31·3	32·5
Greatest Range in 24 hours on the 7th	26·2	25·2
Mean of all the Highest Readings	81·6	80·7
Mean of all the Lowest Readings	65·2	64·8
Mean Daily Range.....	16·4	15·9
Mean Temperature (deduced from Max.& Min.)	72·7	72·0
Mean Temperature (deduced from Dry Bulb)	71·7	71·2
Adopted Mean Temperature	72·2	71·6
Mean Temperature of Evaporation	66·2	66·0
Mean Temperature of Dew Point	61·8	61·8
Mean elastic force of Vapour	0·552	0·552
Mean weight of Vapour in a cub.ft. of air grains	6·0	6·0
Mean additional weight required for saturation,,	2·6	2·4
Mean degree of Humidity.....	70	72
Mean weight of cubic foot of air grains	519·1	519·7
Fall of Rain	0·210	0·105
Number of days on which Rain fell	1	1
Mean amount of Cloud (an overcast sky=10)	1·3	2·2
Total number of miles of wind indicated....	6277	6259
Mean Velocity of Wind per hour.....miles	8·7	8·7

ST. IGNATIUS' COLLEGE, MALTA.

JULY, 1901.

Results of Observations taken during the Month.		Mean for the last 18 years
Mean Reading of the Barometer.....inches	29·988	30·006
Highest " on the 8th "	30·131	30·147
Lowest " on the 11th "	29·856	29·838
Range of Barometer Readings "	0·275	0·309
Highest Reading of a Max. Therm. on the 3rd	103·0	97·3
Lowest Reading of a Min. Therm. on the 8th	64·3	64·1
Range of Thermometer Readings	39·7	33·2
Greatest Range in 24 hours on the 3rd.....	30·0	26·6
Mean of all the Highest Readings.....	89·2	86·9
Mean of all the Lowest Readings	71·0	69·7
Mean Daily Range.....	18·2	17·2
Mean Temperature (deduced from Max. & Min.)	79·6	77·9
Mean Temperature (deduced from Dry Bulb)	79·5	76·9
Adopted Mean Temperature	79·6	77·4
Mean Temperature of Evaporation	72·1	70·4
Mean Temperature of Dew Point	66·6	65·8
Mean elastic force of Vapour .....inches	0·652	0·635
Mean weight of Vapour in a cub.ft. of air grains	7·0	6·8
Mean additional weight required for saturation,,	4·0	3·3
Mean degree of Humidity.....	64	67
Mean weight of a cubic foot of air ..grains	510·1	511·4
Fall of Rain	0·0	0·030
Number of days on which Rain fell	0	1
Mean amount of Cloud (an overcast sky=10)	0·6	0·9
Total number of miles of wind indicated	4100	5717
Mean Velocity of Wind per hour	5·5	7·7

ST. IGNATIUS' COLLEGE, MALTA.
AUGUST, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years.
Mean Reading of the Barometer inches	30·016
Highest ,, on the 24th ,,	30·169
Lowest ,, on the 7th ,,	29·863
Range of Barometer Readings ,,	0·306
Highest Reading of a Max. Therm. on the 1st	93·8
Lowest Reading of a Min. Therm. on the 8th	64·4
Range of Thermometer Readings	29·4
Greatest Range in 24 hours on the 26th	22·5
Mean of all the Highest Readings	86·2
Mean of all the Lowest Readings	70·9
Mean Daily Range	15·3
Mean Temperature (deduced from Max. & Min.)	77·8
Mean Temperature (deduced from Dry Bulb)	77·1
Adopted Mean Temperature	77·5
Mean Temperature of Evaporation	71·7
Mean Temperature of Dew Point	67·8
Mean elastic force of Vapour inches	0·680
Mean weight of Vapour in a cub.ft. of air grains	7·3
Mean additional weight required for saturation,,	2·6
Mean degree of Humidity	73
Mean weight of a cubic foot of air grains	513·4
Fall of Rain inches	0·156
Number of days on which Rain fell	1
Mean amount of Cloud (an overcast sky=10)	1·3
Total number of miles of wind indicated	6099
Mean Velocity of Wind per hour miles	8·2

ST. IGNATIUS' COLLEGE, MALTA.
SEPTEMBER, 1901.

Result of Observations taken during the Month.	Mean for the last 18 years.
Mean Reading of the Barometer inches	30·000
Highest ,, on the 30th ,,	30·297
Lowest ,, on the 13th ,,	29·602
Range of Barometer Readings ,,	0·695
Highest Reading of a Max. Therm. on the 4th	90·5
Lowest Reading of a Min. Therm. on the 29th	60·7
Range of Thermometer Readings	29·6
Greatest Range in 24 hours on the 2nd	23·6
Mean of all the Highest Readings	84·2
Mean of all the Lowest Readings	68·7
Mean Daily Range	15·5
Mean Temperature (deduced from Max. & Min.)	75·6
Mean Temperature (deduced from Dry Bulb)	75·6
Adopted Mean Temperature	75·6
Mean Temperature of Evaporation	71·5
Mean Temperature of Dew Point	67·8
Mean elastic force of Vapour inches	0·680
Mean weight of Vapour in a cub. ft. of air grains	7·4
Mean additional weight required for saturation,,	2·5
Mean degree of Humidity	75
Mean weight of a cubic foot of air grains	512·9
Fall of rain inches	0·190
Number of Days on which rain fell	2
Mean amount of Cloud (an overcast sky=10)	2·7
Total number of miles of wind indicated	6161
Mean Velocity of Wind per hour miles	8·6

ST. IGNATIUS' COLLEGE, MALTA.
OCTOBER, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years.
Mean Reading of the Barometer inches	30·000
Highest " on the 1st "	30·205
Lowest " on the 30th "	29·622
Range of Barometer Readings..... "	0·583
Highest Reading of a Max. Therm. on the 8th	83·5
Lowest Reading of a Min. Therm. on the 27th	52·2
Range of Thermometer Readings	31·3
Greatest Range in 24 hours on the 3rd	23·1
Mean of all the Highest Readings.....	76·3
Mean of all the Lowest Readings	60·3
Mean Daily Range.....	16 0
Mean Temperature (deduced from Max. & Min.)	67·4
Mean Temperature (deduced from Dry Bulb.)	68·7
Adopted Mean Temperature	68·1
Mean Temperature of Evaporation	64·5
Mean Temperature of Dew Point	61·1
Mean elastic force of Vapour inches	0·539
Mean weight of Vapour in a cub. ft. of air grains	5·8
Mean additional weight required for saturation.,	1·9
Mean degree of Humidity	81
Mean weight of a cubic foot of air.... grains	522·1
Fall of Rain..... inches	5·666
Number of days on which Rain fell	16
Mean amount of Cloud (an overcast sky=10)	3·7
Total number of miles of wind indicated....	6320
Mean Velocity of Wind per hour..... miles	8·5

ST. IGNATIUS' COLLEGE, MALTA.
NOVEMBER, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years.	
Mean Reading of the Barometer inches	30·052	30·076
Highest " on the 17th ,"	30·294	30·322
Lowest " on the 29th ,"	29·678	29·692
Range of Barometer Readings " ,"	0·626	0·630
Highest Reading of a Max. Therm. on the 17th	76·6	76·8
Lowest Reading of a Min. Therm. on the 25th	46·5	50·3
Range of Thermometer Readings	30·1	26·5
Greatest Range in 24 hours on the 13th	20·1	18·2
Mean of all the Highest Readings	68·2	69·0
Mean of all the Lowest Readings	53·7	58·0
Mean Daily Range	14·5	11·0
Mean Temperature (deduced from Max. & Min.)	60·0	62·6
Mean Temperature (deduced from Dry Bulb)	62·0	62·0
Adopted Mean Temperature	61·0	62·3
Mean Temperature of Evaporation	57·4	57·8
Mean Temperature of Dew Point	53·9	54·6
Mean elastic force of Vapour inches	0·416	0·427
Mean weight of Vapour in a cub. ft. of air grains	4·4	4·8
Mean additional weight required for saturation ,	1·5	1·3
Mean degree of Humidity	79	80
Mean weight of a cubic foot of air grains	531·4	531·7
Fall of Rain inches	5·157	3·346
Number of days on which Rain fell	11	11
Mean amount of Cloud (an overcast sky = 10)	4·4	5·1
Total number of miles of wind indicated . . .	6840	6682
Mean Velocity of Wind per hour miles	9·5	9·3

ST. IGNATIUS' COLLEGE, MALTA.
DECEMBER, 1901.

Results of Observations taken during the Month.	Mean for the last 18 years.
Mean Reading of the Barometer inches	30·021
Highest " on the 1st ,,	30·393
Lowest " on the 22nd ,,	29·583
Range of Barometer Readings	0·810
Highest Reading of a Max. Therm. on the 16th	67·7
Lowest Reading of a Min. Therm. on the 1st	40·3
Range of Thermometer Readings	27·4
Greatest Range in 24 hours on the 13th	21·0
Mean of all the Highest Readings	62·9
Mean of all the Lowest Readings	51·2
Mean Daily Range	11·7
Mean Temperature (deduced from Max. & Min.)	56·4
Mean Temperature (deduced from Dry Bulb)	57·4
Adopted Mean Temperature	56·9
Mean Temperature of Evaporation	52·9
Mean Temperature of Dew Point	49·4
Mean Elastic force of Vapour inches	0·353
Mean weight of Vapour in a cubic ft. of air grains	4·0
Mean additional weight required for saturation,,	1·1
Mean degree of Humidity	77
Mean weight of a cubic foot of air grains	536·2
Fall of Rain inches	1·936
Number of days on which Rain fell	9
Mean amount of Cloud (an overcast sky=10)	4·0
Total number of miles of wind indicated	8954
Mean Velocity of Wind per hour miles	12·0
	30·051
	30·405
	29·584
	0·821
	68·4
	44·0
	24·4
	17·4
	61·8
	52·2
	9·6
	56·4
	56·1
	56·3
	52·1
	48·9
	0·344
	3·9
	1·1
	79
	538·5
	4·280
	15
	5·6
	8240
	11·1

ST. IGNATIUS' COLLEGE, MALTA.

Summary of Observations, 1901.

Results of Observations taken during the Year.	Mean for the last 18 years.
Mean Reading of the Barometer .....inches 30·125	30·027
Highest „ on Jan. 24th „ 30·503	30·508
Lowest „ on March 20th „ 29·411	29·388
Range of Barometer Readings „ 1·092	1·120
Highest Reading of a Max. Therm. on July 3rd 103·0	98·8
Lowest Reading of a Min. Therm. on Jan. 6th 39·5	40·5
Range of Thermometer Readings 63·5	58·3
Greatest Range in 24 hours on the April 12th 33·1	28·2
Mean of all the Highest Readings..... 72·6	72·5
Mean of all the Lowest Readings..... 58·4	59·5
Mean Daily Range..... 14·2	13·0
Mean Temperature (deduced from Max.& Min.) 64·7	65·0
Mean Temperature (deduced from Dry Bulb) 64·9	64·5
Adopted Mean Temperature 64·8	64·8
Mean Temperature of Evaporation .. 60·2	59·9
Mean Temperature of Dew Point 56·5	56·3
Mean elastic force of Vapour .....inches 0·457	0·454
Mean weight of Vapour in a cub. ft. of air grains 5·2	5·1
Mean additional weight required for saturation,, 1·8	1·8
Mean degree of Humidity ... 76	76
Mean weight of a cubic foot of air. ... grains 527·1	527·8
Total fall of rain in the year inches 24·828	19·894
Number of days on which Rain fell 81	77
Mean amount of cloud (an overcast sky = 10) 2·9	3·7
Total number of miles of wind indicated ... 85074	84953
Mean Velocity of Wind per hour..... miles 9·7	9·9

SINCE MAY, 1883.

The Maximum monthly mean height of the Barometer was

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	30·638
The lowest ,, ,, on January 17th, 1886, and was		29·155
Extreme range	inches	1·483
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		83·2
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 ,, Janvay 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 3rd July, 1901, and was		162·9
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.

In Sunshine, the highest reading was $114\cdot3^{\circ}$ on the 31st.

On Ground, the lowest reading was $35\cdot4^{\circ}$ on the 6th

The Sea has averaged $59\cdot3^{\circ}$.

Thunderstorms passed on the 2nd, 12th, 14th, 15th, 19th, and 22nd.

Lightning was seen on the 13th and 23rd.

Hail fell on the 2nd, 5th, 6th, 14th, 15th, and 22nd.

Total Rainfall since last June, $10\cdot488$ inches; the average of 18 years, $15\cdot474$ inches.

FEBRUARY.

In Sunshine, the highest reading was $122\cdot3^{\circ}$ on the 26th and 27th.

On Ground, the lowest reading was $36\cdot2^{\circ}$ on the 15th.

The Sea has averaged $60\cdot2^{\circ}$.

Thunderstorms passed on the 15th, 17th, and 24th.

Lightning was seen on the 10th.

Hail fell on the 18th and 19th.

Total Rainfall since last June, $14\cdot124$ inches; the average of 18 years, $17\cdot541$ inches.

MARCH.

In Sunshine, the highest reading was $129\cdot5^{\circ}$ on the 31st.

On Ground, the lowest reading was $39\cdot9^{\circ}$ on the 25th.

The Sea has averaged $61\cdot9^{\circ}$.

Thunderstorms passed on the 5th and 11th.

Hail fell on the 5th.

Total Rainfall since last June, $14\cdot936$ inches; the average of 18 years, $18\cdot570$ inches.

APRIL.

In Sunshine, the highest reading was 136·8 on the 12th.

On Ground, the lowest reading was 45·6° on the 21st

The Sea has averaged 62·9°.

Lightning was seen on the 26th.

Total Rainfall since last June, 15·031 inches ; the average of
18 years, 19·625 inches.

MAY.

In Sunshine, the highest reading was 139·4° on the 31st.

On Ground, the lowest reading was 46·0° on the 6th and 13th.

The Sea has averaged 65·8°.

Thunderstorms passed on the 13th and 14th.

Lightning was seen on the 19th.

Hail fell on the 12th.

Total Rainfall since last June, 16·575 inches ; the average of
17 years, 20·253 inches.

JUNE.

In Sunshine, the highest reading was 140·0° on the 13th and
27th.

On Ground, the lowest reading was 56·2° on the 20th.

The Sea has averaged 72·2°.

Lightning was seen on the 11th and 13th.

JULY.

In Sunshine, the highest reading was 162·9° on the 3rd.

On Ground, the lowest reading was 60·3° on the 8th.

The sea has averaged 80·5°

Lightning was seen on the 13th, 16th, 19th, and 20th.

Total Rainfall since last June 0·0 inches ; the average of 18
years, 0·030 inches.

AUGUST.

In Sunshine, the highest reading was 148·7° on the 27th.

On Ground, the lowest reading was 62·5° on the 11th.

The Sea has averaged 78·5°.

Thunderstorms passed on the 5th.

Lightning was seen on the 14th, 15th, 17th, and 18th.

Total Rainfall since last June 0·156 inches ; the average of 18 years, 0·112 inches.

SEPTEMBER.

In Sunshine, the highest reading was 149·6° on the 2nd.

On Ground, the lowest reading was 56·5° on the 29th.

The Sea has averaged 78·0°.

Lightning was seen on the 4th, 6th, 13th, 14th, 21st, 22nd, and 28th.

Total Rainfall since last June, 0·346 inches ; the average of 18 years, 1·047 inches.

OCTOBER.

In Sunshine, the highest reading was 140·9° on the 1st.

On Ground, the lowest reading was 48·1° on the 27th.

The Sea has averaged 71·6°.

Thunderstorms passed on the 13th, 21st, and 26th.

Lightning was seen on the 5th, 7th, 8th, 14th, 15th, and 29th.

Total Rainfall since last June 6·012 inches ; the average of 18 years, 3·984 inches.

A Lunar rainbow was visible at 10 15 p.m. on 30th.

NOVEMBER.

In Sunshine, the highest reading was 125·2° on the 1st.

On Ground, the lowest reading was 40·9 on the 3rd.

The Sea has averaged 68·7°.

Thunderstorms passed on the 2nd and 3rd.

Lightning was seen on the 1st and 28th.

Hail fell on the 2nd and 3rd,

Total Rainfall since last June 11·169 inches ; the average of 18 years, 7·330 inches.

DECEMBER.

In Sunshine, the highest reading was $119\cdot8^{\circ}$ on the 29th.

On Ground, the lowest reading was $36\cdot9^{\circ}$ on the 1st.

The Sea has averaged $65\cdot5^{\circ}$.

Thunderstorms passed on the 15th.

Lightning was seen on the 6th and 22nd.

Hail fell on the 15th and 27th.

Total Rainfall since last June $13\cdot105$ inches ; the average of
18 years, $11\cdot610$ inches.

NOTES FOR THE YEAR.

In Sunshine, the highest reading was $162\cdot9^{\circ}$ on the 3rd July.

On Ground, the lowest reading was $35\cdot4^{\circ}$ on the 6th January.

The Sea has averaged $68\cdot8^{\circ}$.

Thunderstorms passed on 20 days.

Lightning was seen on 32 days.

Hail fell on 15 days.

On 19 days only did the Black bulb in Vacuo read less than
 100° , on 8 of which it read over 95° .

Corrigenda—

July, 1900. Fall of rain—Mean of 17 years should be $0\cdot032$
inches, not 1 as given.

November, 1900. Mean of all the Highest Readings should
be $71\cdot1^{\circ}$, not $71\cdot7^{\circ}$ as given.

J. F. DOBSON, S.J.