• . .

RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

1914

UNDER THE DIRECTION OF

SIR F. W. DYSON, M.A., LL.D., F.R.S.,

PUBLISHED BY ORDER OF THE BOARD OF ADMIRALTY, IN OBEDIENCE TO HIS MAJESTY'S COMMAND.



LONDON:

PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S STATIONERY OFFICE
BY NEILL & CO., LIMITED, 212 CAUSEWAYSIDE, EDINBURGH.

1918.

[Crown Copyright Reserved.]

INDEX.

RODUCTION.														PAC
PERSONAL ESTABLISHMENT	AND A	RRAN	GEM	ENTS			•						•	E
GENERAL DESCRIPTION OF T	гне В	UILDI	NGS	AND	Inst	RUME	NTS							E
SUBJECTS OF OBSERVATION					•			•		-				E
Magnetic Instruments—														
DECLINATION MAGNET FO	R ABS	OLUT	E DE	ETERN	IINAT	ions								E :
DIP INSTRUMENT											•			E
ABSOLUTE HORIZONTAL F	ORCE	Instr	UME	NT										E
DIP INDUCTOR														\mathbf{E}
DECLINATION VARIOMETER	R.													E
HORIZONTAL FORCE VARIE	OMETE	R.												Ε,
VERTICAL FORCE VARIOM	ETER													Εv
Magnetic Reductions												•		E
TABLE OF MAGNETIC ELE	MENTS	DET	ERMI	NED	AT G	REEN	WICH	FRO	м 184	£1.				Ех
		-				J								
IETEOROLOGICAL INSTRUME	NTS	•												
STANDARD BAROMETER														Еx
PHOTOGRAPHIC BAROMETE	R.													T21
			•					٠				•		Ех
DRY AND WET BULB THE	ERMOM													
DRY AND WET BULB THE PHOTOGRAPHIC DRY AND		ETERS	3.				•	•	•	•				Ех
	WET]	ETERS BULB	S . Тне	ERMOI	METEI	R S	•		•					Е х Е х
PHOTOGRAPHIC DRY AND RADIATION THERMOMETER	WET	ETERS BULB	S. Тне	ERMOI	METE)	Rs	•	•	•		•			E x E x E x
PHOTOGRAPHIC DRY AND	WET I	ETERS BULB	S . Тне	ERMOI	METE)	Rs	•		•					E x E x E x
PHOTOGRAPHIC DRY AND RADIATION THERMOMETER EARTH THERMOMETERS	WET I	ETERS BULB	Тне	ERMOI	METE)	Rs	•		•					Ex Ex Ex Ex Ex
PHOTOGRAPHIC DRY AND RADIATION THERMOMETER EARTH THERMOMETERS OSLER'S ANEMOMETER.	Wet]	ETERS BULB	Тне	ERMOI	METE)	38	· .	•	•		•			ExExEx
PHOTOGRAPHIC DRY AND RADIATION THERMOMETER EARTH THERMOMETERS OSLER'S ANEMOMETER. ROBINSON'S ANEMOMETER	WET	ETERS BULB	THE		METEI	38								ExExExExEx

INDEX.

RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS IN TABULAR	
ARRANGEMENT:—	PAGE
Results of Magnetical Observations	E 1
Table I.—Mean Magnetic Declination West for each Civil Day	E 2
Table II.—Monthly and Annual Mean Diurnal Inequalities of Magnetic Declination West .	E 2
TABLE III.—Diurnal Range of Declination on each Civil Day, as deduced from the Twenty-four	
Hourly Measures of Ordinates of the Photographic Register	E 3
TABLE IV.—Monthly and Annual Mean Diurnal Inequalities of Magnetic Declination West from	
Hourly Ordinates, on Five Selected Days in each Month	E 3
Table V.—Mean Horizontal Magnetic Force for each Civil Day	E 4
TABLE VI.—Monthly and Annual Mean Diurnal Inequalities of Horizontal Magnetic Force .	E 4
Table VII.—Diurnal Range of Horizontal Magnetic Force on each Civil Day, as deduced from	
the Twenty-four Hourly Measures of Ordinates of the Photographic Register	E 5
TABLE VIII.—Monthly and Annual Mean Diurnal Inequalities of Horizontal Magnetic Force	
from Hourly Ordinates, on Five Selected Days in each Month	E 5
Table IX.—Mean Vertical Magnetic Force for each Civil Day	E 6
Table X.—Monthly and Annual Mean Diurnal Inequalities of Vertical Magnetic Force	E 6
Table XI.—Diurnal Range of Vertical Magnetic Force on each Civil Day, as deduced from the	
Twenty-four Hourly Measures of Ordinates of the Photographic Register	E 7
TABLE XII.—Monthly and Annual Mean Diurnal Inequalities of Vertical Magnetic Force from	
Hourly Ordinates, on Five Selected Days in each Month	E 7
Table XIII.—Mean Temperature for each Civil Day within the box inclosing the Horizontal	
Force Magnet	E 8
TABLE XIV.—Monthly and Annual Mean Temperature at each Hour of the Day within the box	
inclosing the Horizontal Force Magnet	E 8
Table XV.—Mean Temperature for each Civil Day within the box inclosing the Vertical Force	
Magnet	E 9
TABLE XVI.—Monthly and Annual Mean Temperature at each Hour of the Day within the box	
inclosing the Vertical Force Magnet	E 9
Table XVII.—Values of the Coefficients and Phase Angles in the Periodical Expression—	
$V_t = m + a_1 \cos t + b_1 \sin t + a_2 \cos 2t + b_2 \sin 2t + \&c.$	
$= m + c_1 \sin(t + a) + c_2 \sin(2t + \beta) + \&c.$	
for the Magnetic Diurnal Inequalities	E 10
Table XVIII.—Determinations of the Absolute Value of Horizontal Magnet Force	E 11
Table XIXA.—Results of Observations of Magnetic Dip with the Airy Dip Circle	E 11
Table XIX.—Results of Observations of Magnetic Dip with the Dip Inductor	E 12
TABLE XX.—Annual Summary of the Magnetic Elements	E 12

INDEX.

RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS—	contin	ued.		PAGI
Magnetic Disturbances	•	•	•	E 13
Brief description of Magnetic Movements (superposed on the ordinary diurnation $3'$ in Declination, 20γ in Horizontal Force, or 12γ in Vertical			,	
from the Photographic Register		•	•	E 14
PLATES I.—III., photo-lithographed from tracings of the Photographic Register Disturbances.	s of M	I agne	etic	
RESULTS OF METEOROLOGICAL OBSERVATIONS		•		E 21
Daily Results of the Meteorological Observations				E 22
Highest and Lowest Readings of the Barometer			•	E 46
Highest and Lowest Readings of the Barometer for each Month	•			E 46
Monthly Results of Meteorological Elements	•		•	E 47
Monthly Mean Reading of the Barometer at every Hour of the Day				E 48
Monthly Mean Temperature of the Air at every Hour of the Day	•		•	E 48
Monthly Mean Temperature of Evaporation at every Hour of the Day .				E 49
Monthly Mean Temperature of the Dew-Point at every Hour of the Day .		•	•	E 49
Monthly Mean Degree of Humidity at every Hour of the Day	•			E 50
Total Amount of Sunshine registered in each Hour of the Day in each Month	•	•	•	E 50
Readings of Thermometers on the ordinary stand in the Magnetic Pavilion End	closur	e.	•	E 51
Amount of Rain collected in each Month by the different gauges			•	E 54
Mean Hourly Measures of the Horizontal Movement of the Air in each Month,	and G	reate	est	
and Least Hourly Measures as derived from the Records of Robinson's Anen	aomet	ter		E 54
OBSERVATIONS OF LUMINOUS METEORS				E 55

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1914.

Introduction.

In the present volume a brief account is given of the instruments and methods of reduction now in use. Fuller information, principally of a historical nature, may be found in the Introductions to the volumes for 1909 and previous years.

§ 1. Personal Establishment and Arrangements.

During the year 1914 the personal establishment in the Magnetical and Meteorological Department of the Royal Observatory consisted of Walter William Bryant, Superintendent, aided by one Junior Assistant, David J. R. Edney, and four Computers. The Computers employed during the year were:—William H. Timbury, Sydney T. Divers, Harold George Showell, Harry Joseph Mitchell, Ralph Walden, Alfred W. Hills, and Edward Leary.

§ 2. General Description of the Buildings and Instruments of the Magnetical and Meteorological Observatory.

The buildings and instruments remained substantially unchanged throughout the year 1914, except for the adoption of the dip inductor as the standard dip instrument, in place of the Airy dip circle. For detailed historical information, reference should be made to the Introductions to earlier volumes of these observations.

The instruments for photographic registration of changes in the atmospheric pressure, magnetic declination, and horizontal and vertical magnetic force, are situated in an underground chamber (known as the Magnet Basement); this Greenwich Magnetical and Meteorological Observations, 1914.

chamber is kept at a nearly uniform temperature by means of gas stoves. The small variations of temperature are recorded on a Richard thermograph.

In a wooden building (called the Magnet House) above this chamber are placed the standard barometer, and a Thomson electrometer for photographic registration of the variations of atmospheric electricity. A platform erected above the roof of the Magnet House is used for the observation of meteors; and a nephoscope is mounted there for occasional observations. On the same platform there is a rain-gauge, at a height of 20 feet above the ground.

Near the Magnet House are the earth thermometers, the photographic dry and wet-bulb thermometer apparatus, a rain-gauge, and a set of dry-bulb, wet-bulb, and maximum and minimum thermometers in a Stevenson screen.

The Magnet House is built of non-magnetic material, but during the years 1891–1898 considerable masses of iron were introduced into its neighbourhood by the building of certain additions to the Observatory. Hence the instruments which were formerly placed in the Magnet House, for absolute determinations of magnetic declination, dip, and horizontal force, were transferred to the Magnetic Pavilion. This building is constructed of non-magnetic materials, and stands in an enclosure in Greenwich Park, 350 yards to the east of the Observatory, on a site carefully chosen for its freedom from abnormal magnetic conditions. In the enclosure there are two sets of thermometers used for ordinary eye observations, thermometers for solar and terrestrial radiation, and two rain-gauges.

The anemometers, three rain-gauges, and the sunshine recorder are fixed above the roof of the Octagon Room (the ancient part of the Observatory).

The new Magnetograph House, which was under construction in 1913, and which is situated in the Magnetic Enclosure, has been brought to completion during 1914. Progress has also been made with the instrumental equipment, but this was not ready for regular working until after the close of the year. This building and its instruments are to replace the present Magnet House and the old Magnetographs.

§ 3. Subjects of Observation in the year 1914.

The observations comprise determinations of absolute magnetic declination, horizontal force, and dip; continuous photographic record of the variations of

declination, horizontal force, and vertical force; eye observations of the ordinary meteorological instruments, including the barometer, dry and wet-bulb thermometers, radiation and earth thermometers; continuous photographic record of the variations of the barometer, dry and wet-bulb thermometers, and electrometer (for atmospheric electricity); continuous automatic record of the direction, pressure, and velocity of the wind, and of the amount of rain; registration of the duration of sunshine; observations of some of the principal meteor showers; general record of ordinary atmospheric changes of weather, including numerical estimation of the amount of cloud, special cloud observations in connection with the International Balloon ascents, and occasional phenomena.

Since 1885, Greenwich civil time, reckoning from midnight to midnight, and counting from 0 to 24 hours, has been employed throughout the magnetical and meteorological sections, except in regard to the sunshine registers (see p. E 50).

§ 4. Magnetic Instruments.

Declination Magnet for Absolute Determinations.—Since 1899 January 1, regular observations of declination have been made in the Magnetic Pavilion. The hollow cylindrical magnet Elliot No. 75 is used in conjunction with a telescope by Troughton and Simms, placed on a pier about 2 feet south of the magnet. The magnet is about 4 inches long, and at one end is an engraved glass scale for collimation. The telescope is 21 inches long, and the aperture of its object-glass is 2 inches; its horizontal circle is 16.6 inches in diameter, divided to 5' and read by verniers to 5". It has no vertical circle. The eye-piece has one fixed horizontal wire and one vertical wire, moved by a micrometer screw, the value of one revolution of which is 1' 34".2. The adopted collimation reading was 100°.300 until February 5, when it became necessary to insert a new wire, for which the adopted reading was 100°.140.

The vertical axis of the telescope is adjusted by means of a fixed level, one division of which corresponds to $1''\cdot 15$. The level correction for inequality of the pivots of the axis of the telescope was found in 1898 to be $-6^{\text{div}}\cdot 0$ or $-6''\cdot 9$.

Since 1913 September the magnet has been suspended by a tungsten fibre of 0.02 mm. diameter, and about 25 cm. length. The effect of 90° of torsion is to turn the magnet through about 4′. The torsion is found to change little or not at all; it is determined monthly, and a correction on this account is made when necessary. The collimation error is also determined monthly. This is done by

observing the position of the magnet in its usual position with the scale direct, then with the scale reversed (by turning the magnet through 180° in its carrier, about the longitudinal axis), and again direct.

The reading of the azimuth circle corresponding to the astronomical meridian is determined by observations of Polaris, taken once a week whenever practicable.

Declination observations have been made at least thrice weekly throughout 1914.

DIP INSTRUMENT.—The standard dip instrument in use until the beginning of 1914 was the Airy dip circle, described in detail in the 1912 volume. Dip observations were made with this twelve times in January, and weekly for the rest of the year. Two needles, D_1 and D_2 , were used, which gave results differing somewhat systematically by about 1'.5.

ABSOLUTE HORIZONTAL FORCE INSTRUMENT.—This instrument is of the Kew pattern, and rests on a slate slab in the Magnetic Pavilion. A full account of its construction and use is given in earlier volumes, and will not be repeated here.

During 1914 certain of the instrumental constants were re-determined at the National Physical Laboratory, confirming the values previously used.

Observations undertaken at the Royal Observatory to determine the moment of inertia of the deflecting magnet indicated that the adopted value hitherto used was too small, thus agreeing with a former determination made in 1878 (but never used). On p. E xii, corrected mean annual absolute values of horizontal force are given instead of those published previously to 1913; the correction amounts approximately to multiplication by a factor 1.0010 (the values of the magnetic moment of the magnet also require the same correction factor), or to an increase of 18 γ in the horizontal force.

Observations of the absolute horizontal magnetic force are made weekly. Before 1912 February they were made twice monthly. Observations of the moment of inertia of the deflecting magnet are made monthly.

DIP INDUCTOR.—The dip inductor consists essentially of a coil of copper wire which can be rotated about an axis in its plane. The ends of the coil are

connected to two brushes which press upon a fixed commutator disc. The electromotive force which arises, in general, upon rotation of the coil, is detected by means of a Broca mirror galvanometer with electric light and scale. This force vanishes only when the axis of rotation lies along the direction of the magnetic field in which the instrument is situated. The spindle of the coil is journalled in a ring which can be moved in azimuth and inclination, and the observation consists in adjusting the direction of this ring and spindle until no electromotive force is indicated by the galvanometer.

The observation is made in four positions; after the first adjustment and circle readings have been made, the ring is reversed about a horizontal axis perpendicular to the spindle, and a second adjustment and readings are made: the instrument is then reversed in azimuth, and two similar observations are taken in the new position of the base. The two sets of double readings determine the magnetic dip and the circle reading corresponding to the vertical position of the spindle, after the application of corrections for level. For the latter purpose two levels are provided, resting on the base of the instrument, parallel and perpendicular to the horizontal axis of the ring. The two reversals eliminate any small errors arising from slight asymmetry in the instrument.

The two circles, for the measurement of inclination and azimuth, are each eight inches in diameter, and are read, by means of two screw micrometers in each case, to one second of arc. The levels on the base can likewise be read to one second.

The driving gear is constructed so that the coil can be rotated by the observer while standing at a distance of six feet from the instrument. In order to minimise strain on the instrument, the tension of the driving cords upon the pulley attached to the coil spindle is exactly balanced by the thrust of a rod against a small knob at the centre of the upper plane surface of the pulley. The spindle has a driving pulley at each end, for use in the direct and reversed positions.

While rotating the coil the observer can also adjust the inclination and azimuth of the spindle; this is done by means of long rods, suitably supported, which, through the agency of flexible spiral-wire couplings, actuate the slow motions on the instrument. The galvanometer, lamp, and scale are enclosed in a wooden cupboard adjacent to the driving handle and slow motion rods. The scale is viewed through a conical tube projecting from this cupboard, so that the observation may be made in daylight. The coil is rotated and the spindle is

simultaneously adjusted until the spot of light comes to rest in its normal position, after which the circles and levels are read.

The adjustment of the spindle is facilitated by the novel form of the commutator in this instrument. The fixed commutator disc is divided into four instead of two parts, and it is oriented so that two of the quadrants are in use during the two quarter-revolutions which are symmetrical about the meridianal positions of the coil. During these fractions of the revolution the electromotive force due to an azimuth error of the spindle is much greater than that due to a similar error in inclination (the latter force, moreover, is not of constant sign). During the remaining half of the revolution the reverse is the case. pairs of quadrants are connected to a switchboard near the driving handle, and the galvanometer can be switched into either circuit, thus receiving a rapidly intermittent current of generally constant sign during the rotation of the coil. This renders it possible to correct successively the inclination and azimuth errors of the spindle, and conduces to the speed and accuracy of the observations. driving cord, thrust rod, and slow motion couplings can be quickly detached for the various reversals of the spindle, and the whole observation of dip and azimuth can be made in ten minutes.

The dip inductor has been adopted as the standard dip instrument from the beginning of 1914, and observations have generally been made thrice weekly since that time.

DECLINATION VARIOMETER.—The magnet used in this instrument is 2 feet long, $1\frac{1}{2}$ inches wide, and $\frac{1}{4}$ inch thick. It is suspended by a skein of silk, consisting of a bundle of fine threads bound together at intervals of 6 or 7 inches: the skein is about 12 feet long, 6 feet of which is vertical. The magnet is taken from its carrier at the beginning of each year, in order to remove any torsion which may have accumulated; this is done by stretching the skein under the weight of a brass torsion rod for a few hours, adjusting the torsion circle till the bar rests in the magnetic meridian. The magnet is enclosed in a double wooden box, and is encircled by a copper damper to reduce accidental vibrations.

The drum for photographic registration revolves normally in 26 hours; by a change-speed device the rate of rotation can be increased twelvefold when required. The photographic sheets are changed daily at 11 a.m. Gas-light illumination is used. On each sheet a reference line is photographed by a fixed spot of light. The traces are interrupted automatically for 4 minutes at every hour, to afford a time scale. By another shutter the observer occasionally cuts

off the light for a few minutes, noting the time; this facilitates the numeration of the hourly breaks. The length of 24 hours on the sheet is about 13.3 inches.

The distance between the concave speculum mirror carried by the magnet, and the surface of the cylinder, is 134.4 inches. Since a movement of the mirror through 1° produces 2° of motion in the reflected ray, a change of 1° in declination corresponds to 119.15 mm. [0'.5 of arc per mm.] on the photographic paper. A card-board strip, graduated on this scale to degrees and minutes, is prepared for reading from the sheets.

The base line value for this magnet is adopted monthly from the absolute declination observations made in the Magnetic Pavilion.

Horizontal Force Variometer.—The magnet used in this instrument is 2 feet long, $1\frac{1}{2}$ inches broad, and about $\frac{1}{4}$ inch thick; it is enclosed in a double wooden box. The bifilar suspension consists of a silk skein passing under two small pulleys, which are attached to a vernier piece used in connection with a torsion circle on the frame which holds the magnet. The effective length of each branch of the skein is about $7^{\text{ft.}}$ $6^{\text{in.}}$; the distances between the branches at the upper and lower ends are respectively $1^{\text{in.}}\cdot 14$ and $0^{\text{in.}}\cdot 80$. The present skein was mounted in 1909 December.

The torsion circle is fixed relative to the magnet, while the vernier is movable; the circle is divided to half degrees, and read by vernier to I'. The torsion is adjusted so as to make the magnet hang approximately transverse to the magnetic meridian, the north magnetic pole being west. Accidental vibrations of the magnet are reduced by a copper damper.

The changes of horizontal force are registered photographically on the cylinder already described in connection with the declination variometer; the same reference line is used for each trace, and the arrangements for interruption of the traces are similar.

The method of determining the scale value of the records of this instrument is described in the Introduction, pp. E ix and x, for 1912. The scale value determinations are made annually on the first convenient day in the new year, and the mean value from two successive observations is adopted for the intervening year. The adopted scale value for the year 1914 is 2.96γ per mm.

E viii Introduction to Greenwich Magnetical Observations, 1914.

The temperature in the magnet basement is subject to slow changes during the course of a year, and the horizontal force records require correction on this account. The correction is applied to the mean daily and the monthly mean hourly values, using the mean daily and monthly mean hourly values of the temperature as recorded on a Richard thermograph, corrected by comparison with reading of a thermometer with its bulb projecting into the magnet box itself.

The adopted temperature correction (determined in 1885 and 1886) is -4.26γ per 1° rise in temperature, at 65° Fahrenheit; this correction increases or diminishes numerically by 0.37 γ per degree, with each rise or fall in temperature of 5°.

VERTICAL FORCE VARIOMETER.—The magnet used in this instrument is $1\frac{1}{2}$ feet long, and lozenge-shaped, being broad at the centre and pointed at the ends. The steel knife-edge, which is 8 inches long, and passes through an aperture in the magnet, rests on two agate planes. The magnet is placed unsymmetrically on the knife edge, being nearer to its southern end. The axis of vibration was originally in the magnetic meridian, but is now a few degrees distant, on account of the secular change of declination.

Two steel screw stalks, carrying adjustable screw weights, are attached to the magnet, one being vertical in order to vary the sensitiveness, the other horizontal in order to adjust the balance of the magnet, which should rest in a nearly horizontal position. The magnet and supporting frame are enclosed in a wooden box with suitable glass-covered apertures. The temperature within the box is indicated by a thermometer, the bulb of which projects well into the interior of the box.

The photographic arrangements are generally similar to those already described in connection with the declination and horizontal force variometers. The cylinder carrying the photographic sheet is in this case vertical, and also receives the record of the variations of barometric pressure. The time scale is the same as for the other magnetic registers.

The scale coefficient of the instrument is determined by the method of vibrations. When the magnet is approximately horizontal, and transverse to the magnetic meridian, the variation of the vertical force, in terms of the whole vertical force, which will produce a small angular motion θ (measured in radians) = cotan dip $\times \left(\frac{T^1}{T}\right)^2 \times \theta$; T and T^1 are the times of vibration of the magnet in the vertical and horizontal planes respectively.

Observations of T are made once a week by means of the telescope and scale provided for eye readings of the position of the magnet. The mean of 5 observations made during January gives the value $19^{s} \cdot 538$; of 13 observations made during February, March and April, $18^{s} \cdot 594$; of 13 observations during May, June and July, $18^{s} \cdot 138$; and of 20 observations during the last five months, $17^{s} \cdot 432$.

The time of vibration in the horizontal plane (T^1) is determined once every three years, as the observation requires the removal of the magnet from its box. The magnet, with all its attached parts, is suspended from a tripod, with its broad side horizontal. The arc of vibration is kept small. Observations on 1912 January 1 gave for the time of vibration in the horizontal plane $16^s \cdot 484$. This value has been adopted for the year 1914.

Since the distance between the concave mirror of the magnet and the surface of the cylinder is $100 \cdot 2$ inches, the length on the cylinder, in inches, which corresponds to a change of $0 \cdot 01$ part of the whole vertical force $= 2 \times 100 \cdot 2 \times \tan \operatorname{dip} \times (\frac{T}{T^1})^2 \times 0 \cdot 01$. Taking $T = 19^{\text{s}} \cdot 538$, $T^1 = 16^{\text{s}} \cdot 484$, and $\operatorname{dip} = 66^{\circ} 51' 13''$, this length is found to be $6 \cdot 585$ inches. The cardboard scale, which is used for measuring the curves for the year, is constructed with this as unit. The corresponding values for the three other periods are $5 \cdot 964$ inches, $5 \cdot 675$ inches and $5 \cdot 242$ inches respectively.

The temperature corrections for this magnet are applied in a manner similar to that described for the horizontal force variometer. The correction (which is constant over the normal temperature range) is $-9.20 \, \gamma$ per 1° Fahrenheit.

§ 5. Magnetic Reductions.

The results given in the magnetic section refer to the civil day, commencing at midnight.

Before the photographic records of magnetic declination, horizontal force, and vertical force are discussed, they are divided into two groups—one including all days on which the traces show no particular disturbance, and which, therefore, are suitable for the determination of diurnal inequality; the other comprising days of unusual and violent disturbance, when the traces are so irregular that it appears impossible to treat them except by the exhibition of every motion of each magnet through the day. Following the principle of separation hitherto adopted,

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS, 1914.

5 b

there are no days in the year 1914 which are classed as days of great disturbance. Days of lesser disturbance are April 6, May 31, July 5, July 29–31, September 27, October 28, and December 28. When two days are mentioned, it is to be understood that the reference is usually to one set of photographic sheets extending from noon to noon, and including the last half and the first half respectively of two consecutive civil days.

Through each photographic trace, including those on days of lesser disturbance, a pencil line was drawn, representing the general form of the curve without its petty irregularities. The ordinates of these pencil curves were then measured, with the proper pasteboard scales, at every hour; and from the tables of these measures, for each calendar month, are obtained the mean monthly values for each hour of the day, and the mean daily value of the element for each day of the month. The daily mean is taken from the 24 ordinates 0^h to 23^h. Tables I. to IV. contain the results for declination, Tables V. to VIII. those for horizontal force, and Tables IX. to XII. those for vertical force. For each element the mean daily value and daily range are given for every day of the year (except January 1 for all elements, and December 31 for horizontal and vertical force), together with the monthly and annual mean diurnal inequalities for all days and for quiet days (as selected by the International Committee). In the formation of diurnal inequalities it is unimportant whether a day omitted be a complete civil day, or the parts of two successive civil days making together a whole day, although in the latter case the results are not available for daily values. No days were omitted on account of great disturbance in the formation of these Tables.

By means of two stoves placed in the Basement, the temperature has been kept nearly constant throughout the year, the endeavour being to keep it as near to 67° as possible. The results in Tables V. to XII. are corrected for temperature, the corrections applied (which are mentioned in the description of each instrument) being founded on the daily and hourly values of temperature given in Tables XIII. to XVI., as mentioned on p. E viii.

The variations of declination are given in arc and those of horizontal and vertical force in C.G.S. measure.

The magnetic diurnal inequalities of declination, horizontal force, and vertical force, for each month and for the year, as given in Tables II., VI., and X., have been treated by the method of harmonic analysis, and the results are given in Table XVII.

In Table XVIII. the absolute determinations of horizontal force are given both as observed, and also as reduced to the mean value for the month. The latter was effected by application of the difference between the horizontal force ordinate at the time of observation and the mean value for the month, as obtained from the photographic register.

As regards magnetic dip, the result of each observation of dip with the dip inductor is given in Table XIX.; these have not been reduced to the mean value for the month, but a correction has been applied on account of the diurnal variation of dip (as deduced from Tables VI. and X.) in forming the monthly mean values of dip given in Table. The dip needle observations are given in Table XIXa.

Table XX. contains an annual summary of the magnetic elements giving the mean monthly values, the monthly mean diurnal ranges, and sums of hourly deviations from mean.

In Tables IV., VIII., and XII. are given mean diurnal inequalities of declination, horizontal force, and vertical force derived from five quiet days each month. From 1883 to 1910 the quiet days were selected by the Astronomer Royal; since 1911 the days selected by the International Committee have been adopted.

Reduced copies of the magnetograms for certain disturbed days (mentioned on p. Ex) have been printed in each volume since 1882. The list of these days since the year 1889 has been selected in concert with M. Mascart, or his successor M. Angot, so that the two Observatories of Val Joyeux (formerly of the Parc Saint Maur) and Greenwich should publish the magnetic registers for the same days of disturbance with a view to the comparison of the results. As far as possible the days of greater disturbance are those selected by the International Committee.

The plates are followed by a brief description of other significant magnetic motions (superposed on the ordinary diurnal movement) recorded during the year.

With regard to the plates, on each day three distinct registers are usually given, viz.: declination, horizontal force, and vertical force; the curves are affected, slightly as compared with the amount of motion on disturbed days, by the small recorded changes of temperature of the magnets. The recorded hourly temperatures are inserted on the plates, and the temperature-corrections of the magnets are given at pages E viii and E ix. Briefly, an increase of temperature of 1° F. throws the horizontal force curve upward by about $4\cdot3$ γ , and the vertical force curve downward by about $9\cdot2$ γ .

E xii Introduction to Greenwich Magnetical Observations, 1914.

At the foot of each plate, scales, in C.G.S. measure, are given for each of the magnetic registers.

The subjoined table gives the values of Magnetic Elements determined at the Royal Observatory, Greenwich:—

Year.	Declination West.	Horizontal Force,† C.G.S. Unit.	Dip.‡	Year.	Declination West.	Horizontal Force,† C.G.S. Unit.	Dip.‡
1841	23.16.2		0 /	1878	18.49.3	0.1802	67.38·2
1842	23.14.6		• •	1879	18.40.5	0.1805	67.37.0
1843	23.11.7	••	69. 0.6	1880	18.32.6	0.1802	67.35.7
	23.15.3	• • •	69. 0.3	1881	18.27.1	0.1807	67.34.7
1844 1845	22.56.7		68.57.5	1882	18.22.3	0.1806	67.34.2
1846	22.49.6	0.1731	68.58.1	1883	18.15.0	0.1812	67.31.7
1847	22.490	0.1736	68.59.0	1884	18. 7.6	0.1814	67.29.7
1848	22.51.8	0.1731	68.54.7	1885	18. 1.7	0.1817	67.28.0
1849	22.37.8	0.1733	68.51.3	1886	17.54.5	0.1818	67.27·1
1850	22.23.5	0.1738	68.46.9	1887	17.49.1	0.1810	67.26.6
1851	22.23.3	0.1744	68.40.4	1888	17.40.4	0.1822	67.25.6
1852	22.17.9	0.1745	68.42.7	1889	17.34.9	0.1823	67.24.3
1853	22.17-9	0.1748	68.44.6	1890	17.28.6	0.1825	67.23.0
1854	22.101	0.1749	68.47.7	1891	17.23.4	0.1827	67.21.5
1855	21.48.4	0.1756	68.44.6	1892	17.17.4	0.1829	67.20.0
1856		0.1759	68.43.5	1893	17.11.4	0.1831	67.17.9
1857	21.43.5	0.1769	68.31.1	1894	17. 4.6	0.1831	67.17.4
1858	21.35·4 21.30·3	0.1762	68.28.3	1895	16.57.4	0.1834	67.16.1*
1859	21.30.3	0.1761	68.26.9	1896	16.51.7*	0.1835*	67.15.1*
1860	21.23 3	i	68.30.1	1897	16.45.8*	0.1838	67.13.5*
1,000	21.14-3	0.1773	68.24.6	1898	16.39.2*	0.1840	67.12.1
1861	21. 5.5		68.15.8	1899	16.34.2	0.1843	67.10.5
-06.		0.1759	68. 9.6	1900	16.29.0	0.1846	67. 8.8
1862	20.52.6	0.1763	68. 7·0	1900	16.26.0	0.1850	67. 6·4
1863	20.45.9	0.1764		1901	16.22.8	0.1852	67. 3.8
1864	••	0.1767	68. 4·1 68. 2·7	· /	16.19.1	0.1852	67. 1.2
1865	20.33.9	0.1767	68. 1·3	1903 1904	16.15.0	0.1854	66.57.6
1866	20.28.0	0.1773		1904	16. 9.9	0.1854	66.56.3
1867	20.20.5	0.1777	67.57.2	1905	16. 3.6	0.1854	66.55.6
1868	20.13.1	0.1779	67.56.5	1900	15.59.8	0.1855	66.56.2
1869	20. 4.1	0.1782	67.54.8	1907	15.53.5	0.1854	66.56.3
1870	19.53.0	0.1784	67.52.5	_		0.1854	66.54·1
1871	19.41.9	0.1786	67.50.3	1909	15.47.6	0.1855	66.52.8
1872	19.36.8	0.1789	67.47.8	1910	15.41.2	0.1855	66.52·I
1873	19.33.4	0.1793	67.45.8	1911	15.33.0	0.1855	66.51.8
1874	19.28.9	0.1797	67.43.6	1912	15.24.3	0.1853	66.50.5
1875	19.21.2	0.1797	67.42.4	1913	15.15.2	0.1853	66.51.2
1876	19. 8.3	0.1799	67.41.0	1914	15. 6.3	0.1053	00.51.2
1877	18.57.2	0.1800	67.39.7	l	1	({	

^{*} Corrected for the effect of the iron in the new buildings (see p. E ii).

[†] The values of the Horizontal Force from 1861 differ from those given in previous volumes, on account of the correction mentioned on p. E iv.

[†] These values of the dip differ slightly in some instances from those given in previous volumes, on account of the correction mentioned on p. E v, 1912 volume.

In 1861 the new Unifilar Apparatus for absolute Horizontal Force and the Airy Dip-Circle were introduced, both sets of apparatus being used in that year. In 1864 the excavation of the Magnetic Basement caused the suspension of complete Declination Observations. From 1914 the Dip was determined with the Inductor.

§ 6. Meteorological Instruments.

Standard Barometer.—The standard barometer, mounted in 1840 on the southern wall of the western arm of the Upper Magnet Room, is Newman No. 64. Its tube is 0ⁱⁿ. 565 in diameter, and the depression of the mercury due to capillary action is 0ⁱⁿ. 002, but no correction is applied on this account. The cistern is of glass, and the graduated scale and attached rod are of brass; at its lower end the rod terminates in a point of ivory, which in observation is made just to meet the reflected image of the point as seen in the mercury. The scale is divided to 0ⁱⁿ. 05, subdivided by vernier to 0ⁱⁿ. 002. The height of the barometer above the mean level of the sea is 159 feet.

The barometer is read at 9^h, 12^h (noon), 15^h, 21^h (civil reckoning) every day. Each reading is corrected by application of an index-correction, and reduced to the temperature 32°. The readings thus found are used to determine the value of the instrumental base line on the photographic record.

PHOTOGRAPHIC BAROMETER.—The barometric record is made on the same cylinder as is used for magnetic vertical force. A siphon barometer fixed to the northern wall of the Magnet Basement is employed, the bore of the upper and lower extremities of the tube being about 1.1 inch, and that of the intermediate portion 0.3 inch. A metallic plunger, floating on the mercury in the shorter arm of the siphon, is partly supported by a counterpoise acting on a light lever, leaving a definite part of its weight to be supported by the mercury. The lever carries at its other end a vertical plate of aluminium, having a small horizontal slit, whose distance from the fulcrum is about eight times that of the point of connexion with the float, and whose vertical movement is therefore about four times that of the ordinary barometric column. The light of a gas lamp, passing through this slit and falling on a cylindrical lens, forms a spot of light on the paper. The barometer can, by screw action, be raised or lowered so as to keep the photographic trace in a convenient part of the sheet. A base line is traced on the sheet, and the record is interrupted at each hour by the clock, and occasionally by the observer, in the same way as for the magnetic registers. The length of the time scale is also the same.

The barometric scale, determined by experimentally comparing the measured movement on the paper with the observed movement of the standard barometer, is such that one inch of barometric movement is equivalent to 4ⁱⁿ··16 on the paper.

The base lines on the barometric sheets are determined from the observations of the standard barometer. Hourly measurements are made from the sheets as in the case of the magnetic registers. As the diurnal change of temperature in the Basement is very small, no appreciable differential effect is produced on the photographic register by the expansion of the column of mercury.

DRY AND WET BULB THERMOMETERS.—The Standard dry and wet bulb thermometers and maximum and minimum self-registering thermometers, both dry and wet, are mounted on a revolving frame planned by Sir G. B. Airy. This, together with details of the thermometers and the corrections applicable to them, may be found fully described in the volumes for 1912 and previous years.

Since 1899 January 4 this stand has stood in an open position in the Magnetic Pavilion enclosure.

The corrections to be applied to the thermometers in ordinary use are determined, usually once each year for the whole extent of scale actually employed, by observations at 32° in pounded ice and by comparison with the standard thermometer No. 515, kindly supplied to the Royal Observatory by the Kew Committee of the Royal Society.

The dry bulb thermometer used throughout the year was Negretti and Zambra, No. 45354. The correction $-0^{\circ}\cdot 4$ has been applied to the readings of this thermometer. The wet bulb thermometer used throughout the year was Negretti and Zambra, No. 94737. The correction $-0^{\circ}\cdot 2$ has been applied to the readings of this thermometer.

The dry and wet bulb thermometers are read at 9^h, 12^h (noon), 15^h, 21^h (civil reckoning) every day. Readings of the maximum and minimum thermometers are taken at 9^h, 15^h, and 21^h every day. Those of the dry and wet bulb thermometers are employed to correct the indications of the photographic dry and wet bulb thermometers.

Photographic Dry-Bulb and Wet-Bulb Thermometers.—The apparatus which has been in use since 1887 was designed by Sir W. H. M. Christie, and since 1899 has stood in its present position in the Magnet Ground. It is placed in a shed, 8 feet square, standing upon posts about 8 feet high, and open to the north. The apparatus is screened from the direct rays of the sun, without impeding the circulation of the air. The recording mechanism is similar in general plan to that already described in correction with the magnetometers in the Magnet Basement, the illu-

mination being by gaslight. The traces consist of broad bands, due to the free passage of light to the drum, above the mercury column in the dry-bulb, and through an air-bubble in that of the wet-bulb, crossed by fine lines caused by the shadows of the graduations on the thermometer tubes. The two traces fall on the same part of the cylinder as regards time scale. The stems of the thermometers are placed close together, each being covered by a vertical metal plate having a fine vertical slit, so that light passes through only at such parts of the bore of the tube as do not contain mercury. Further details of the thermometers and recording arrangements may be found in the volume for 1912. The scale value of the records is approximately 10° per inch.

Radiation Thermometers.—These thermometers are placed in the Magnetic Pavilion enclosure, in an open position about 50 feet south-west of the building. The thermometer for solar radiation is a self-registering mercurial maximum thermometer on Negretti and Zambra's principle, with its bulb blackened, and the thermometer enclosed in a glass sphere from which the air has been exhausted. The thermometer employed was Negretti and Zambra, No. 157738, until June 14, when it was broken by hail, and replaced by Negretti and Zambra, No. 168952. The thermometer for radiation to the sky was a self-registering spirit minimum thermometer, Negretti and Zambra, No. 140216. The thermometers are laid on short grass and freely exposed to the sky; they require no correction for index-error.

Earth Thermometers.—These four thermometers, the bulbs of which are sunk to depths of 25.6, 12.8, 6.4, and 3.2 feet below the surface, are fully described in earlier volumes. The shortest thermometer is read daily at noon, the readings being given (subject to an unknown small index correction) in the daily results. The other thermometers are read weekly on Monday at noon, but the results are not published, as the daily readings previously printed for many years seem to offer all the information which these thermometers are likely to afford. A discussion by Professor Everett of the observations up to 1859 was given in an appendix to the volume for 1860.

Osler, for continuous registration of the direction and pressure of the wind and of the amount of rain, is fixed above the north-western turret of the ancient part of the observatory. The direction of the wind is registered by means of a large vane (9^{tt.} 2^{in.} in length), connected by gearing with a rack-work carrying a pencil; the latter marks on a flat horizontally moving sheet of paper. The vane is 25

feet above the roof of the Octagon Room, 60 feet above the adjacent ground, and 215 feet above the mean level of the sea. A fixed mark on the north-eastern turret, in a known azimuth, as determined by celestial observation, is used for examining at any time the position of the direction plate over the registering table, to which reference is made by means of a direction pointer when adjusting a new sheet on the travelling board.

A circular pressure plate with an area of 192 square inches is attached two feet below the vane; moving with the latter, it is always kept directed against the wind. A light wind causes the plate to compress slender springs, the motion being registered on the horizontal sheet by a pencil connected with the plate by a flexible brass chain, which is always in tension. Higher wind pressures bring stiffer springs into play behind the plate, and the two sets of springs are adjusted by screws and clamps so as to afford fixed scales on the sheet, the scale for light winds being double that for heavy winds. The scale is determined experimentally in lbs. per square foot from time to time.

The recording sheet is changed daily at noon. The time scale, ordinarily the same as that of the magnetic registers, can be increased 24-fold by altering the gearing.

A self-registering rain gauge of peculiar construction forms part of the apparatus; this is described under the heading "Rain Gauges" in previous volumes.

Robinson's Anemometer.—This instrument, for registration of the horizontal movement of the air, is mounted above the roof of the Octagon Room. It was brought into use in 1866, and is of smaller size than that now usual, the four hemispherical cups being 5 inches in diameter, the centre of each cup being 15 inches distant from the vertical axis of rotation. The cups are 21 feet above the roof of the Octagon Room, 56 feet above the adjacent ground, and 211 feet above the mean level of the sea. A motion of the recording pencil through 1 inch corresponds to horizontal motion of the air through 100 miles. The time scale is the same as for the magnetic registers, and the sheet is changed daily at noon.

In preceding volumes the values of wind velocity V given in the tables are three times the actual velocity v of the cups. From some tests of the Browning

instrument, made by Mr. W. H. Dines at Hersham in 1889, on his whirling machine, it would appear that the relation between V and v is more correctly given by

$$V = 4.0 + 2.0 v$$

and that the instrument fails to record wind velocities less than 4 miles per hour. The values of the wind velocity given by the formula V=3v would thus be too high when V exceeds 12. Since the two formulæ agree, however, for V=12, the mean values of the wind velocity (which seldom differ much from 12) will be approximately correct in either case; therefore, for the sake of continuity and simplicity, the formula V=3v will continue to be used. In this volume, however, the greatest hourly measures (p. E 54) are given according to both formulæ, and the least hourly measures omitted.

RAIN GAUGES.—During the year 1914 eight rain gauges were employed, placed at different elevations above the ground, for which see page E 54 of the Meteorological Results.

The gauge No. 1 forms part of the Osler Anemometer apparatus, and is self-registering, the record being made on the sheet on which the direction and pressure of the wind are recorded. The apparatus is fully described in earlier volumes.

Gauge No. 2 is a ten-inch circular gauge, placed close to gauge No. 1, its receiving surface being precisely at the same level. The gauge is read daily at 9ⁿ Greenwich civil time. This is also liable to interference, just as No. 1.

Gauges Nos. 3, 4, and 5 are 8-inch circular gauges, placed respectively on the roof of the Octagon Room, over the roof of the Magnetic Observatory, and on the roof of the Photographic Thermometer Shed. All are read daily at 9^h Greenwich civil time.

Gauge No. 6 is an 8-inch circular gauge placed with the receiving surface 5 inches above the ground in the Magnetic Pavilion enclosure, about 10 feet northwest of the thermometer stand, and gauge No. 7, also an 8-inch circular gauge, is similarly placed in the ground south-east of the Magnetic Observatory. No. 8 is a new gauge of the same diameter, but of the modified Snowdon pattern adopted by the Meteorological Office, having its receiving surface 1 foot above the ground. It was brought into use 1908 January 1, being fixed SW by W from No. 6 with a clear space of 6 feet between the rims. No. 6 is the Standard gauge, Nos. 7 and

E xviii Introduction to Greenwich Meteorological Observations, 1914.

8 are used as checks on the readings of No. 6. No. 6 is read daily, usually at 9ⁿ, 15ⁿ, and 21ⁿ Greenwich civil time, and Nos. 7 and 8 at 9ⁿ only as a rule.

The present height of the Standard gauge above mean sea-level is 5 feet 9 inches less than in its old position in the Observatory Grounds, before its removal to the Pavilion Enclosure.

The gauges are also read at midnight on the last day of each calendar month.

ELECTROMETER.—The electric potential of the atmosphere is measured by means of a Thomson self-recording quadrant electrometer, made by White, of Glasgow. It is situated in the Upper Magnet Room, in connection with Lord Kelvin's water-dropping apparatus, and with the usual arrangements for photographic registration. The time scale is the same as for the magnetic registers, the hourly break of trace being made by the driving-clock itself.

SUNSHINE RECORDER.—The instrument in use is of the Campbell-Stokes pattern, with 4-inch glass globe. The recorded durations are those of *bright* sunshine, no register being obtained when the sun shines faintly through fog or cloud, or is very near the horizon. The hourly results relate to *apparent* time.

Until 1896 the instrument was placed above the Magnetic Observatory, since when it has been situated on the stage, above the Octagon Room, which carries the Robinson anemometer, about 50 feet above the ground. The glass globe formerly used was replaced in 1897 by a new one presented in 1881 by the late Mr. Campbell, as the records from 1894–1896 showed a notable falling off, pointed out by Mr. Marriott, due to deterioration of the glass of the old globe.

§ 7. Meteorological Reductions.

The results given in the Meteorological Section refer to the civil day, commencing at midnight.

All results in regard to atmospheric pressure, temperature of the air and of evaporation with deductions therefrom, are derived from the photographic records, excepting that the maximum and minimum values of air temperature are those given by eye observation of the ordinary maximum and minimum thermometers at 9^h, 15^h, and 21^h (civil reckoning), reference being made, however, to the photographic register when necessary to obtain the values corresponding to the civil

day from midnight to midnight. The hourly readings for the elements mentioned are measured direct from the photographic curves, and reduced so as to be based fundamentally, both as regards scale and zero, on the readings of the standard barometer and dry- and wet-bulb thermometers.

The barometer results are *not* reduced to sea-level, neither are they corrected for the effect of gravity, by reduction to the latitude of 45°.

The mean daily temperature of the dew-point and degree of humidity are deduced from the mean daily temperatures of the air and of evaporation by use of Glaisher's *Hygrometrical Tables*. The table of factors for this purpose may be found in the Introductions for 1910 and previous years.

In the same way the mean hourly values of the dew-point temperature and degree of humidity in each month (pages E 49 and E 50) have been calculated from the corresponding mean hourly values of air and evaporation temperatures (pages E 48 and E 49).

The excess of the mean temperature of the air on each day above the average of 65 years, given in the "Daily Results of the Meteorological Observations," is found by comparing the numbers contained in column 6 with a table of average daily temperatures found by smoothing the accidental irregularities of the daily means deduced from the observations for the sixty-five years 1841–1905. In this series the mean daily temperature from 1841 to 1847 depends usually on 12 observations daily, in 1848 on 6 observations daily, and from 1849 to 1905 on 24 hourly readings from the photographic record. The smoothed numbers are given in Table VII., Reduction of the Greenwich Meteorological Observations, Part IV., and also in the Introduction for 1910.

The daily register of rain contained in column 16 is that recorded by the gauge No. 6, whose receiving surface is 5 inches above the ground. This gauge is read at 9^h, 15^h, and 21^h Greenwich civil time. The continuous record of Osler's self-registering gauge shows whether the amounts measured at 9^h are to be placed to the same, or to the preceding civil day; and in cases in which rain fell both before and after midnight, also gives the means of ascertaining the proper proportion of the 9^h amount which should be placed to each civil day. The number of days of rain given in the footnotes, and in the abstract tables, pages E 47 and E 54, is formed from the records of this gauge. In this numeration only those days are counted on which the fall amounted to or exceeded 0ⁱⁿ.005.

E xx Introduction to Greenwich Meteorological Observations, 1914.

The indications of atmospheric electricity are derived from Thomson's Electrometer.

No particular explanation of the anemometric results seems necessary. It may be understood generally that the greatest pressures usually occur in gusts of short duration. The "Mean of 24 Hourly Measures" was in former years the mean of 24 measures of pressure taken at each hour, but commencing with 1887 January 1, it is the mean of measures, each one of which is the average pressure during the hour of which the nominal hour is the middle point.

The mean amount of cloud given in the footnotes on the right-hand pages E 23 to E 45, and in the abstract table, page E 47, is the mean found from observations made at 9^h, 12^h (noon), 15^h, and 21^h of each civil day.

For understanding the divisions of time under the headings, "Clouds and Weather" and "Electricity," the following remarks are necessary:—In regard to Clouds and Weather, the day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the indications before it apply (roughly) to the interval from midnight to 6^h, and those following it to the interval from 6^h to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column. In regard to Electricity, the results are included in one column; in this case the colons divide the whole period of 24 hours (midnight to midnight).

As regards the notation for clouds and weather, the following are the symbols which denote actual phenomena:—

a,	aurora	h,	haze	s,	stratus
ci,	cirrus	ha,	halo	sc,	scud
cl,	clouds	hl,	hail	sh, shs,	shower (s)
co,	corona	l,	lightning	sl,	sleet
cu,	cumulus	m,	mist	sm,	storm
d,	dew	n,	nimbus	sn,	snow
f,	fog	prh,	parhelion	sq, sqs,	squall(s)
fr,	frost	prs,	paraselene	t,	thunder
g,	gale	r,	rain	w,	wind
glm,	gloom				

The following are qualifying symbols used in conjunction with the above:—

c,	continued	li,	light	so,	solar
fq,	frequent	lu,	lunar	st,	strong
fr,	frozen	m,	misty	th,	thin
gt,	great	oc,	occasional	tk,	thick
ho,	hoar	p-cl,	$partially\ cloudy$	v,	variable
hy,	heavy	slt,	slight	vv.	very variable

These symbols are used in combination: thus c-hy-r denotes continued heavy rain; t-sm, thunderstorm; p-cl, partially cloudy; m-r, misty rain; and so on. In regard to clouds, cl is omitted when the type is specified: thus ci-cu denotes cirrocumulus clouds.

Howard's nomenclature is used for clouds, and the figure indicates the proportion of sky covered by cloud, an overcast sky being represented by 10.

The following is the notation employed for electricity:—

N,	negative	m,	moderate	s,	strong
Ρ,	positive	w,	weak	v,	variable
ss,	very strong	ww,	very weak	vv,	very variable

Zero potential is indicated by 0, and a dash (—) indicates accidental failure of the apparatus.

In regard to the observations of Luminous Meteors in general, only special meteor showers are watched for, such as those of April, August, and November. The observers of meteors in the year 1914 were Mr. Newton, Mr. Divers, Mr. Showell, Mr. Mitchell, Mr. Berry, and Mr. Walden. Their observations are distinguished by the initials N., D., S., M., A.B., and W. respectively. One observation made by Mr. Symms is distinguished by the initials S.S.

F. W. DYSON.

ROYAL OBSERVATORY, GREENWICH, 1918 April 8.

		,	

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS,

1914.

TABLE I.—MEAN MAGNETIC DECLINATION WEST FOR EACH CIVIL DAY. (Each result is the mean of 24 hourly ordinates from the photographic register.)

						1914.						
Day of	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Month.	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°
d	,		,	,	1	İ,	1 ,	,	,	,	<u> </u>	,
I		8.5	9.2	9.4	8.7	6.4	6.2	6.0	5.5	4.3	3.9	3.3
2	10.6	9.4	8·1	8.5	8.2	7·I	5.8	6.1	5.0	3.6	4.4	3.3
3	10.2	10.2	8.7	8.8	8.8	8.3	5.9	5.7	4.9	3.7	4.0	3.8
4	10.1	9.4	8.4	8.6	7.8	7.4	6.1	5.9	5.6	4.2	3.9	3.8
5	9.6	9.5	8•6	9.0	7.5	7.8	6.4	. 5.2	5.4	3.3	3.1	3.4
6	10.3	10.4	8∙o	9.3	7.6	7.7	6.5	4.5	4.9	4.4	3.4	3.7
7	10.7	9.1	9·1	7.5	7.5	7.7	5.5	4.1	4.2	3.7	3.7	2.6
8	9.5	8.3	8.2	7.5	7.9	8∙0	5.5	4.1	4.7	4.0	3.4	2.8
9	8.7	8.6	8.5	8∙0	8∙0	8.0	5.4	4.3	4.7	4.0	3.3	2.3
10	8.7	8.5	8.5	7.6	8.5	7.1	5.1	4.7	5.4	4· I	3.2	3.0
ΙΙ	9.8	8.7	8.8	8.2	8.5	7.0	4.4	5.7	5.0	4.1	3.2	3.4
I 2	10.6	8.2	8.2	7.8	8.3	7.3	5.2	5.7	4.2	4.3	3.3	3.2
I 3	10.2	8.4	8.5	8.6	8.4	7.4	4.1	5.9	4.3	3.3	3.0	2.6
14	10.4	8.2	8.5	8.5	7.1	7.1	4.4	5.4	3.9	3.1	4.3	2.7
15	9.8	8.6	8.3	8.5	8.5	7.4	3.8	5.6	3.5	2.8	3.0	2.6
16	9.1	8.7	7.8	9.0	7.4	6.6	4.9	5.2	3.2	2.7	3.2	3.1
17	9.8	8.8	8.3	8 ⋅ ₇	8.7	7.1	4.2	5.1	3.6	3.8	3.2	2.6
18	10.1	9.5	8.7	8.9	7.2.	7.2	3.6	5.7	4.2	4.0	2.9	2.5
19	10.0	9.2	9.2	8.5	6.9	6.8	4.7	4.9	4· I	4.2	2.8	2.4
20	10.2	8.6	8.4	8.8	6.7	7.5	4.8	5.3	4.2	4.1	3.2	3.0
2 I	10.3	8.8	8.7	9.2	6.9	6.7	4.5	5.7	4.4	4.2	3.8	2.1
22	10.9	8.4	9.0	8.7	7.2	7.2	4.2	5.3	4.3	3.6	3.7	2.1
23	10.7	8.4	8.3	9.1	8.2	7.4	5.0	5.8	2.4	3.6	3.7	1.7
24	10.4	8.1	7.5	8.5	7.9	7.4	4.2	4.7	4.0	3.4	4.0	2.3
25	10.0	9.1	7.6	8.5	8.6	8.1	4.8	5.9	3.5	2.9	4.3	2.1
26	9.7	8.5	8.5	8.4	9.1	6.5	5.7	5.7	4.0	3.4	3.3	1.9
27	10.3	8.5	8.5	9.0	8.1	6.2	5.2	5.8	2.3	4.7	3.5	1.4
28	10.2	9.2	9.4	8.7	7.4	6.9	5.2	4.9	2 · I	4.0	4.4	0.3
29	9.8		8.9	8.2	7.0	5.8	5.6	4.7	5.3	3.3	4.1	1.3
30	9.9		8.9	8.5	6.6	6.7	4.9	5.0	3.4	3⋅1	3.4	0.7
31	9.6		8.4		7.7		4.6	5.1		2.9		0.7
Means	10.0	8.9	8.5	8.5	7.8	7.2	5.1	5.3	4.5	3.7	3.6	2.5

Table II.—Monthly and Annual Mean Diurnal Inequalities of Magnetic Declination West. (The results in each month are diminished by the smallest hourly value.)

						1914	•						
Hour, Greenwich Civil Time.	January.	February.	March.	April,	Мау.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	0.1	0.2	0.8	2· I	2,2	3.6	,	2.2	1.2	, I.o	0.5	0.4	1.09
Ih	0.5	0.2	1.0	2.2	3.2	1	3.3 3.1	2.1	1.4	1.0	0.0	0.8	1.18
2	0.3	0.6	1.0	2.1	3·0	3·3 2·9	3·3 3·0	2.5	1.5	1.0	1.5	1.1	1.24
3	0.4	0.0	1.1	2.0	2.8	2.6	2.8	2.4	1.3	1.0	1.5	1.4	1.24
4	0.6	0.8	1.3	2.0	2.5	2.2	2.3	2.1	1.1	1.0	1.6	1.7	1.16
T 5	0.6	0.9	1.1	1.7	1.8	1.3	1.0	1.4	0.9	I·2	1.5	1.7	0.82
5 6	0.5	1.0	1.2	1.6	1.1	0.7	0.3	0.6	0.7	1.5	1.4	1.5	0.57
7	0.5	1.2	1.1	1.0	0.3	0.2	0.2	0.0	0.2	I·2	1.5	1.2	0.28
8	0.6	I·4	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.5	1.3	I · I	0.00
9	1.0	I·4	0.0	0.0	1.1	0.8	0.7	1.1	0.7	0.0	0.6	0.5	0.22
IÓ	1.4	1.5	1.0	1.4	2.9	2.5	2.5	3.1	3.3	I · 2	1.3	0.9	1.48
11	1.7	2.4	3.2	3.6	5.3	5.0	5.0	5.4	5.8	3.3	2.8	2.0	3.35
Noon	2.1	3.7	5.5	6.2	7.4	7·I	6.9	7.8	7.5	5.2	4.3	3.0	4.31
13 ^h	2.6	4.0	$6.\overline{3}$	8.1	8.2	8.1	8.2	8.8	8.1	5.7	4.6	3.5	5.91
14	2.0	3.8	5.9	7.9	7.9	8.2	8.4	8.4	7.0	5.0	4.1	3.2	5.24
15	1.6	3.0	4.9	6.8	7.0	7.5	7.9	6.8	5.0	3.9	3.0	2.5	4.55
16	1.6	2.4	3.5	5.6	6.0	6.6	6.8	5.1	3.2	2.9	2.1	2.0	3.24
17	1.4	2.4	2.7	4.5	5.0	5.7	5.6	3.8	2.4	2.5	1.8	1.8	2.86
18	1.2	1.9	2.2	3.3	4.5	5.2	4.7	3.0	2.2	1.0	1.7	1.8	2.36
19	0.8	1.6	2.0	2.7	4.2	4.7	3.2	2.7	2.3	1·6	1.3	1.7	1.96
20	0.4	1 · 2	1.5	2.3	4.0	4.2	3.9	2.6	2.2	I · 2	0.7	1.1	1·67
2 I	0.0	0.6	I · 2	2.2	3.0	3.9	3.4	2.3	2.0	0.8	0.3	0.4	1.31
22	0.0	0.1	0.8	2.0	3.7	3.7	3.2	2.2	1.6	0.6	0.0	0.0	1.05
23	0.0	0.0	0.7	1.9	3.3	3.6	3.0	2.3	1.3	0.7	0.1	0.0	0.97
24	0.1	0.1	0.8	2 · I	3.1	3.6	3.1	2.2	1.2	0.0	0.5	0.4	1.07
∫ Oh. 23h	0'-91	1'.55	2'.10	3'.05	3'.84	3'-90	3'.77	3'.28	2'.62	1'.91	1'.67	1'.47	2'.03
$\begin{cases} 0^{h-2}3^{h} \\ 1^{h-2}4^{h} \end{cases}$	0'.91	1'.55	2'.10	3'.05	3'.83	3'.90	3'.77	3'.28	2'.62	1'.91	1'.67	1'-47	2'.03

TABLE III.—DIURNAL RANGE of DECLINATION, on each Civil Day, as deduced from the Twenty-four Hourly Measures of Ordinates of the Photographic Registers.

						1914.						
Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	,	,	,	,			,	Ι ,	,	,	1 ,	,
1		2.8	6∙1	11.0	8.2	8.5	7.9	9.2	7.2	7.9	8.8	3.0
2	4.3	5.7	6.3	8.1	7.8	8.7	8.2	8.7	7.8	6.1	5.0	4.9
3	2.8	6.6	7.0	9.8	7.4	5.2	8.7	13.9	10.6	7.0	6.9	6.9
4	2.8	4.8	4.8	8.7	6.9	6.4	9.6	7.9	12.4	6.2	9.4	4.3
5	7.1	3.9	5.8	9.7	11.4	7.7	19.2	8.5	13.2	7.7	6·1	6.6
6	2.7	8.2	8.3	20.0	10.0	10.0	7.4	12.9	9.5	9.0	5.4	4.8
7	4.2	5.1	6.8	6.5	9.0	10.6	10.8	10.6	8.5	6.9	7.1	4.2
8	5.4	4.1	5.6	7.4	8.1	8.1	8.7	8.9	8.2	7.6	7.1	4.7
9	2.9	3.2	7.5	9.3	9.1	6.9	9.3	11.5	10.1	6.9	5.4	9.5
10	3· I	3.3	6.7	11.8	10.9	8.9	12.8	7.9	12.0	8·o	5.1	8.0
11	3.6	3.5	9.3	13.1	12.7	10.0	9.9	11.7	6.9	6.9	11.7	2.5
I 2	4.0	3.6	7.3	9.8	10.0	9.0	7.3	10.6	9.7	6.9	6.6	3.3
13	2.7	5.1	7.2	9.2	9.9	9.4	6.5	9.6	8.8	3·8	4.0	2.2
14	4.1	3.7	8.4	8.9	5.3	7.2	7.4	7.7	7.2	5.3	12.1	3.0
15	4·o	6.5	9.8	5.3	8.0	8.5	6.7	6.9	7.0	5.2	6.8	2.5
16	7.7	3.6	8 ⋅4	7.1	10.7	6.2	8.6	8·ó	9.3	5.4	5.1	9.0
17	3.8	5.0	8.7	5.9	5.7	8.7	7.7	7.8	7.9	6.7	3.7	5· 4
18	4.5	5.8	7.1	9.5	4.7	9.7	9.3	10.8	8.1	8.2	1.4	4.8
19	2.2	5.5	4.5	9.7	8.5	10·8	6.1	11.3	8.7	6.5	4.4	5.0
20	3.2	3.3	7.2	8.5	7.8	9.7	7.8	12.7	10.5	6.2	4.3	3.7
21	4.8	2.9	8.3	8.7	8.3	7.9	8.7	8.0	9.7	6·1	4.1	2.6
22	7.5	9.5	8.6	9.0	10.2	10.2	11.4	8.4	9.2	6.2	4.4	3.9
23	2.5	7.7	7.4	12.1	10.1	11.0	8.3	10.1	12.8	5.7	4.6	1.8
24	1.6	2.8	11.3	9.7	9.6	12.3	11.1	11.0	9.0	6.3	2.2	4.9
25	1.3	4.7	12.4	10.5	8.5	14.1	9.1	11.4	7.3	4·6	3.2	3.1
26	2.2	5.1	6.3	11.0	11.4	9.8	13.1	9.6	$\left \begin{array}{cc} 6.7 \\ \end{array}\right $	5.0	9.6	3.9
27	1.8	4.4	7.9	9.8	8.1	11.4	9.9	10.0	20.4	8.6	10.2	7:3
28	3.5	9.7	8.9	7.7	9.8	9.5	9.0	8.4	16.3	14.5	4.8	9.4
29	1.4	21	7.5	7.3	8.4	7.5	13.5	16.0	8.4	7.1	5.6	3.5
30	2.0		9.3	6.7	7.0	7.8	11.4	10.5	6.5	6·o	4.0	5.2
31	4.7		11.2	_ ′	11.5	/ -	7.9	8.8		7.0	T -	5.4
Means	$\frac{7}{3'\cdot6}$	5'.0	7'.8	9'.4	8'.9	9'.1	9'.5	10'.0	$\left \frac{9' \cdot 7}{9' \cdot 7} \right $	6'.8	6'.1	4'.8
	<u> </u>				nean of the t			<u> </u>	<i>)</i> /			<u>T</u>

Table IV.—Monthly and Annual Mean Diurnal Inequalities of Magnetic Declination West from Hourly Ordinates, on Five Selected Days, in each Month.

Each result is the mean of the corresponding hourly ordinates from the photographic register, on five quiet days in each month, selected by the International Committee for comparison with results of other Observatories. The results in each case are diminished by the smallest hourly value. The days included are:—

January 9, 10, 24, 25, 26.	April 12, 15, 26, 29, 30.	July 2, 8, 13, 17, 19.	(
February 1, 10, 11, 21, 25.	May 9, 10, 14, 19, 20.	August 9, 10, 14, 16, 22.	1
March 5, 22, 28, 29, 30.	June 12, 13, 16, 17, 23.	September 2, 7, 14, 21, 26.	1

October 12, 14, 24, 25, 26. November 9, 20, 21, 22, 23. December 2, 13, 15, 21, 26.

							1914.						
Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	Auugst.	September.	October.	November.	December.	For the Year.
Midn.	o·6	0.7	2.2	2.7	3.8	417	3.0	2.9	2.2	0.7	1.3	0.8	1.77
midii. Ih		0.8		'	-	4.2	2.8	2.3	2.7	0.9	1.6	1	1.82
	0.7	0.8	2.3	2.9	3.7	4.4		1	1 ' 1	1.1	1.0	1.0	1.89
2	0.7		2.3	3.0	3.8	4.2	2.5	2·3	3.0	I · I	2.1	!	,
3	0.2	0.9	2·I	3.4	3.1	3.7	2.4	i	2.3			1.3	1.73
4	0.5	1.0	2.2	3.2	2.7	3.0	1.9	2.2	2.1	1.1	2.2	1.6	1.62
5	0.4	0.6	1.9	2.7	1.7	1.8	I.O	1.4	1.7	1.5	2.0	1.3	1.15
6	0.2	0.5	2 · I	2.4	0.9	0.9	0.1	0.4	I.I	I · 4	1.6	1.5	0.72
7	0.0	0.7	1.5	1.5	0.1	0.3	0.3	0.0	0.2	1.4	1.5	0.6	0.32
8	0.1	0.8	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.4	0.00
9	0.2	0.9	0.0	0.0	0.9	o·8	0∙8	I.0	0.7	0.0	0.0	0.0	0.15
10	o·6	0.7	1.1	0.9	3.1	2.7	2.4	3.3	3.1	0.6	1.1	0.8	1.35
11	o·8	1.8	3.7	3.2	5.5	5.3	4.2	5.3	6.0	1.9	2.8	1.7	3.19
Noon	1.6	2.9	6 ·o	6.2	7.6	7.6	6.3	7.4	7.2	3.9	4.1	2.7	4.94
13h	1.8	3.2	7.3	7.7	7.9	8.3	7.0	8.2	7.6	4.9	4.4	3.0	5.59
14	1.5	2.8	7.0	7.7	7.1	8.5	6.9	8·1	6.6	4.8	3.8	2.3	5.24
15	1.2	2.1	5.8	6.6	6·1	7.4	6.2	7.1	5.0	3.5	2.7	1.6	4.26
16	1.1	1.4	4.2	5.7	4.9	6.6	5.3	5.5	3.5	2.6	2.5	1.5	3.38
17	0.8	1.6	3.2	4.8	4.5	6.0	4.6	4.7	3.1	2.4	2.6	1.3	2.95
18	0.5	1.5	2.9	3.9	4.4	5.5	3.6	3.9	3.3	1.9	2.3	1.3	2.57
19	0.2	1.3	2.9	3.5	4.4	5.3	3.7	3.8	3.3	2 · I	2.4	1.2	2.49
20	0.1	1.0	2.8	3.3	4.2	5.0	3.6	3.7	3.3	1.9	1.7	0.8	2.27
2 I	0·I	0.7	2.7	3.3	4.0	5.0	3.5	3.7	2.8	1.7	1.6	0.6	2.13
22	0.3	0.4	2.3	3.2	4.3	4.8	3.6	3.4	2.5	1.5	1.3	0.5	1.99
23	0.2	0.1	2.2	3.2	3.9	4.2	3.5	3.5	2.2	1.5	1.3	0.7	1.88
24	0.3	0.0	1.9	3.3	3.8	4.2	3.3	3.2	2.1	1.5	1.6	0.7	1.83
	0'.62	I'-22	2'.97	3'.56	3'.86	4'.43	3'.31	3'.59	3'.16	1'.89	2.08	I'-2 I	2'.31
$ \begin{cases} O^{h-23^h} \\ I^{h-24^h} \end{cases} $	0'.61	1'.19	2'.95	3'.59	3'.86	4'.43	3'.32	3'.60	3'.15	1'.92	2.'09	I'-2 I	2'.31

Table V.—Mean Horizontal Magnetic Force for each Civil Day.

(Each result is the mean of 24 hourly ordinates from the photographic register, expressed in C.G.S. units. The values are corrected for Temperature.)

						1914.						
Day of	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.
Month.						18000	γ+		,			
đ	1]			1			1				
I		544 γ	535 γ	535 γ	507 γ	516 γ	525 γ	523 y	540 γ	515 γ	509	535 γ
2	545 γ	538	520	537	497	523	520	533	529	527	510	531
3	554	533	523	534	508	515	524	520	528	542	516	529
4	558	534	530	537	533	505	518	521	522	535	516	517
5	553	526	544	546	538	509	508	524	513	530	522	508
6	552	513	553	522	534	515	509	529	508	532	526	504
7	535	520	540	525	539	517	505	524	513	522	513	524
8	552	528	550	522	536	513	520	529	526	510	502	520
9	583	536	557	520	525	507	528	548	516	517	507	514
10	590	535	544	533	532	511	525	545	518	527	518	510
11	570	528	535	534	540	514	525	525	525	526	502	513
I 2	551	536	541	533	536	528	530	525	512	508	492	521
13	557	537	555	531	536	541	528	535	526	519	506	530
14	5 4 9	549	566	536	550	549	531	537	535	524	508	530
15	546	550	562	528	563	548	518	531	527	528	509	533
16	543	542	557	529	554	527	516	537	530	539	528	535
17	553	536	546	533	545	530	522	541	537	536	524	522
18	544	530	533	531	520	537	525	528	535	527	529	529
19	539	530	537	535	514	537	5 2 8	530	527	528	527	527
20	534	540	530	526	526	537	533	521	522	530	528	520
21	534	543	532	529	549	532	534	522	527	529	526	525
22		540	533	530		529	526	525	540	537	524	526
23	533	535	535	532	555 566	529 526	523	54I	536	539	521	526
- 1	523 522			i i	- 1			1	541	542	521	526
24		541 536	541	530	557	533	530 516	541	545	550	532	514
25 26	529		535	531	533	544	_	530				519
	547	532	541	520	528	540	4 99	521 528	554	552	544	534
27	544	531	541	522	529	527	504		536	549	534	526
28	548	527	525	514	522	533	516	54°.	533	515	533	
29	552		525	523	538	529	515	534	526	511	538	519
30	557		541	526	555	530	507	535	514	517	538	524
31	558		550		576		505	535		520		٠
Means	550	536	539	527	539	525	527	527	521	534	514	524

Table VI.—Monthly and Annual Mean Diurnal Inequalities of Horizontal Magnetic Force. (The results are expressed in C.G.S. units and in each case diminished by the smallest hourly value.)

						1914.			og the shie				
Hour, Greenwich Civil Time.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	Iγ	3 2	16 γ	26 y	24 y	30 y	29 γ	33 γ	29 γ	26 γ	18 γ	8 γ	18·9 γ
I h	1	4	16	25	2 I	29	30	32	28	24	16	8	18.1
2	ı	3	16	22	2 I	28	29	29	27	24	14	10	18.9
3	4	3	16	2 I	19	25	27	27	26	25	15	10	16.8
4	5	4	18	20	20	25	26	27	26	27	16	10	17.3
5	5	$\dot{6}$	18	2 I	19	25	25	26	24	26	19	12	17.4
6	7	7	18	2 I	1 8	2 I	20	22	22	27	19	14	16.6
7	8	7	17	20	14	15	16	16	17	23	18	14	14.0
7 8	6	7	14	15	9	8	10	7.	10	17	16	11	9.4
9	6	6	8	7	3	2	2	o	2	9	7	6	3.4
IO	4	7	2	2	ŏ	0	0	o	0	2	3	2	0.4
II	2	5	0	0	I	3	I	3	2	0	0	0	0.0
Noon	3	4	3	3	4	8	7	10	11	3	I	0	3.4
13 ^h	4	5	9	9	8	14	12	17	18	9	4	3	7.9
14	4	7	14	13	14	22	18	22	22	13	7	6	12.1
15	3	4	17	20	20	26	24	26	23	15	8	8	14.8
16	2	Ī	17	23	23	30	29	31	24	18	10	9	16.7
17	3	0	16	24	28	35	34	34	26	19	13	10	18.8
18	4	2	16	26	31	38	37	38	29	22	15	10	20.9
19	4	4	18	26	32	41	38	40	32	24	16	8	22.2
20	4	4	18	26	32	41	37	40	31	2 6	16	8	22.2
21	3	2	18	27	30	38	36	38	29	28	17	8	21.4
22	3	I	18	26	29	34	34	37	28	29	18	9	20.8
23	2	I	18	26	26	31	32	35	28	28	19	7	19.7
24	0	3	17	25	24	29	30	34	29	26	19	8	18.9
Support of the suppor	3.7	4.0	14.5	18.7	18.6	23.7	23.0	24.6	21.4	19.3	12.7	8.0	14.7
₫ (1h-24h	3:7	4.0	14.2	18.7	18.6	23.7	23.1	24.6	21.4	19.3	12.7	8.0	14.7

Table VII.—Diurnal Range of Horizontal Magnetic Force, on each Civil Day, as deduced from the Twenty-four Hourly Measures of Ordinates of the Photographic Registers.

(The results are corrected for Temperature and are expressed in C.G.S. units.)

						1914.						
Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
đ												
I	• •	21 γ	27 γ	49 γ	27 y	71 γ	44 y	80 y	35 γ	40 γ	46 γ	22 y
2	14 γ	18	34	25	41	42	41	39	36	41	29	· 2 I
3 .	9	24	35	27	26	42	20	84	46	30	29	30
4	16	20	22	31	31	40	29	68	54	44	7 4	23
5	13	22	29	32	28	39	95	53	4 9	40	39	17
6	15	43	35	89	31	41	39	53	51	50	37	• 29
7	27	18	14	31	45	55	46	58	65	37	39	18
8	4 I	16	2 I	38	34	49	54	60	51	49	29	2 6
9	16	19	22	38	41	34	39	42	69	69	30	27
10	10	19	36	44	57	46	51	43	37	44	41	24
11	38	17	27	37	48	36	48	4 8	34	2 9	81	23
I 2	19	14	34	41	40	. 62	4.2	44	45	40	35	2 I
13	24	26	48	48	54	38	43	34	34	4 6	27	I 2
14	13	21	24	36	39	43	37	28	34	31	41	24
15	24	20	29	19	40	48	48	38	43	32	24	17
16	28	21	41	35	35	44	48	37	50	2 I	14	36
17	19	20	28	42	42	55	55	29	37	3 6	33	20
18	20	22	2 I	43	42	36	41	43	31	2 6	22	20
19	I 2	16	20	41	40	57	31	37	23	31	22	29
20	15	15	26	28	57	41	28	50	33	35	27	17
21	19	9	· 2 9	32	27	46	40	38	40	30	22	2 I
22	28	36	26	42	37	39	52	44	31	42	22	25
23	16	27	36	23	30	45	45	43	56	31	27	20
24	14	17	29	50	34	53	57	33	40	29	16	37
25	22	15	42	41	35	24	70	42	42	20	17	22
26	22	14	28	24	5.5	36	56	59	40	28	32	18
27	13	24	32	25	40	52	40	58	111	46	17	13
28	16	53	32	38	55	49	57	59	81	74	18	29
29	9		34	48	44	62	50	76	54	71	16	20
30	13		31	32	44	41	61	73	26	26	22	20
3 I	17		34		44	'	83	45		34		
Means	18.7	21.7	29.9	37.6	40.1	45.5	48.1	49.6	45.9	38.8	30.0	22.7
						elve monthly		8 γ.				

TABLE VIII.—MONTHLY and ANNUAL MEAN DIURNAL INEQUALITIES OF HORIZONTAL MAGNETIC FORCE from HOURLY ORDINATES, ON FIVE SELECTED DAYS in each MONTH.

Each result is the mean of the corresponding hourly ordinates from the photographic register, on five quiet days in each month, selected by the International Committee for comparison with results at other Observatories. The results are corrected for Temperature and in each case diminished by the smallest hourly value. The days included are:—

TOT4

January 9, 10, 24, 25, 26. February 1, 10, 11, 21, 25. March 5, 22, 28, 29, 30. April 12, 15, 26, 29, 30. May 9, 10, 14, 19, 20. June 12, 13, 16, 17, 23. July 2, 8, 13, 17, 19. August 9, 10, 14, 16, 22. September 2, 7, 14, 21, 26. October 12, 14, 24, 25, 26. November 9, 20, 21, 22, 23. December 2, 13, 15, 21, 26.

						1914.	•						
Hour, Greenwich Civil Time.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	ογ	3 γ	20 γ	27 γ	21 γ	26 γ	27 γ	27 γ	26 γ	23 γ	18 γ	6 γ	15.8 γ
1 h	0	4	21	24	22	26	25	26	25	2 I	18	7	15.3
2	2	5	20	22	20	25	24	24	25	19	18	. 8	14.8
3	4	4	21	20	19	26	24	20	24	20	19	7	14.4
4	4	6	22	20	19	29	26	2 I	22	2 I	20	. 8	15.3
5	4	8	21	2 I	18	28	24	22	21	2 I	2.2	9	15.3
6	5	8	22	2 I	14	22	18	19	19	23	22	11	14.1
7	6	7	24	23	9	16	ΙΙ	I 2	14	22	2 I	12	11.9
8	8	8	20	20	2	10	4 .	4	6	20	19	9	7.9
9	8	6	13	I 2	0	1	0	0	0	13	11	4	2.8
10	8	5	4	4	r	0	2 -	2	2	5	6	I	0.4
11	8	. 2	Ó	0	7	2	6	5	5	0	0	0	0.0
\mathbf{Noon}	5	О	5	0	I 2	14	7	II	12	2	4	2	3.3
13 ^h	5	2	13	7	18	20	10	18	24	7	11	4	8.7
14	4	5	21	11	24	27	15	19	28	I 2	15	7	12.8
15	3	4	24	2 I	30	31	23	22	30	14	14	10	15.9
16	5	3	25	23	33	36	30	26	35	19	19	10	19.1
17	7	5	28	24	39	38	35	31	36	20	21	12	21.8
18	9	7	27	30	42	39	39	34	39	25	20	12	24.0
19	IÓ	8	29	, 31	41	44	43	33	42	27	20	13	25.5
20	9	6	29	30	40	45	40	30	40	27	17	14	24.4
2 I	9	6	27	29	39	43	39	29	39	27	18	14	23.7
22	9	3	29	27	38	42	36	28	37	26	19	14	22.8
23	8	3	28	24	37	37	34	25	37	26	19	11	21.2
24	7	3	28	25	37	35	33	27	34	26	20	I 2	21.0
sig {oh_23h	5.8	4.9	20.5	19.6	22.7	26.1	22.6	20.3	24.5	18.3	16.3	8.5	14.6
å (1h−24h	6.1	4.9_	20.9	19.5	23.4	26.5	22.8	20.3	24.8	18.5	16.4	8.8	14.8

TABLE IX.—MEAN VERTICAL MAGNETIC FORCE for each CIVIL DAY.

(Each result is the mean of 24 hourly ordinates from the photographic register, expressed in C.G.S. units. The values are corrected for Temperature.)

						1914.									
Day of Month.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.			
Month.		43000 γ +													
d						1	1		1		1	1			
1		330 γ	328 y	321 y	303 γ	305 γ	347 γ	322 y	343 γ	376 γ	367 γ	319 γ			
2	344 γ	329	323	313	292	307	352	341	337	374	367	322			
3	352	327	309	317	294	312	361	336	336	378	367	323			
4	352	327	319	316	299	314	356	352	338	381	358	325			
5 6	350	332	328	314	292	316	354	343	343	378	357	321			
6	351	332	317	330	299	309	355	343	343	374	367	308			
7	348	337	324	317	304	315	348	342	337	373	359	314			
8	347	338	333	313	307	308	341	343	337	364	366	320			
9	359	329	329	322	300	309	343	339	342	37 I	367	316			
10	362	329	323	317	290	317	346	341	350	368	365	317			
11	369	335	320	321	297	314	351	347	360	369	372	313			
12	341	334	315	325	303	314	350	348	363	367	368	310			
13	340	333	327	323	295	315	355	341	350	364	361	319			
14	339	336	327	323	296	323	359	344	344	365	354	316			
15	329	348	318	322	301	324	367	347	358	364	339	317			
16	344	332	321	317	304	330	372	347	359 361	364 365 364 369	337	312			
17	342	333	323	312	301	325	362	344	361	369	333	309			
18	338	343	324	311	305	326	356	345	358.	368	326	315			
19	335	334	318	311	309	332	356	343	359	364	320	313			
20	327	328	320	315	309	333	361	338	358	363	321	309			
21	321	333	309	315	314	335	369	343	349	361	311	307			
22	323	333	306	325	316	342	370	338	353	360	308	311			
23	315	324	303	320	322	325	370	333	351	363	299	299			
24	308	331	304	321	327	327	363	340	352	364	300	296			
25	313	325	301	316	319	332	356	345	360	367	296	299			
26	320	311	300	316	313	334	347	350	359	374	299	294			
27	320	319	300	309	303	324	344	349	374	368	304	297			
28	321	317	304	307	305	326	340	349	380	367	308	310			
29	328		308	313	298	333	362	343	389	365	313	306			
30	335		305	318	305	334	345	346	379	363	321	292			
31	343		306		310		342	348	·	364		•••			
Ieans	337	331	316	317	304	322	355	343	354	368	338	311			

Table X.—Monthly and Annual Mean Diurnal Inequalities of Vertical Magnetic Force. (The results are expressed in C.G.S. units and in each case diminished by the smallest hourly value.)

						1914.			og inc oma				-
Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	3 γ	92	πη	15 γ	2Ιγ	16 γ	13 γ	Πγ	13 γ	9 γ	6 γ	6 γ	10.8 γ
$_{f I}{f h}$	4	10	13	15	21	14	11	11	13	8	5	7	10.7
2	+	10	13	16	2 I	13	I 2	11	13	7	6	6	10.7
3	3	11	13	17	22	14	12	12	12	7	6	5	10.9
4	4	12	14	19	24	17	14	14	14	7	7	6	12.4
5	5	13	15	20	25	19	18	16	15	7	7	6	13.5
6	4	13	13	2 I	24	18	14	16	15	6	7	5	12.7
7	4	10	I 2	22	23	18	15	17	18	8	7	5	12.9
8	. I	7	11	19	18	15	11	17	15	8	5	3	10.5
9	0	6	9	15	13	12	9	I 2	10	8	4	4	8.2
10	0	2	5	10	7	9	6	7	4	4	3	I	4.3
1 I	2	I	I	. 6	2	2	I	3	I	0	0	0	1.3
\mathbf{Noon}	I	0	0	0	0	0	0	0	0	0	I	I	0.0
13 ^h	2	0	I	2	3	3	2	3	2	2	4	I .	1.8
14	3	I	4	8	7	6	6	8	6	6	7	3	5.1
15	4	3	8	I 2	I 2	10	1 I	13	II	9	10	3	8.5
16	3	6	I 2	16	18	15	15	18	14	I 2	I 2	3	11.7
17	4	6	12	2 I	22	19	19	2 I	14	ΙΙ	11	4	13.4
18	4	8	13	23	24	2 I	20	22	13	I 2	9	4	14.1
19	4	7	I 2	23	24	20	18	19	13	11	8	4	13.3
20	4	7	11	21	22	19	16	17	11	10	6	4	12.0
2 I	3	7	11	18	2 I	18	15	15	11	9	6	5	11.3
22	3	7	10	16	20	17	13	14	12	8	5	4	10.5
23	2	8	10	14	20	16	12	I 2	11	7	4	3	9.6
24	3	9	11	14	20	18	ΙΙ	14	12	8	4	5	10.5
$\begin{cases} 0^{h-2}3^h \\ 1^{h-2}4^h \end{cases}$	3.0	6.8	9.7	15.4	17.2	13.8	11.8	12.9	10.9	7:3	6.1	3.9	9.9
$\begin{cases} 1^{h-24^h} \end{cases}$	3.0	6.8	9.7	15.3	17.2	13.9	11.7	13.0	10.8	7:3	6.0	3.8	9.9

Table XI.—Diurnal Range of Vertical Magnetic Force, on each Civil Day, as deduced from the Twenty-four Hourly Measures of Ordinates of the Photographic Registers.

(The results are corrected for Temperature and expressed in C.G.S. units.)

1914.												
Day of Month.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.
d	1		Ī									
1		14 γ	18 γ	40 γ	4Ιγ	76 y	2Ιγ	23 γ	2Ιγ	22 y	37 γ	5 γ
2	18 γ	14	30	2 I	28	38	25	43	25	24	14	20
3	14	14	25	24	40	22	13	33 -	22	20	23	13
4	16	14	13	24	29	24	2 6	35	37	19	40	23
5	24	8	18	22	32	27	51	25	27	25	2 I	19
6	14	31	2 I	96	31	35	20	50	23	15	17	, 9
7	16	II	13	33	3 6	27	21	20	26	23	30	I 2
8	16	14	15	38	26	26	23	16	19	16	16	13
9	13	18	13	25	28	28	35	29	22	15	8	17
10	8	16	16	24	47	19	2 I	2 6	30	2 I	II	8
11	25	16	32	25	38	22	18	35	15	14	50	9 8
12	14	20	24	28	25	34	16	15	23	14	2 I	8
13	20	20	13	30	30	23	30	38	22	7	14	6
14	13	2 I	23	27	32	15	27	19	16	11	I 2	I 2
15	18	16	40	34	. 32	31	26	2 6	18	15	18	11
16	15	25	14	39	25	22	16	25	26	14	16	13
17	20	20	20	24	24	25	20	15	11	18	40	16
18	20	12	15	24	24	25	23	25	2 I	19	26	15
19	18	17	16	25	2 6	37	16	28	2 I	I 2	I 2	10
20	12	11	22	20	28	2 I	24	23	29	ΙΙ	7	9
21	I 2	I 2	20	20	19	17	20	18	2 I	17	20	ΙΙ
22	9	13	15	20	25	24	18	18	30	22	I 2	I 2
23	18	19	29	34	28	23	27	25	33	11	10	10
24	I 2	18	22	30	33	22	20	17	22	18	9	13
25	10	22	23	36	29	49	30	43	16	19	18	9
2 6	15	25	15	37	40	27	28	25	15	16	29	6
27	20	14	13	39	37	28	13	25	59	13	20	8
28	13	26	31	27	29	30	22	20	15	62	20	30
29	6	!	20	28	2 I	23	104	34	34	60	15	19
30	10		31	20	32	22	25	26	20	12 8	13	13
31			24		39		44					· · ·
Means	15.0	17.2	20.8	30.5	30.8	28.1	26.5	26.7	24.0	19.1	20.0	12.6
				The mean	of the twelv	e monthly va	lues is 22.6	γ				

TABLE XII.—MONTHLY and ANNUAL MEAN DIURNAL INEQUALITIES OF VERTICAL MAGNETIC FORCE from HOURLY ORDINATES, ON FIVE SELECTED DAYS in each MONTH.

Each result is the mean of the corresponding hourly ordinates from the photographic register, on five quiet days in each month, selected by the International Committee for comparison with results at other Observatories. The results are corrected for Temperature and in each case diminished by the smallest hourly value. The days included are:—

January 9, 10, 24, 25, 26. February 1, 10, 11, 21, 25. March 5, 22, 28, 29, 30. April 12, 15, 26, 29, 30. May 9, 10, 14, 19, 20. June 12, 13, 16, 17, 23.

 July
 2,
 8,
 13,
 17,
 19.

 August
 9,
 10,
 14,
 16,
 22.

 September
 2,
 7,
 14,
 21,
 26.

October 12, 14, 24, 25, 26. November 9, 20, 21, 22, 23. Dcember 2, 13, 15, 21, 26.

						1914.							
Hour, Greenwich Civil Time.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	8 γ	9 γ	16 γ	19 γ	25 γ	19 γ	17 γ	17 γ	14 γ	8 γ	8 γ	6 γ	12.8 γ
$\mathbf{I}^{\mathbf{h}}$	7	10	16	2 I	25	19	17	15	15	7	8	6	I 2·8
2	6	10	18	22	26	19	17	15	15	7	7	5	12.9
3	6	12	18	25	2 6	19	19	17	15	9	7	5	13.8
4	6	13	2 I	25	27	2 I	19	18	16	9	7	5	14.6
5	6	13	22	25	29	22	20	20	19	9	7	5	15.4
6	4	13	20	27	28	2 I	19	22	18	10	6	4	15.0
7	4	12	19	27	26	2 I	20	23	2 I	11	5	3	15.0
8	i	8	17	23	20	18	16	22	16	10	4	I	12.0
9	0	8	I 2	19	16	16	14	15	12	I 2	3	2	9.8
ΙÓ	5	7	9	13	8	14	10	6	5	8	2	2	6.4
11	7	5	3	8	2	3	2	4	I	I	2	2	2.3
Noon	8	3	0	Ó	0	0	0	0	0	0	0	I	0.0
13	9	I	4	I	6	2	2	2	I	I	2	3	1.8
14	12	0	8	6	13	3	5	6	4	3	4	3	4.6
15	12	3	13	11	16	10	8	13	7	7	4	5	8.1
16	9	5	15	II	20	16	ΙΙ	16	7	8	4	0	9.2
17	IÓ	5	16	17	24	18	16	18	9	9	4	I	I I · 2
18	11	6	14	19	24	18	16	17	9	9	3	2	11.3
19	13	5	14	19	25	17	16	17	10	9	3	4	I I · 7
20	12	6	13	19	24	19	16	17	II	9	3	4	1 I · 7
2 I	I 2	5	13	17	24	18	16	14	9	9	2	+	10.9
22	11	5	I 2	16	25	18	17	15	11	9	3	4	I I · 2
23	11	7	13	18	25	18	16	14	I 2	9	2	5	11.5
24	13	8	15	1.8	27	18	17	15	I 2	10	4	5	12.5
	7:9	7.1	13.6	17.0	20.2	15.4	13.7	14.3	10.7	7.6	4.3	3.4	10.2
$\frac{g}{g} \begin{cases} \frac{O^{h}-23^{h}}{I^{h}-24^{h}} \end{cases}$	8.1	7.1	13.5	17.0	20.2	15.3	13.7	14.2	10.6	7.7	4.0	3.4	10.5

TABLE XIII.—MEAN TEMPERATURE for each CIVIL DAY within the box inclosing the Horizontal Force Magnet.

Day of Month.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.
d			0		1 0					0		.0
1		66.4	68∙0	67.3	66∙1	66.4	71.1	68.6	69.9	67.2	67.2	66.9
2	66.6	67.2	66∙0	67.7	67.3	67.4	71.9	68.8	69.0	68.7	67.9	67.5
3	67.0	67.1	67.4	67.3	67.7	67.2	70.6	67.9	68.9	67.9	67.2	66∙1
4	67.0	67.3	67.9	67.0	67.4	67.7	- 68∙1	67.2	69.2	67.2	66.7	68∙0
5	66.8	67.5	67.7	66.7	67.0	66.8	67.7	67.0	68.9	66.6	67.7	66.4
6	66.1	67.1	66.4	66.9	67.4	66.8	67.2	66.9	67.6	67.1	67.4	66.6
7	66.4	67.7	67.2	65.7	67.4	67.7	66.8	66.7	68.3	66.7	66.6	68.2
8	66.9	67.4	67.8	66.5	67.1	66.9	67.4	66.8	69.7	67:3	67.2	66.4
9	67.9	66.6	66•6	67.5	67.1	67.2	69.1	67.8	69.7	67.6	67.7	67.0
IO	67.9	67.5	66.3	67.2	67.0	67.6	68.9	68.7	69.9	66.8	67.2	66•4
ΙΙ	65.5	67.8	66.3	67.8	68∙0	67.0	69.3	68∙0	69.3	67.3	67.6	66.8
I 2	63.5	67.1	68.5	66.7	68∙0	67.3	70.1	68.1	66.7	67•1	67.0	67.1
13	65.9	66.8	67.4	67.2	67.1	68.1	70.2	68.9	66.8	67.2	67.8	67.0
14	67.1	68.6	67.2	67.1	68∙0	67.9	70.5	69.4	67.6	67.5	65.4	66.9
15	66.9	67.3	65.3	66.2	67.8	67.6	70.4	69.6	66.8	68.4	65.5	66.5
16	66.6	66.8	66.2	66.2	67.2	67.7	68.9	68.4	67.0	67.7	66.8	66∙1
17	66.5	67.4	66.7	68.4	66.6	67.6	68.5	68.5	67.0	67∙0	66.3	66.2
18	66.9	67.0	67.4	67.6	66.2	67.7	68.9	67.9	66.3	67.1	67.0	66.7
19	66.7	66.5	67·1	68.3	69.1	68.9	69.6	67.6	66.9	66.6	66·o	66.5
20	67.0	67.8	66.8	68∙1	68.3	68.8	70.2	67.4	66.6	66.7	66.8	66.0
2 I	66.4	67.4	66∙1	67.4	68.6	68.2	70.1	67.9	67.5	66.6	65.7	66.8
22	66.8	66.8	66.2	67.3	68·1	67.4	69.8	68.1	66.6	66.5	66.2	66.3
23	66.1	67.3	66.3	67.4	68.4	67.3	67.8	68.8	67.9	66.8	66.3	66.7
24	66.1	66.9	67.1	67.9	66.6	67.0	67.7	69.7	67.6	66.5	66.6	66.4
25	67.8	65.6	65.9	67.6	66.8	67.6	66.9	69.9	67.2	67.6	66.8	65.5
26	67.6	66.9	67.5	66.7	66.9	67.3	66.6	69.3	66.9	66.6	67.9	65.7
27	66.3	67.4	67.4	66.9	66.9	67.5	67.6	68.4	67.3	66·1	66.8	66.7
28	67.0	68.1	67.2	67.7	67·í	68.4	68.5	68.2	67.5	65.0	67.3	67.3
29	67.5		68.3	67.7	67.8	69.0	67.4	68.5	66.8	64.7	67.1	64.4
30	67.6		67.3	67.0	67.5	70.0	67.2	69.1	66.8	67.1	67.6	66.5
31	66.9		68.6		67.5	,	67.7	69.8		67.7		•••
Means	66°·71	67°·19	67°·04	67°·23	67°·42	67°·67	68°-80	68°·32	67°·81	67°·00	66°-91	66°·59

TABLE XIV.—MONTHLY and ANNUAL MEAN TEMPERATURE at each Hour of the Day within the box inclosing the Horizontal Force Magnet.

						1914.							
Hour, Greenwich Civil Time.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	67.2	67.8	67.6	68°0	67.8	68°0	6g.1	68.6	68.1	67.2	67.3	66.8	67.79
I h	67.1	67.6	67.5	67.8	67.7	68·o	69.0	68.5	68.1	67.2	67.1	66.7	67.69
2	66.8	67.4	$67 \cdot 3$	67.7	67.6	67.9	69.0	68.4	68.0	67.2	67.0	66.5	67.57
3	66.6	67.2	67.1	67.5	67.5	67.8	68.9	68.4	67.9	67.1	66.9	66.4	67.44
. 4	66.4	67.0	66.9	67.3	67.4	67.7	68.8	68.3	67.8	67.0	66.9	66.3	67.32
5	66.3	66.9	66.7	67.1	67.2	67.6	68.7	68.2	67.7	66.9	66.8	66.3	67.20
6	66.2	66.7	66.5	66·a	67.1	67.5	68.6	68.1	67.6	66.9	66.8	66.3	67.10
7	66.2	66.7	66.5	66.8	67.1	67.4	68.6	68.1	67.6	66·8	66.8	66.4	67.08
8	66.2	66.7	66.5	66.8	67.1	67.3	68.5	68∙0	67.5	66.8	66.8	66.4	67.05
9	66.3	66.7	66.5	66.7	67.1	67.2	68.4	68∙0	67.4	66.7	66.7	66.3	67.00
IÓ	66.4	66.7	66.6	66.8	67.1	67.2	68.5	68∙0	67.4	66.7	66.6	66.4	67.03
11	66.4	66.8	66.6	66.8	67.1	67.3	68.5	68·o	67.4	66.7	66.6	66.4	67.05
Noon	66.4	66.7	66.6	66.8	67.1	67.3	68.5	68·1	67.5	66.8	66.5	66.4	67.06
13h	66.5	66.8	66.8	66.9	67.2	67.5	68.6	68.2	67.6	66.9	66.6	66.5	67.18
14	66.6	67.0	66.9	67·0	67.4	67.6	68.7	68.2	67.7	66.9	66.8	66.6	67.28
15	66.7	67.1	67·i	67.1	67.5	67.6	68.8	68.3	67.8	67.0	66.8	66.7	67.37
16	66.7	67.1	67.2	67.2	67.5	67.7	68.9	68.3	67.9	67.0	66.9	66.8	67.43
17	66.9	67.3	67.3	67.3	67.6	67.8	68.9	68.4	67.9	67.0	67.0	66.8	67.52
18	67.1	67.5	67.3	67.4	67.6	67.8	68·9	68.5	68·o	67.1	67.0	66.8	67.58
19	67.2	67.7	67.4	67.4	67.6	67.9	69·ó	68.6	68∙0	67.2	67.1	66.8	67.66
20	67.1	67.7	67.4	67.5	67.6	67.9	69·0	68.6	68.1	67.2	67.1	66.8	67.67
21	67.2	67.7	67.5	67.6	67.7	68·ó	69·0	68.6	68∙1	67.2	67.2	66.8	67.72
22	67.2	67.8	67.5	67.7	67.7	68∙0	69·1	68.6	68.1	67.2	67.2	66.9	67.75
23	67.2	67.9	67.6	67.8	67.7	68·o	69·1	68.6	68·o	67.2	67.3	66.9	67.78
24	67.2	67.9	67.6	67.9	67.8	68∙1	69.0	68.6	68∙0	67.2	67.3	66.9	67.79
		<u> </u>	1	1	l	ł	<u> </u>	1	1	1	1	1	

TABLE XV.—MEAN TEMPERATURE for each CIVIL DAY within the box inclosing the Vertical Force Magnet.

Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	0	66°3	67°8	66°8	66°2	65·9	70·4	68°6	69.2	67°5	67.2	66°9
I 2	67.0	66.9	65.7	67.9	67.3	67.4	71.0	67.9	68.4	68.5	67.5	67.1
	66.8	67.2	67.4	66.9	67.5	66.8	69.6	68·o	68.5	67.8	67.0	66.1
3	67.0	67.3	67.5	66.8	67.0	67.5	67.2	66.5	68.6	67·0	66.7	67.3
4	67.5	67.2	66.9	66.8	66.8	66.6	. 66.8	66.7	68.3	66.6	67.6	66.2
5 6	66.5	67.4	66.9	66.9	67.3	66.9	66.4	66.2	67.3	67.2	67.0	67.3
-	67.1	67.6	67.3	66.3	67·o	67.3	66.7	66.1	68.0	67·0	66.5	67.8
7	67.2	66.8	67.1	66.6	66.8	66.8	67.4	66.1	69.2	67·5	67.5	66.1
-	67.5	67.0	66.9	67.2	66.8	67.2	68·7	67.4	69.4	67.0	67.7	66.8
9	68.2	67.2	66.7	67.4	67.2	67·0	68·2	67.9	69.4	66.6	66.9	66.6
10	65.7	67.4	66.3	67.8	67·6	66.8	68.6	67.4	68.6	67·o	67.5	66.9
II		67.4	68.6	66.8	67.4	66.9	69.4	67.5	66.3	67·2	66.9	67.0
12	65·7 66·9	67.1	67.4	67.1	67·0	68·o	69.3	68.4	66.4	67.2		66.5
13		68.1	66.7	66.6	67.7	67.2	. , ,	69.0			67.4	66.8
14	67.2	66.7	66.9				69.7	68.8	67·9 66·7	67.4	65.8	
15	67.7			65.9	67·5 66·9	67.2	69.5	1	66.6	68.4	66.5	66.6
16	66.8	67.2	66.5	66.3	,	67.1	67.8	67·8 68·o		67.3	67.4	66.4
17	66.8	67.6	66.4	67.4	66.9	67.4	67.7	1 .	66.9	66.9	67.1	66.8
18	67.3	66.5	67.3	67.7	67.3	67.3	68.2	67.3	66.7	67.1	67.1	66.4
19	67.0	66.3	67.3	67.7	68.2	67.8	68.9	66.9	67.4	66.8	66.9	66.6
20	67.3	67.7	66.5	68·o	68.3	67.7	69.4	67.0	67.1	66.8	67.2	66.9
2 I	67.4	67.0	66.4	67.6	68∙1	67.5	69.2	67.3	67.8	66.9	66.5	67.3
22	67.2	66.6	66.8	67.1	67.4	66.1	68.9	67.7	66.8	66.5	66.5	66.1
23	67.0	67.6	67.0	67.4	67.5	67.3	66.7	68.4	67.9	66.3	67.1	67.0
24	67.1	66.7	67.3	67.2	66.2	66.7	66.7	69.2	67.6	66.3	67.3	67.0
25	68.0	65.8	66.5	67.2	66.8	67.2	66.3	69.3	67.3	67.5	67.3	66.4
26	67.3	67.4	67.9	66.5	66.8	66.5	66.9	68.8	67.3	66.2	67.5	66.7
27	66.6	67.4	67.4	67.2	67.2	67.2	67.6	67.8	67.6	66.2	66.5	66.7
28	67.0	68∙0	67.2	68∙1	67.0	67.8	68·o	67.6	67.7	65.5	67.0	66.4
29	67.4		68∙o	67.4	67.6	68.3	66.7	68∙0	66.5	64.9	66.7	65.1
30	67.3		66.8	66.4	67.2	69.3	67.0	68.8	67.0	67.1	66.9	67.3
31	66.8		68.1		66.8		67.3	69.4		67.5		• • •
Means	67°·08	67°·12	67°∙08	67°·10	67°·20	67°·22	68°·14	67°·80	67°.68	66°.96	67°·02	66°·70

TABLE XVI.—MONTHLY and ANNUAL MEAN TEMPERATURE at each Hour of the Day within the box inclosing the Vertical Force Magnet.

						1914.							
Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midn.	67.6	67°7	67°7	67 ° 9	67°5	67.5	68°4	68°o	68°0	67.2	67.4	66°9	67°65
Ih	67.4	67.5	67.5	67.7	67.4	67.5	68.4	68∙0	67.9	67.1	67.3	66.7	67.53
2	67.1	67.3	67.3	67.5	67.3	67.4	68.3	67.9	67.8	67.1	67.1	66.6	67.39
3	67.0	67.1	67·I	67.3	67.2	67.3	68.2	67.8	67.8	67.0	67.0	66.5	67.27
4	66.8	66.9	66.9	67.0	67.1	67.2	68∙1	67.7	67.6	66.9	66.9	66.4	67.13
5	66.6	66.7	66.7	66.8	67.0	67.1	68·o	67.6	67.5	66.8	66.9	66.4	67.01
6	66.5	66.5	66.5	66.6	66.9	67.0	67.9	67.6	67.4	66.8	66.8	66.4	66-91
7	66•5	66.5	66.5	66.5	66.9	66.9	67.8	67.5	67.3	66.7	66.8	66.4	66.86
8	66.6	66.5	66.5	66.4	66.9	66.8	67.8	67.4	67.2	66.7	66.8	66.5	66•84
9	66.6	66.5	66.5	66.4	66.9	66.7	67.7	67.4	67.2	66•6	66.8	66.4	66·81
IO	66.8	66.6	66.6	66.4	66.9	66.7	67.7	67.4	67.2	66•6	66.7	66.5	66.84
11	66.8	66.6	66.7	66.5	66.9	66.8	67.8	67.5	67.2	66.7	66.7	66.6	66.90
Noon	66.9	66.7	66.8	66.7	67.0	67.0	67.9	67.6	67.4	66.8	66.7	66.6	67·01
13 ^h	66.9	66.8	66.9	66.8	67.1	67.1	68∙1	67.7	67.6	66.9	66.8	66.8	67.13
14	67.1	67.0	67.1	67.0	67.3	67.3	68.2	67.8	67.7	66.9	66.9	66.9	67.27
15	67.1	67.2	67.2	67.1	67.4	67.3	68.2	67.9	67.8	67.0	67.0	67.0	67.35
16	67.2	67.2	67.3	67.2	67.4	67.4	68.3	67.9	67.9	67.0	67.0	67·1	67.41
I 7	67.3	67.3	67.4	67.3	67.4	67.4	68.3	68·o	68∙0	67·1	67.1	67.0	67.47
18	67.5	67.5	67.4	67.4	67.4	67.4	68.3	68 ∙ o	68∙0	67·1	67.2	67.0	67.52
19	67.5	67.7	67.5	67.4	67.4	67.5	68.4	68∙1	68∙0	67.2	67.2	66.9	67.57
20	67.5	67.7	67.5	67.5	67.4	67.5	68.4	68∙1	68∙0	67.2	67.3	66.9	67•58
2 I	67.5	67.7	67.5	67.5	67.4	67.6	68.4	68⋅1	67.9	67.2	67.3	66·9	67.58
22	67.5	67.8	67.5	67.6	67.4	67.6	68.4	68∙1	67.9	67.2	67.4	66.9	67.61
23	67.6	67.8	67.6,	67.8	67.4	67.6	68.4	68∙1	67.9	67.2	67.4	67·ó	67.65
24	67.6	67.8	67.6	67.8	67.5	67.6	68.3	68∙1	67·9	67.2	67.4	66.9	67.64
		1	1		l ————————————————————————————————————	<u> </u>		!	1		1	1	

TABLE XVII.—VALUES of the COEFFICIENTS and PHASE ANGLES in the PERIODICAL EXPRESSION.

```
\begin{array}{l} {\rm V}^{\rm t}=m+a_1\,\cos\,t+b_1\,\sin\,t+a_2\,\cos\,2t+b_2\,\sin\,2t+a_3\,\cos\,3t+b_3\,\sin\,3t+a_4\,\cos\,4t+b_4\,\sin\,4t\\ =m+c_1\,\sin\,(t+a_1)+c_2\,\sin\,(2t-a_2)+c_3\,\sin\,(3t+a_3)+c_4\sin\,(4t+a_4) \end{array}
```

in which t represents the time from Greenwich mean midnight converted into arciat the rate of 15° to each hour, and V_t the annual or monthly mean hourly value of the magnetic element at time t, as given in Tables II., VI., and X.

The coefficients, a, b, c, are given in units of 1 γ (0.00001 C.G.S unit) for H.F. and V.F. and in minutes of arc (1' = 5.39 γ) for declination.

December. -0.89 -0.22 -0.03 For the Year -1.42 -1.22 +0.79 January. -1.42 -1.22 +0.79 Bebruary. -1.44 -1.99 -0.2 March. -1.44 -1.99 -0.2 March. -1.44 -1.99 -0.2 May. -9.99 -8.0 -5.3 June. +11.7 -10.7 -5.4 August. -12.7 -10.4 -4.2 September. +9.8 -6.0 -3.2 October. +10.8 -0.6 -4.7 November. +6.8 -0.8 -3.9 December. +2.5 +1.1 -3.7 For the Year -7.4 -3.8 -3.8 January. +4.0 +2.3 -2.7 March. +4.2 +0.8 -3.8 April. +4.6 +0.1 -7.0 May. +8.2 +0.5 -6.8 June. +5.3 -0.8 -5.8 July. +4.3 -1.6<		+ °° ·4′. - °°·52′. + °° ·4′.		+ °°·59′ - 1°·11′			- 3°·47 - 1°·6			:	
February	b_2 a_3	b_3	a_4 b_4	c_1	a_1	c_2	a_2	c_3	a_3	c_4	a_4
February			Declina	rion W	EST.						
February	+0.31 -0.17	-0.04	+0.14 +0.01	0.97	255.4	0.36	29.3	oʻ18	284.5	o ['] 14	86.9
March.	,		+0.11 +0.25	1.48	249.9	0.52	14.3	0.30	245.7	0.28	24.0
April.		-0.62 -	+0.32 +0.35	1.93	235.9	1.32	29.0	o·85	222.7	0.48	43.2
May			+0.28 + 0.26	2.31	222.5	1.92	26.5	0.91	210.5	0.38	47.5
July -1·39 -2·44 +1·20 August -1·95 -1·62 +1·57 September -2·07 -1·23 +1·55 October -1·46 -0·76 +0·63 November -0·89 -0·22 -0·03 For the Year -1·42 -1·22 +0·79 January -0·8 +1·2 -1·6 February -1·4 +1·9 -0·2 March +5·2 -1·4 -3·8 April +9·3 -4·1 -4·6 May -9·9 -8·0 -5·3 July +1·7 -10·7 -5·4 July +1·2 -10·7 -5·4 July +1·5 -9·1 -5·4 September +9·8 -6·0 -3·2 October +0·8 -0·0 -3·2 Howenber +0·8 -0·6 -4·7 November +0·8 -0·6 -4·7 November +0·8 -0·8 -3·8 Horth +0·1 -0·9 -0·			+0.16 +0.01	2.47	211.0	1.75	45.0	o·86	244.2	0.16	87.3
July -1·39 -2·44 +1·20 August -1·95 -1·62 +1·57 September -2·07 -1·23 +1·55 October -1·46 -0·76 +0·63 November -0·89 -0·22 -0·03 For the Year -1·42 -1·22 +0·79 January -0·89 -0·22 +0·35 For the Year -1·42 -1·22 +0·79 January -0·89 -0·22 +0·3 January -1·42 -1·22 +0·79 January -1·42 -1·22 +0·79 January -1·42 -1·22 +0·79 January -1·42 -1·22 +0·79 January -1·43 -1·44 -1·46 January -1·49 -0·2 -0·2 January -1·10 -1·10 -1·10 -1·10 January -1·10 -1·10 -1·10 -1·10 -1·10 June -1·10 -1·10 -1·10 -1·10 -1·10 -1·10 -1·10	+1.34 - 0.54	-0.31	+0.22 +0.07	2.80	205.4	1.77	41.0	0.62	239.8	0.23	71.5
August.		-0.27	-0.03 +0.13	2.81	209.7	1.98	37.3	0.56	241.9	0.13	14:4
September		1 51	+0.10 +0.13	2.54	230.2	2.14	47.2	0.95	241.1	0.19	37.6
December -1.46 -0.76 +0.63 +0.35 -0.89 -0.22 -0.03 +0.35 -0.89 -0.22 -0.03 +0.79 +		, ,	+0.32 +0.22	2.41	239.4	1.77	61.4	1.16	249.6	0.39	55.2
November			+0.48 +0.27	1.65	242.4	1.14	33.4	0.70	225.7	0.56	60.4
December			+0.30 +0.32	1.31	261.9	0·9 i	22.3	0.52	243.6	0.44	43.4
Sor the Year		1 - 1	+0.23 + 0.26		256.1	0.72	357.8	0.44	251.6	0.34	40.9
January. — 0.8 + 1.2 — 1.6 Pebruary — 1.4 — 1.9 — 0.2 March — + 5.2 — 1.4 — 3.8 April — 9.3 — 4.1 — 4.6 May — 9.9 — 8.0 — 5.3 July — + 12.5 — 9.1 — 5.4 August — 12.7 — 10.4 — 4.2 September — + 9.8 — 6.0 — 3.2 October — + 10.8 — 0.6 — 4.7 November — + 6.8 — 0.8 — 3.9 Pebruary — + 4.0 — 2.3 — 2.7 March — + 4.2 — 0.8 — 3.8 April — + 4.6 — 0.1 — 7.0 May — 8.2 — 0.8 — 3.8 June — + 5.3 — 0.8 — 5.8 June — + 5.3 — 0.8 — 5.8 July — + 4.3 — 1.6 — 5.7 August — 2.9 — 1.8 — 6.5 September — 3.7 — 0.9 — 4.4 October — 9.7			+0.23 +0.19		229.3	1.31	36.8	0.65	237.7	0.29	49.9
February		33			/ 3	- 3			37 /		
February			Horizont	AL FOR	CE.						
February	- o·7 - o·2	- 0.7	- 0.1 - 0.4	1.4	325.2	1.7	247.7	0.7	195.1	0.4	349.1
March + 5·2 - 1·4 - 3·8 April + 9·3 - 4·1 - 4·6 May + 9·9 - 8·0 - 5·3 June + 11·7 - 10·7 - 5·4 July + 12·5 - 9·1 - 5·4 August - 12·7 - 10·4 - 4·2 September + 9·8 - 6·0 - 3·2 October + 10·8 - 0·6 - 4·7 November + 6·8 + 0·8 - 3·9 December + 2·5 + 1·1 - 3·7 For the Year + 7·4 - 3·8 - 3·8 April + 4·6 + 0·1 - 7·0 May + 8·2 + 0·5 - 6·8 June + 5·3 - 0·8 - 5·8 July + 4·3 - 1·6 - 5·7 August - 2·9 - 1·8 - 6·5 September - 3·7 - 0·9 - 4·4 October + 2·0 - 1·9 - 2·7	-0.5 - 0.3	- 0.4	0.0 + 1.2		323.0	0.5	206.2	0.5	211.3	I · 2	360.€
April. $+9.3 - 4.1 - 4.6 - 5.3$ May. $-9.9 - 8.0 - 5.3$ July. $+11.7 - 10.7 - 5.4$ August. $-12.7 - 10.4 - 4.2$ September. $+9.8 - 6.0 - 3.2$ October. $+10.8 - 0.6 - 4.7$ November. $+6.8 + 0.8 - 3.9$ $+2.5 + 1.1 - 3.7$ For the Year $+7.4 - 3.8 - 3.8$ April. $+4.6 + 0.1 - 7.0$ May. $+8.2 + 0.5 - 6.8$ June. $+5.3 - 0.8 - 5.8$ July. $+4.3 - 1.6 - 5.7$ August. $-2.9 - 1.8 - 6.5$ September. $-3.7 - 0.9 - 4.4$ October. $+2.0 - 1.9 - 2.7$	+ 1.8 + 1.4		- o·7 + I·I	5.4	105.4	4.2	294.8	3.0	152.0	1.3	326.8
May	+ 1.5 + 2.3	1 1	- o·3 - 1·o		113.8	4.8	288.3	3.1	131.0	1.0	13.0
June.	+ I·2 - O·2	1 1	0.5 - 0.4	12.7	128.9	5.4	282.9	1.5	173.4	0.6	52.0
July -12.5 -9.1 -5.4 August -12.7 -10.4 -4.2 September $+9.8$ -6.0 -3.2 Doctober $+10.8$ -0.6 -4.7 November $+6.8$ -0.8 -3.9 $+2.5$ $+1.1$ -3.7 For the Year $+7.4$ -3.8 -3.8 February -4.0 -2.3 -2.7 March -4.2 $+0.8$ -3.8 April -4.6 $+0.1$ -7.0 May -8.2 $+0.5$ -6.8 June -5.3 -0.8 -5.8 July -4.3 -1.6 -5.7 August -2.9 -1.8 -6.5 September -3.7 -0.9 -4.4 October -1.9 -2.7	+ 3.1 - 1.0	1 - 1	- 0·7 + I·I	. '	132.3	6.2	299.5	2.0	209.2	1.3	33.2
August. -12.7 -10.4 -4.2 September. $+9.8$ -6.0 -3.2 October. $+10.8$ -0.6 -4.7 November. $+6.8$ -0.8 -3.9 December. $+2.5$ $+1.1$ -3.7 For the Year $+7.4$ -3.8 -3.8 March. $+4.2$ $+0.8$ -3.8 April. $+4.6$ $+0.1$ -7.0 May. $+8.2$ $+0.5$ -6.8 June. $+5.3$ -0.8 -5.8 July. $+4.3$ -1.6 -5.7 August. -2.9 -1.8 -6.5 September. -3.7 -0.9 -4.4 October. $+2.0$ -1.9 -2.7	+ 3.2 - 0.2	1 1	- 0.5 - 0.7	15.5	126.2	6.2	300.7	1.3	190.1	0.8	39.8
September. $+9.8 - 6.0 - 3.2$ October. $+10.8 - 0.6 - 4.7$ November. $+6.8 - 0.8 - 3.9$ $+2.5 + 1.1 - 3.7$ For the Year. $+7.4 - 3.8 - 3.8$ February. $+4.0 + 2.3 - 2.7$ March. $+4.2 + 0.8 - 3.8$ April. $+4.6 + 0.1 - 7.0$ May. $+8.2 + 0.5 - 6.8$ June. $+5.3 - 0.8 - 5.8$ July. $+4.3 - 1.6 - 5.7$ August. $-2.9 - 1.8 - 6.5$ September. $-3.7 - 0.9 - 4.4$ October. $-1.9 - 2.7$	+ 3.7 - 1.0	1	- I·4 + o·7	16.4	129.2	5.6	311.1	2.7	201.6	1.6	62.0
October. $+10.8$ -0.6 -4.7 November. $+6.8$ $+0.8$ -3.9 $+2.5$ $+1.1$ -3.7 For the Year. $+7.4$ -3.8 -3.8 February. $+4.0$ $+2.3$ -2.7 March. $+4.2$ $+0.8$ -3.8 April. $+4.6$ $+0.1$ -7.0 May. -8.2 $+0.5$ -6.8 June. $+5.3$ -0.8 -5.8 July. $+4.3$ -1.6 -5.7 August. -2.9 -1.8 -6.5 September. -3.7 -0.9 -4.4 October. $+2.0$ -1.9 -2.7					121.6	5.4	324.2	2.8	197.0	2.3	31.8
November. $+6.8 - 0.8 - 3.9$ December. $+2.5 + 1.1 - 3.7$ For the Year. $+7.4 - 3.8 - 3.8$ February. $+4.0 + 2.3 - 2.7$ March. $+4.2 + 0.8 - 3.8$ April. $+4.6 + 0.1 - 7.0$ May. $+8.2 + 0.5 - 6.8$ June. $+5.3 - 0.8 - 5.8$ July. $+4.3 - 1.6 - 5.7$ August. $-2.9 - 1.8 - 6.5$ September. $-3.7 - 0.9 - 4.4$ October. $-1.9 - 2.7$			0.0 + 0.8	_	93.1	4.8	281.3	3.5	167.3	0.8	357.0
December $+$ 2·5 $+$ 1·1 $-$ 3·7 For the Year $+$ 7·4 $-$ 3·8 $-$ 3·8 January $+$ 0·9 $-$ 0·3 $-$ 0·9 February $+$ 4·0 $+$ 2·3 $-$ 2·7 March $+$ 4·2 $+$ 0·8 $-$ 3·8 April $+$ 4·6 $+$ 0·1 $-$ 7·0 May $+$ 8·2 $+$ 0·5 $-$ 6·8 June $+$ 5·3 $-$ 0·8 $-$ 5·8 July $+$ 4·3 $-$ 1·6 $-$ 5·7 August $-$ 2·9 $-$ 1·8 $-$ 6·5 September $-$ 3·7 $-$ 0·9 $-$ 4·4 October $+$ 2·0 $-$ 1·9 $-$ 2·7	0.6	3 4			83.7	3.9	261.8	2.6	143.8	I • O	47.5
For the Year + 0.9 - 0.3 - 0.9 February + 4.0 + 2.3 - 2.7 March + 4.6 + 0.1 - 7.0 May + 8.2 + 0.5 - 6.8 June + 5.3 - 0.8 - 5.8 July + 4.3 - 1.6 - 5.7 August + 2.9 - 1.8 - 6.5 September - 3.7 - 0.9 - 4.4 - 1.9 - 2.7	- 0.0 + 1.5	7.2	+ 0.7 + 0.7	2.7	66.2	3.8	283.2	1.0	127.3	0.7	349.1
January. + 0.9 - 0.3 - 0.9 February. + 4.0 + 2.3 - 2.7 March + 4.2 + 0.8 - 3.8 April. + 4.6 + 0.1 - 7.0 May. + 8.2 + 0.5 - 6.8 June. + 5.3 - 0.8 - 5.8 July. + 4.3 - 1.6 - 5.7 August. + 2.9 - 1.8 - 6.5 September 3.7 - 0.9 - 4.4 October. + 2.0 - 1.9 - 2.7	+ 0.9 + 1.5	1.2	_ 01 + 07	2.7	00 2	3 0	2032	• 9	12/3	0 /	349
February $+$ 4.0 $+$ 2.3 $-$ 2.7 March $+$ 4.2 $+$ 0.8 $-$ 3.8 April $+$ 4.6 $+$ 0.1 $-$ 7.0 May $+$ 8.2 $+$ 0.5 $-$ 6.8 June $+$ 5.3 $-$ 0.8 $-$ 5.8 July $+$ 4.3 $-$ 1.6 $-$ 5.7 August $-$ 2.9 $-$ 1.8 $-$ 6.5 September $-$ 3.7 $-$ 0.9 $-$ 4.4 October $+$ 2.0 $-$ 1.9 $-$ 2.7	+ 1.6 + 0.4	- 1.8	+ 0.4 + 0.8	8.3	117.1	4· I	292.4	1.9	168.7	0.9	22.6
February $+$ 4.0 $+$ 2.3 $-$ 2.7 March $+$ 4.2 $+$ 0.8 $-$ 3.8 April $+$ 4.6 $+$ 0.1 $-$ 7.0 May $+$ 8.2 $+$ 0.5 $-$ 6.8 June $+$ 5.3 $-$ 0.8 $-$ 5.8 July $+$ 4.3 $-$ 1.6 $-$ 5.7 August $-$ 2.9 $-$ 1.8 $-$ 6.5 September $-$ 3.7 $-$ 0.9 $-$ 4.4 October $+$ 2.0 $-$ 1.9 $-$ 2.7			Verticai	Force						-	
February + 4.0 + 2.3 - 2.7 March + 4.2 + 0.8 - 3.8 April + 4.6 + 0.1 - 7.0 May + 8.2 + 0.5 - 6.8 June + 5.3 - 0.8 - 5.8 July + 4.3 - 1.6 - 5.7 August - 2.9 - 1.8 - 6.5 September - 3.7 - 0.9 - 4.4 October + 2.0 - 1.9 - 2.7				1	0						(-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		9 1	+ 0.4 + 0.5		109.8	1.3	313.9	0.4	213.4	0.4	60.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	+ 0.6 + 0.5	- o·I			60.0	2.8	283.3	0.5	99.8	0.4	120.0
May. + 8.2 + 0.5 - 6.8 June. + 5.3 - 0.8 - 5.8 July. + 4.3 - 1.6 - 5.7 August. + 2.9 - 1.8 - 6.5 September. - 3.7 - 0.9 - 4.4 October. + 2.0 - 1.9 - 2.7					79.3	3.9	281.4	1.5	70·I	0.2	254.2
June + 5·3 - 0·8 - 5·8 July + 4·3 - 1·6 - 5·7 August + 2·9 - 1·8 - 6·5 September - 3·7 - 0·9 - 4·4 October + 2·0 - 1·9 - 2·7			- 0.3 - 0.3		89.3	7·1	260.8	1.8	61.5	0.4	311.2
July $+$ 4·3 $-$ 1·6 $-$ 5·7 August $+$ 2·9 $-$ 1·8 $-$ 6·5 September $-$ 3·7 $-$ 0·9 $-$ 4·4 October $+$ 2·0 $-$ 1·9 $-$ 2·7		0.1 -	1	8.2	86.8	6.8	272.5	1.7	87.3	0.5	70.2
August $+$ 2·9 $-$ 1·8 $-$ 6·5 September $-$ 3·7 $-$ 0·9 $-$ 4·4 October $+$ 2·0 $-$ 1·9 $-$ 2·7		1	+ o·1 - o·4	5.4	98.3	5.9	258.3	1.6	90.3	0.4	169.1
August $+$ 2·9 $-$ 1·8 $-$ 6·5 September $-$ 3·7 $-$ 0·9 $-$ 4·4 October $+$ 2·0 $-$ 1·9 $-$ 2·7	+ 0·2 · 1·4	- 0.2	- 0·I - 0·5	4.6	111.0	5.7	271.6	1.4	80.2	0.5	166.2
September	-0.5 + 2.3	; ;	- o·4 - o·1	3.4	121.7	6.5	266.0	2.3	83.0	0.4	251.2
October $+ 2.0 - 1.9 - 2.7$		- 0.5	- o·3 - o·4	3.8	76·1	4.5	277.3	2.8	101.1	0.5	322.
					134.2	2.7	273.0	1.9	77.3	0.9	289
NOVEREDEL	+ 1.8 + 1.3		- 0·5 - 0·1		160.6	3.1	304.7	1.4	103.3	0.5	260.
December $ + 1.9 + 0.6 - 0.8 $			- 0.1 - 0.4		73.1	1.0	306.0	0.4	93.8	0.4	349.1
For the Year \cdots $\begin{vmatrix} \cdot \end{vmatrix} = 0.2 \begin{vmatrix} \cdot $	0.2	0.1	0.1	3.6	93.9	4.1	273.6	1.4	86-1	0.1	273.0

TABLE XVIII.—RESULTS of DETERMINATIONS of the Absolute Value of Horizontal Magnetic Force in the Year 1914, trom Observations made with the Gibson Instrument in the Magnetic Pavilion.

	In C.G.	S. Units.			In C.G.	S. Units.			In C.G.	S. Units.	
Greenwich Civil Time,		ue of tal Force	Observer.	Greenwich Civil Time, 1914.		ue of tal Force	Observer.	Greenwich Civil Time, 1914.		ue of tal Force	Observer.
1914.	as observed.	reduced to Mean of Month.		1914.	as observed.	reduced to Mean of Month.		1914.	as obs erv ed.	reduced to Mean of Month.	
d h Jan. 7. 13 14. 13 21. 12 28. 12 Feb. 4. 12 11. 12 18. 13 25. 13 Mar. 4. 13 11. 13 18. 13 25. 12 Apr. 1. 12 8. 12 15. 12 22. 12 29. 15	·18528 ·18549 ·18528 ·18545 ·18540 ·18520 ·18533 ·18536 ·18536 ·18528 ·18528 ·18529 ·18516 ·18517 ·18515 ·18519 ·18520	·18545 ·18557 ·18554 ·18543 ·18528 ·18522 ·18543 ·18555 ·18546 ·18546 ·18543 ·18540 ·18531 ·18540 ·18531	B B E E B B B E E E E E B	d h May 6. 12 13. 12 20. 12 27. 12 June 16. 13 19. 13 23. 12 26. 11 July 3. 12 8. 13 15. 13 22. 12 29. 11 Aug. 5. 12 12. 13 19. 11 26. 12	·18531 ·18507 ·18521 ·18508 ·18518 ·18523 ·18500 ·18515 ·18505 ·18505 ·18506 ·18506 ·18506 ·18506	·18527 ·18564 ·18520 ·18544 ·18527 ·18518 ·18525 ·18528 ·18527 ·18532 ·18517 ·18515 ·18532 ·18533	B B B B B B B B B B B B B B B B B B B	d h Sept. 2. 13 9. 13 16. 12 23. 12 30. 12 Oct. 7. 11 14. 11 21. 12 28. 13 Nov. 4. 13 11. 12 18. 13 25. 11 Dec. 2. 12 9. 12 16. 13 23. 13 30. 12	·18537 ·18510 ·18532 ·18509 ·18526 ·18502 ·18502 ·18516 ·18484 ·18476 ·18479 ·18522 ·18522 ·18520 ·18540 ·18518	·18529 ·18510 ·18509 ·18549 ·18534 ·18524 ·18526 ·18526 ·18540 ·18540 ·18544 ·18529 ·18544 ·18529 ·18544 ·18525 ·18526 ·18533	B B E E E B B E E B B B B B B

TABLE XIXA.—RESULTS of OBSERVATIONS of MAGNETIC DIP with the AIRY DIP CIRCLE in the YEAR 1914.

Greenwich Civil Time, 1914.	3-inch Needle.	Magnetic Dip.	Observer.	Greenwich Civil Time, 1914.	3-inch Needle.	Magnetic Dip.	Observer.	Greenwich Civil Time, 1914.	3-inch Needle.	Magnetic Dip.	Observer.
d h Jan. 2. 13 5. 13 8. 13 10. 13 12. 13 13. 13 19. 12 20. 12 23. 13 26. 12 27. 12 30. 12 Feb. 2. 12 9. 12 16. 13 24. 12 Mar. 3. 12 9. 13 16. 13 23. 12 30. 12	$\begin{array}{c} D_1 \\ D_2 \\ D_2 \\ D_1 \\ D_2 \\ D_2 \\ D_1 \\ D_2 \\ D_3 \\ D_4 \\ D_4 \\ D_4 \\ D_5 \\$	66. 47. 53 66. 47. 57 66. 54. 41 66. 47. 41 66. 48. 22 66. 47. 8 66. 52. 12 66. 47. 7 66. 49. 49 66. 50. 5 66. 49. 54 66. 54. 41 66. 46. 27 66. 49. 18 66. 49. 18 66. 49. 18 66. 45. 52 66. 47. 42	BBBBBEEEEEE EEBB BBBEE	d h Apr. 7. 11 14. 12 20. 12 28. 15 May 4. 13 13. 11 18. 12 25. 12 June 2. 12 9. 13 15. 12 16. 11 22. 12 29. 13 July 6. 13 13. 12 20. 13 27. 15 Aug. 4. 12 11. 12	$\begin{array}{c} D_1 \\ D_2 \\ D_2 \\ D_1 \\ \end{array}$ $\begin{array}{c} D_2 \\ D_1 \\ D_2 \\ \end{array}$ $\begin{array}{c} D_1 \\ D_2 \\ D_1 \\ D_2 \\ \end{array}$ $\begin{array}{c} D_1 \\ D_2 \\ D_1 \\ D_2 \\ \end{array}$ $\begin{array}{c} D_1 \\ D_2 \\ D_1 \\ D_2 \\ \end{array}$ $\begin{array}{c} D_1 \\ D_2 \\ D_1 \\ \end{array}$ $\begin{array}{c} D_2 \\ D_1 \\ D_2 \\ \end{array}$ $\begin{array}{c} D_1 \\ D_2 \\ \end{array}$	66. 48. 3 66. 49. 52 66. 48. 1 66. 48. 22 66. 51. 2 66. 47. 39 66. 50. 26 66. 47. 52 66. 48. 52 66. 49. 14 66. 50. 7 66. 49. 21 66. 51. 50 66. 51. 50 66. 51. 25 66. 49. 51 66. 49. 21 66. 51. 25 66. 49. 51 66. 49. 55 66. 49. 55 66. 49. 55	EEEB BBEE EEBBBB BBEB EE	d h Aug. 17. 15 24. 13 31. 13 Sept. 7. 13 14. 13 21. 12 28. 12 Oct. 5. 13 12. 12 19. 13 26. 13 Nov. 2. 15 9. 12 16. 13 23. 12 30. 12 Dec. 7. 12 14. 12 21. 13 28. 13	$\begin{array}{c} D_{1} \\ D_{2} \\ D_{1} \\ \end{array}$ $\begin{array}{c} D_{2} \\ D_{1} \\ D_{2} \\ \end{array}$ $\begin{array}{c} D_{1} \\ D_{2} \\ D_{2} \\ \end{array}$ $\begin{array}{c} D_{1} \\ D_{2} \\ D_{1} \\ \end{array}$ $\begin{array}{c} D_{2} \\ D_{1} \\ D_{2} \\ \end{array}$ $\begin{array}{c} D_{1} \\ D_{2} \\ D_{1} \\ \end{array}$ $\begin{array}{c} D_{2} \\ D_{1} \\ D_{2} \\ \end{array}$ $\begin{array}{c} D_{1} \\ D_{2} \\ D_{1} \\ \end{array}$	66. 51. 9 66. 49. 6 66. 47. 51 66. 48. 59 66. 48. 55 66. 48. 8 66. 47. 49 66. 50. 31 66. 46. 48 66. 48. 32 67. 1. 11 66. 51. 41 66. 49. 56 66. 51. 17 66. 53. 48 66. 47. 59 66. 52. 59 66. 54. 6 66. 49. 41	BBB BBEE EEBB BBEE EEBB

The initials B and E are those of Messrs. Bryant and Edney respectively.

TABLE XIX.—RESULTS of OBSERVATIONS of MAGNETIC DIP made with the DIP INDUCTOR in the YEAR 1914.

Civi	enwich I Time, 914.	Magnetic Dip.	Observer.	Greenwich Civil Time, 1914.	Magnetic Dip.	Observer.	Greenwich Civil Time, 1914.	Magnetic Dip.	Observer.	Greenwich Civil Time, 1914.	Magnetic Dip.	Observer.
	d h			d h			d h			d h		
Jan.	8. 13	66. 50·2	В	Apr. 9.11	66. 52.4	Е	July 13. 16	66. 50·7	C	Oct. 6. 12	66. 51.8	В.
	13. 13	66. 48.5	$\bar{\mathrm{B}}$	9. 12	66. 51.7	\overline{c}	14. 13	66. 51.4	В	8, 12	66. 52.2	E
	16. 11	66. 50·6	\bar{c}	17. 12	66. 51.2	Ě	17 11	66. 51.0	Ē	IO. I2	66. 52.7	\bar{J}
	16. 12	66. 49.0	B	21, 12	66. 50.9	\bar{c}	* 21. 11	66. 51.0	\bar{c}	13. 15	66. 52.4	B
	20. 15	66. 49.6	B	23. 12	66. 50.5	E	23. 15	66. 50.3	В	15, 11	66. 53.0	$\widetilde{\mathbf{E}}$
	22. 12	66. 50.6	E	24. 13	66. 51·o	В	24. 11	66. 52.3	Ē	17. 12	66. 52.4	$\overline{\mathbf{J}}$
	26. 11	66. 49.9	\overline{c}	28. 14	66. 50.2	B	27. 11	66. 52.7	$\overline{\mathbf{c}}$	20, 12	66. 52.2	B
	30. 12	66. 50·í	E	l '			28. 12	66. 52.4	В	22, 12	66. 52.9	E
	30. 15	66. 49.7	В	May 6. 15	66. 49.8	В	31. 13	66. 51.1	E	24. 12	66. 52.3	$\overline{\mathbf{J}}$
	31. 10	66. 48.9	C	7. 13	66. 50·4	В				27. 13	66. 52.2	В
	<i>J</i> .	' '		8. 12	66. 50.5	\mathbf{E}	Aug. 4. 10	66. 52.5	В	29. 12	66. 55.1	E
Feb.	3. 13	66. 48.6	В	13, 12	66. 52.5	В	6. 11	66. 52.6	\mathbf{c}	31, 12	66. 53.0	J
	6. 12	66. 51.4	C	15. 12	66. 50.4	E	7. 12	66. 53.1	E	,)))	1
	9. 16	66. 49.6	C	19. 13	66. 51.4	В	10. 13	66. 52.3	В	Nov. 3. 13	66. 52.9	В
	9. 16	66. 50·1	C	21. 15	66. 50.0	C	12. 12	66. 52.0	\mathbf{C}	5. 11	66. 52.9	E
	10. 12	66. 49.9	В	22. 11	66. 50.9	\mathbf{E}	14. 11	66. 52.6	E	7. 12	66. 52.5	J
	13. 12	66. 50·ó	E	26. 12	66. 50·7	\mathbf{E}	18. 13	66. 50.7	В	10. 13	66. 51.6	В.
	16. 15	66. 49.9	\mathbf{C}	26. 15	66. 48.7	C	21, 12	66. 51.6	В	12. 12	66. 53.9	E
	20, 12	66. 51·í	\mathbf{E}	29. 15	66. 50.5	В	21. 14	66. 51.7	C	14. 11	66. 54.9	J
	24. 13	66. 49.6	В	, ,	, ,		24. 13	66. 50.8	C	17. 12	66. 52.2	\mathbf{E}
	27. 12	66. 50.1	\mathbf{E}	June 2, 13	66. 51.7	В	25. 13	66. 51.4	В	19. 11	66. 52.2	E
	27. 15	66. 50.1	В	5. 11	66. 51.5	C	28. 13	66. 53.0	В	21. 13	66. 50.6	J
	, ,			5. 11	66. 51.3	E		,,,		24. 13	66. 52.6	В
Mar.	3. 13	66. 51.0	В	9. 12	66. 51.3	В	Sept. 1. 13	66. 50.3	В	26. 12	66. 50.7	E
	3. 15.	66. 50.6	C	10. 15	66. 49.2	C	1. 16	66. 50.7	C	28. 11	66. 49.4	J
	6. 12	66. 50.8	E	12. 11	66. 51.8	Е	4. 13	66. 50.0	E		12.	
	10. 13	66. 50.2	В	16. 11	66. 51.7	В	8. 13	66. 51.3	В	Dec. 1.13	66. 54·0	В
	13. 12	66. 51.0	${f E}$	18. 11	66. 50.4	C	11. 11	66. 52.2	E	4. 12	66. 5 1·1	E
	14. 12	66. 49.8	C	19. 10	66. 51.1	Е	12. 13	66. 51.8	\mathbf{C}	5. 13	66. 50.8	J
	17. 13	66. 50·5	В	23. 11	66. 52.9	В	15. 16	66. 50.7	В	8. 13	66. 51.5	В
	20. 12	66. 50.5	E	26. 12	66. 51.8	E	18. 11	66. 52.3	\mathbf{C}	10. 12	66. 52.3	${f E}$
	24. 13	66. 48.0	В	26. 15	66. 50.7	C	18. 12	66. 51.7	\mathbf{E}	12, 11	66. 51.6	J
	25. 16	66. 49.6	C	30. 11	66. 51.7	C	21. 14	66. 53.2	C	15. 13	66. 50.9	В
	27. 12	66. 50.4	\mathbf{E}	30. 13	66. 51.8	В	22. 15	66. 50.2	В	17. 11	66. 51·ó	${f E}$
	31. 13	66. 50.3	В		_		25. 11	66. 52.7	E	19. 11	66. 51.6	J
		, ,		July 3. 11	66. 51.6	\mathbf{E}	29. 13	66. 53.8	В	22. 11	66. 50.8	\mathbf{E}
Apr.	3. 12	66. 51.5	Е	7. 13	66. 51.7	В				24. 13	66. 50.3	В
,T	3. 16	66. 49.9	$\overline{\overline{\mathbf{c}}}$	9. 11	66. 51.2	$\overline{ ext{C}}$	Oct. 2. 11	66. 53.0	\mathbf{E}	29. 13	66. 51.3	В
	6. 14	66. 52.3	\mathbf{c}	10. 11	66. 52.9	E	3. 13	66. 51.7	В	31. 10	66. 51.2	E

The initials B, E, C, and J are those of Messrs. Bryant, Edney, Chapman, and Jones.

TABLE XX.—ANNUAL SUMMARY of the MAGNETIC ELEMENTS.

			Mean	Value of		Monthly	y Mean Diurnal R	ange of	Sum of Hou	ırly Deviations fro	om Mean of
Month, 1914.	Weste Declina		Horizontal Force C.G.S.	Vertical Force C.G.S.	Dip.	Declination.	Horizontal Force.	Vertical Force.	Declination.	Horizontal Porce.	Vertical Force.
January		0.0	-18550	.43337	66. 49·7	2. 6	7γ	5γ	15.5	33 γ	25 γ
February	15.	8.9	·18536	·43331	66. 50.3	4.0	7	13	22.8	41	72
March		8.5	.18539	.43316	66. 50.4	6.3	18	15	34.9	101	78
April		8.5	.18527	.43317	66. 51.3	8.1	27	23	42.8	161	115
May	15.	7.8	.18539	.43304	66. 50.8	8.2	32	25	42.3	190	156
June	15.	7.2	.18525	.43322	66. 51.4	8.2	41	2 I	46.6	239	109
July	15.	5.1	.18527	.43355	66. 51.6	8.4	38	20	48.0	243	96
August	15.	5.3	.18527	.43343	66. 52.1	8.8	40	22	46.4	246	103
September	15.	4.2	18521	.43354	66. 51.7	8.1	32	18	42.9	184	83
October	15.	3.7	·18534	·43368	66. 52.6	5.7	29	I 2	30·I	178	56
November	15.	3.6	.18514	.43338	66. 52.2	4.6	19	I 2	22.3	121	48
December	15.	2.5	.18524	.43311	66. 51.4	3.2	14	7	17.5	63	33
The Year	15.	6.3	.18530	.43333	66. 51.3	6.38	25.3	16.1	34.34	150.0	81.2

ROYAL OBSERVATORY, GREENWICH.

MAGNETIC DISTURBANCES.

1914.

MAGNETIC DISTURBANCES in DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, recorded at the ROYAL OBSERVATORY, GREENWICH, in the YEAR 1914.

The following notes give a brief description of all magnetic movements (superposed on the ordinary diurnal movement) exceeding 3' in Declination, 20\gamma\ in Horizontal Force, or 12\gamma\ in Vertical Force, as taken from the photographic records of the respective Magnetometers. The movements in Horizontal and Vertical Force are expressed in C. G. S. units. When any one of the three elements is not specifically mentioned, it is to be understood that the movement, if any, was insignificant. Any failure or want of register is specially indicated.

The term "wave" is used to indicate a movement in one direction and return; "double wave" a movement in one direction and return with continuation in the opposite direction and return; "two successive waves" consecutive wave movements in the same direction; "oscillations" a number of movements in both directions. The extent and direction of the movement are indicated in brackets, + denoting an increase, and - a decrease of the magnetic element. In the case of oscillations the sign \pm denotes positive and negative movements of generally equal extent.

Magnetic movements which do not admit of brief description in this way are exhibited on accompanying plates.

The time is Greenwich Civil Time (commencing at midnight, and counting the hours from o to 24).

```
1914.

January

1d 10h to 16h Loss of register in all elements.

4d 23h to 5d 2h Quadruple wave in H. F. (-20, +40, -20, +15) and in Dec. (+3', -2', +3', -6').

5d 0h to 0½h Decrease in V.F. (-22). 13½h to 15½h Wave in H.F. (-25).

7d 19½h to 21h Double-crested wave in Dec. (-3', -4').

8d 21h to 23h Double-crested wave in Dec. (-5', -3').

14d 22h to 23½h Wave in Dec. (-6'). 22h to 23h Wave in H.F. (+20).

15d 23h to 16d 3h Quadruple wave in Dec. (+3', -3', +1', -5').

16d 0½h to 2h Double wave in H.F. (-15, +15). 1½h to 1½h Decrease in V.F. (-9). 18h to 19h Wave in Dec. (-3').

17d 10¼h to 11h Wave in H.F. (-20).

22d 2h to 5h Triple wave in H.F. (-15, +20, -15) and in Dec. (-2', +8', -5'). 1h to 4½h Decrease in V.F. (-16), with superposed double wave (+5, -10) from 2½h to 4½h. 19½h to 23h Wave in Dec. (-8'), with peak at 20½h; small movements in H.F. 23h to 24h Wave in Dec. (+5') and in H.F. (+20); decrease in V.F. (-15).
```

February 2^d 15^h to 18^h Wave in Dec. (- 3').

3^d 14^h to 18^h Wave in H.F. (- 40), with peak at 16^{3h}; two small waves in Dec. (- 3', - 3'), with peaks at 14^{1h}, 16^{3h}. 21^{1h} to 23^h Wave in Dec. (- 5'), with peak at 21^{1h}.

4^d 5^h to 6^{1h} Wave in Dec. (+ 5'). 21^h to 22^h Wave in H.F. (+ 25). 21^h to 22^{1h} Wave in Dec. (- 5'), with steep rise.

5^d 2^{1h} to 4^h Flat-crested wave in Dec. (+ 4').

6^d 5^{3h} to 8^h Double-crested wave in Dec. (+ 3', + 2'). 15^h to 20^h Wave in H.F. (- 35), with its peak at 18^h. 17^{3h} to 18^{1h} Wave in Dec. (+ 3'), followed by decrease (- 5') till 20^h.

12^d 23^{3h} to 13^d 0^{1h} Small wave in Dec. (+ 3').

14^d 14^{3h} to 15^{1h} Decrease in H.F. (- 30). 23^{1h} to 15^d 2^{1h} Wave in Dec. (- 5'), with flat crest and slow decline, also followed by two similar but smaller waves.

16^d 20^{1h} to 21^h Sharp wave in Dec. (- 4').

17^d 0^h to 1^h Pointed wave in H.F. (+ 20). 21^h to 22^{1h} Truncated wave in Dec. (- 4'); decrease (- 3') to 23^{1h}, recovery (+ 3') and return (- 3') at 18^d 0^{1h}, slow increase (+ 2') to 1^{1h}, and wave (- 6') from 1^{1h} to 3^h, with peak at 1^{3h}. 17^d 21^{3h} to 22^{1h} Decrease in H.F. (- 20), with slow oscillatory return at about 18^d 6^h. Decrease in V.F. (- 12) from 18^d 1^{3h} to 2^{1h}.

```
1914.
February 20<sup>d</sup> 20<sup>h</sup> to 21\frac{3}{4}<sup>h</sup> Wave in Dec. ( - 4').
                             22<sup>d</sup> 7½h to 11½h Loss of register in V.F.
                             22<sup>d</sup> 20<sup>h</sup> to 22<sup>h</sup>, 22<sup>h</sup> to 23<sup>d</sup> 2<sup>h</sup> Two successive waves in Dec. (-8', -6'); small oscillations in H.F.
                             28d 12h to 16h Wave in H.F. ( + 25). 20h to March 1d 1h Wave in Dec. ( - 10'), with peak at 22½h; wave
                                        in H.F., with two peaks (-30, -35) at 20\frac{1}{2}h, 22\frac{3}{4}h.
March
                                1^{\mathfrak{g}} 1_{5^{\mathfrak{g}}} 1_{5^{\mathfrak
                                        with peak at 19<sup>1h</sup>.
                               2^{\mathbf{d}} 0_{2}^{\mathbf{h}} to 1_{2}^{\mathbf{h}}, 1_{2}^{\mathbf{h}} to 3^{\mathbf{h}} Two waves in H.F. (+ 30, + 20), with steep commencement in the former. 0_{2}^{\mathbf{h}} to 1_{4}^{\mathbf{h}} Small double wave in Dec. (±1'). 1_{2}^{\mathbf{h}} to 3_{4}^{\mathbf{h}} Wave in Dec. (-5'). 0_{2}^{\mathbf{h}} to 2^{\mathbf{h}} Decrease in V.F. (-25). 1^{\mathbf{h}} to 1_{4}^{\mathbf{h}} Loss of register in H.F. 17^{\mathbf{h}} to 3^{\mathbf{d}} 7 Long series of small deviations (-5', -5', -4', -6', -5', -2', -3') of Dec., with accordant returns to the normal: also dight movements in H.F. to 2^{\mathbf{d}} 4.
                                        with occasional returns to the normal; also slight movements in H.F. to 3d 4h.
                                3^{d} 4h to 7h Wave in H.F. (+ 35). 4h to 6h Decrease in V.F. (- 25).
                                4^{d} 17_{4}^{1h} to 19^{h} Wave in Dec. (-4'). 21_{4}^{1h} to 23^{h} Waves with sharp commencement in H.F. (+35)
                                        and in Dec. (-6').
                                5^{\mathbf{d}} 1^{\mathbf{3}h} to 3^{\mathbf{h}} Wave in Dec. ( + 3').
                                6^{\mathrm{d}} 3^{\mathrm{h}} to 6^{\mathrm{h}} Double wave in Dec. ( + 4', - 5'), wave in H.F. ( + 25). 4^{\mathrm{h}} to 4^{\mathrm{h}} Decrease in V.F.
                                       (-15). 15<sup>h</sup> to 18\frac{1}{2}^{h} Flat-crested wave in H.F. (-25). 21\frac{1}{2}^{h} to 7^{d} 2^{h} Double wave in Dec., with subsidiary waves superposed; main peaks at 22\frac{1}{2}^{h} (-13') and 7^{d} 0\frac{3}{4}^{h} (+4'). 22^{h} to 23\frac{3}{4}^{h} Sharp wave in H.F. (+45), with net decrease (-20). 22^{h} to 7^{d} 0\frac{1}{4}^{h} Wave in V.F. (-12).
                                7^{\rm d} o<sub>4</sub> to 1_{3}^{\rm dh} Decrease in V.F. (-15). 17_{3}^{\rm dh} to 18_{3}^{\rm dh} Wave in Dec. (-3'). 23^{\rm h} to 8^{\rm d} 1_{3}^{\rm dh} Wave in
                                        \overline{\text{Dec.}} ( -4'.)
                                9^{d} 23^{1h}_{4} to 10^{d} 1^{h} Wave in H.F. ( + 20).
                             10d 20\frac{1}{2}h to 21\frac{1}{2}h Sharp-peaked wave in H.F. ( + 30), flat-crested wave in Dec. ( - 3').
                             11d 19_4^{3h} to 24^h Wave in Dec., with two sharp peaks (-7', -6') at 20_4^{1h} and 22^h, and intervening minimum
                                        (-2'); small movements in H.F.
                             12d 18h to 19h Small double wave in H.F. (-15, +15). 18h to 19h Wave in Dec. (-8'), with steep
                                        commencement.
                             15^{\rm d} 13^{\rm h} to 5^{\rm h} Shallow wave in Dec. ( -3'). 13^{\rm 3h} to 14^{\rm h} Decrease in Dec. ( -3'). 14^{\rm h} to 15^{\rm h} Wave in H.F. ( + 20). 17^{\rm h} to 20^{\rm h} Wave in H.F. ( -35), with superposed wave ( -25) from 18^{\rm h} to 19^{\rm 3h}. 18^{\rm h} to 20^{\rm h} Wave in Dec. ( -12'). 22^{\rm h} to 16^{\rm d} 2^{\rm h} Wave in Dec. ( -5'), amd small oscillations in
                                        H.F. 16^{h} to 20^{h} Wave in V.F. ( + 25).
                              17d 18th to 18d 3h Oscillations in H.F., positive till 21h, and afterwards negative ( ± 25). 21h to 18d 3h
                                         Oscillations in Dec., negative till 18d 2h, and positive ( + 7') from 2h to 3h; main peak ( - 11') at 213h.
                                         21h to 18d 3h Wave in V.F. ( + 12).
                             20^{d} \ 20^{\frac{3}{4}h} to 21^{\frac{1}{2}h} Wave in Dec. ( -4').
                             23<sup>d</sup> 20½<sup>h</sup> to 22<sup>h</sup> Small double-crested wave in Dec. (-3', -3').
                             24^{d} 20\frac{1}{2}^{h} to 25^{d} 2^{h} Negative waves in Dec., with peaks at 21\frac{1}{4}^{h} (-7'), 22\frac{1}{4}^{h} (-8'), 23\frac{3}{4}^{h} (-12'), and 1\frac{3}{4}^{h}
                                        (-4'). 22h to 23½h Wave in H.F. (-20). 23½h to 25d o½h Double wave in H.F. (+20, -30).
                             25d 18h to 22h Wave in Dec., with peaks at 18\frac{1}{2}h (-4'), 19\frac{1}{4}h (-5').
                             26d 20h to 22\frac{1}{2}h Wave in Dec. ( - 3'). 23h to 23\frac{3}{4}h Wave in Dec. ( + 5') and in H.F. ( + 20).
                              27^{d} 3h to 5h Wave in Dec. (+4'). 21\frac{1}{4}h to 22\frac{1}{2}h Wave in Dec. (-5'), and small wave in H.F. (+15).
                               1d 15h to 19h Oscillations (± 3', ± 20) in Dec. and H.F. superposed on normal curve. 22h to 23h Wave
April
                                       in Dec. (-3') and H.F. (+20).
                               2d 15h to 16h Wave (+ 20) and double wave (+ 20, - 25) in H.F. 23h to 3d 1h Small movements in
                                       Dec. Two waves in Dec. (+2', +3') and in H.F. (+20+20).
                               6d 5h to 7d 5h See Plate I.
                               7^{\mathbf{d}} 14\frac{1}{2}h to 22h Several rapid oscillations in H.F. chiefly (17\frac{1}{4}h to 18\frac{1}{4}h, +35 to -35). 22\frac{1}{2}h to 23\frac{1}{2}h Waves
                                       in H.F. (+ 50), V.F. (- 20), and Dec. (- 5').
                               8d Ih to 4\frac{1}{2}h Waves in Dec. (+5', +2', -4', + I'). 1\frac{1}{2}h to 5\frac{1}{4}h Waves in H.F. (-15, ± 10, +25).
                                        ^{2h} to ^{4h} Decrease in V.F. (-30). ^{5h} to ^{6h} to ^{6h} Two waves in H.F. (-20, -30). ^{16h} to ^{10h} to ^{10h} Wave in Dec. (-6'), with peak at ^{17h}; double wave in H.F. (-25, +10); wave in V.F. (+15). ^{21h}
```

to 23h Double-crested wave in Dec. (-3', -3'), wave in H.F. (+25).

```
1914.
                      9^{d} 0_{4}^{3h} to 1_{2}^{1h} Flat-crested wave in Dec. (+3'). 20^{h} to 21_{2}^{1h} Wave in Dec. (-6'), with steep commence-
 April
                           ment, double wave in H.F. (-20, +20). 23\frac{1}{4} to 10^{d} 1\frac{3}{4} Wave in Dec. (-3).
                     10^{d} 18^{1h}_{2} to 19^{1h}_{4} Wave in H.F. (+ 20). 18^{1h}_{2} to 20^{1h}_{2} Truncated wave in Dec. (- 5').
                    11d 19\frac{1}{2}h to 20h Wave in Dec. (-3') and in H.F. (+20). 23h to 12d 0\frac{3}{4}h Wave in H.F. (+20).
                    16<sup>d</sup> 2<sup>h</sup> to 4<sup>h</sup> Double wave in Dec. (+ 4', - 2'); small waves in H.F. (+ 12, + 20). 2<sup>h</sup> to 3<sup>1</sup>/<sub>4</sub>h Decrease in V.F. (- 16). 11<sup>1</sup>/<sub>2</sub>h to 15<sup>h</sup> Quadruple wave in H.F. (- 18, + 18, - 12, + 15). 13<sup>h</sup> to 14<sup>1</sup>/<sub>2</sub>h Wave in Dec. (- 3'). 15<sup>h</sup> to 16<sup>1</sup>/<sub>2</sub>h Wave in Dec. (- 5'). 17<sup>3</sup>/<sub>4</sub>h to 18<sup>1</sup>/<sub>4</sub>h Wave in Dec. (- 3'). 21<sup>h</sup> to 22<sup>1</sup>/<sub>4</sub>h Wave in H.F. (+ 30). 22<sup>1</sup>/<sub>4</sub>h to 17<sup>d</sup> 2<sup>h</sup> Double wave in H.F. (- 15, + 15). 21<sup>h</sup> to 24<sup>h</sup> Wave in V.F. (+ 15),
                            following upon unusually large diurnal movement in V.F. (range 45).
                    17^{d} 10_{3}^{dh} to 20_{3}^{dh} Wave in H.F. (+ 20). 22<sup>h</sup> to 23<sup>h</sup> Wave in H.F. (+ 20), with steep rise. 23<sup>3</sup>/<sub>3</sub>h to 18<sup>d</sup> 1h
                            Wave in \overline{H}.F. (+20).
                    19<sup>d</sup> oh to 3<sup>h</sup> Decrease in V.F. (-16). oh to 6<sup>h</sup> Small movements in H.F. (\pm 15) and Dec. (\pm 2'). 20\frac{1}{2}^{h} to 21\frac{3}{4}^{h} Two waves in Dec. (\pm 2', \pm 5'). 20\frac{3}{4}^{h} to 22^{h} Decrease in V.F. (-16). 21\frac{1}{4}^{h} to 22\frac{1}{4}^{h} Wave
                           in H.F. (+25).
                    21^{d} 19\frac{1}{2}^{h} to 21\frac{3}{4}^{h} Triple wave in Dec. (-, +, -, range 3').
                    23d 20th to 21h Decrease (-5') in Dec., slow recovery to 24d 1h, and further decrease (-4') to 24d 2h.
                    24^d 15h to 19h Oscillations in H.F. (\pm 12). 18h to 20h Flat-crested wave in Dec. (- 4').
                    27<sup>d</sup> 15\frac{3}{4}h to 19<sup>h</sup> Irregular oscillations in H.F. ( \pm 20); increase in V.F. ( \pm 27).
                     6^{d} 22h to 24h Wave in Dec. (-6').
May
                     8d 192h to 202h Wave in H.F. (+ 20).
                   15^{d} 14^{h} to 15^{h} Wave in H.F. (+25). 16\frac{1}{4}^{h} to 18^{h} Oscillations in H.F. (\pm 15). 20\frac{1}{2}^{h} to 21\frac{1}{2}^{h} Wave in Dec.
                           (-3'). 22\frac{1}{4}h to 16^{d} 6h Double wave in Dec. (+3', -9'), with peaks at 22\frac{1}{2}h and 16^{d} 0\frac{3}{4}h. 23\frac{1}{2}h to
                           16d 11h  Wave in H.F. (+ 30).
                   17^{\rm d} oh to 4\frac{1}{2}h Triple wave in Dec. (-2', +2', -2'). 4\frac{1}{2}h to 6h Decrease in V.F. (-12). 6\frac{3}{4}h to 7\frac{1}{2}h Oscil-
                           lations in H.F. and Dec. 8^h to 9\frac{1}{2}^h Wave in Dec. (+3'). 13^h to 14^h Wave in H.F. (+30). 15\frac{3}{4}^h to 16\frac{1}{4}^h
                           Serrated wave in H.F. (+25).
                   25<sup>d</sup> 13½<sup>h</sup> to 14<sup>h</sup>. Pointed wave in H.F. (-20). 17<sup>h</sup> to 18¼<sup>h</sup> Wave in H.F. (-20). 19¾<sup>h</sup> to 20¾<sup>h</sup> Wave in H.F. (-25). 20<sup>h</sup> to 21<sup>h</sup> Wave in Dec. (-3'). 21¾<sup>h</sup> to 22½<sup>h</sup> Increase (+2') and decrease (-5') in Dec.
                   26<sup>d</sup> 13<sup>1</sup>/<sub>4</sub><sup>h</sup> to 14<sup>3</sup>/<sub>4</sub><sup>h</sup> Wave in H.F. (-4·5). 14<sup>3</sup>/<sub>4</sub><sup>h</sup> to 19<sup>h</sup> Oscillations in H.F. (± 15). 21<sup>1</sup>/<sub>2</sub><sup>h</sup> to 23<sup>h</sup> Wave in Dec. (-6') and H.F. (+28). 31<sup>d</sup> 6<sup>h</sup> to June 1<sup>d</sup> 6<sup>h</sup>. See Plate I.
                     1d 23h to 2d 0\frac{1}{2}h Truncated wave in H.F. (+40). 23h to 23\frac{1}{4}h Wave in Dec. (-3').
June
                     2^d 10h to 23^h Slight movements (\pm 15) in H.F., with sharp wave (+ 20) from 15\frac{1}{4}h to 15\frac{1}{2}h.
                     3^{d} 3^{h} to 4^{1h} Wave in H.F. (-20). 3^{1h} to 5^{h} Wave in Dec. (+3).
                     7^{d} 17^{\frac{1}{2}h} to 19^{\frac{1}{2}h} Double wave in H.F. (+15, -15).
                    8d 16\frac{1}{4}h to 17\frac{1}{4}h Wave in H.F. (-25). 19\frac{1}{2}h to 20\frac{3}{4}h Wave in Dec. (-3') and double wave in H.F. (-15,
                  11^{d} 19^{1h} \text{ to } 21^{h} \text{ Wave in Dec. } (-3').
                  12d 18h to 13d 9\frac{1}{2}h Loss of register in H.F. and Dec.
                  15d 3^h to 4^h Wave in Dec. (+3').
                  19<sup>d</sup> 16<sup>h</sup> to 18<sup>h</sup> Increase in H.F. (+ 35), slowly recovering, with superposed waves (\pm 20, from 19½<sup>h</sup> to 21<sup>h</sup>), to about 20<sup>d</sup> 6<sup>h</sup>. 21½<sup>h</sup> to 20<sup>d</sup> 0½<sup>h</sup> Triple wave in Dec. (-3', +4', -7'), the peaks occurring at 22¼<sup>h</sup>,
                           22\frac{1}{2}h, 23h. 22\frac{1}{2}h to 22\frac{3}{4}h Sharp decrease in V.F. (- 20).
                  20d 14\frac{1}{4}h to 16\frac{1}{4}h Wave in H.F. (- 20). 16\frac{1}{2}h to 17\frac{1}{2}h Wave in H.F. (- 35), with rapid commencement.
                  25^{d} 13^{h} to 14^{h} Two waves in H.F. (+ 20, + 30). 14\frac{1}{2}^{h} to 15\frac{3}{4}^{h} Double wave in H.F. (+ 40, -45). 15\frac{3}{4}^{h}
                          to 19th Wave in H.F., with irregular crest (- 40).
                  26d \ 21\frac{3}{4}h to 22\frac{1}{2}h Wave in H.F. (-30). 23h to 27d \ 9h Loss of register in H.F., Dec., and V.F.
                  27<sup>d</sup> 20<sup>h</sup> to 28<sup>d</sup> 6<sup>h</sup> Movements in Dec., with turning points at 20\frac{1}{2}<sup>h</sup> (-2'), 21\frac{1}{4}<sup>h</sup> (-3'), 23<sup>h</sup> (+1'),
                          23\frac{1}{2}h (-5'), 28d o \frac{1}{2}h (+6'); the last is followed by a rapid decrease in Dec. (-10') and V.F.
```

(-25) till $0\frac{3}{4}$ h. 21^{h} to 22^{h} Wave in H.F. (+20).

1914. June

- 28^d 2^h to 3^h Wave in H.F. (-30); increase in Dec. (+6'). 3^h to $3\frac{1}{2}$ ^h Decrease in Dec. (-4') and in V.F. (-12). $3\frac{1}{2}$ ^h to $5\frac{1}{2}$ ^h Further decrease in Dec. (-6'). $3\frac{1}{2}$ ^h to $7\frac{1}{2}$ ^h Increase in V.F. (+15). 20^h to 21^h Wave in H.F. (+40) and oscillations in Dec. $(\pm 2')$.
- 29^d 3^h to 5^h Wave in Dec. (+4'). 20^{3h} to 21^{3h} Decrease in Dec. (-6'), with slow recovery to 30^d 1^h. 30^d 2^h to 4^h Wave in Dec. (+4').

July

- 5^d 1^h to 6^d 1^h See Plate II.
- 6d 1h to $2\frac{1}{4}$ h Wave in Dec. (-3'). 2h to $2\frac{3}{4}$ h Wave in H.F. (+20).
- 9^h 21½h to 10d 1h Wave in Dec. (- 4'), followed by decrease (- 5') to 10d 3h. Oscillations in H.F. (\pm 10) from 9^d 21h to 10d 3h.
- $15^{\rm d}$ 20\frac{1}{4}^{\text{h}} \text{ to 21\frac{1}{2}^{\text{h}}} \text{ Wave in Dec. (-3').}
- 21d $3\frac{1}{2}$ h to $4\frac{1}{2}$ h Wave in Dec. (+4'). $22\frac{1}{2}$ h to 22^d $0\frac{1}{2}$ h Wave in Dec. (-5').
- $22^{\mathbf{d}} \circ_{\underline{1}}^{\underline{1}h}$ to $1\frac{1}{2}^{\underline{h}}$ Wave in Dec. (-4') and small wave in H.F. (+15). $20\frac{1}{2}^{\underline{h}}$ to $22\frac{3}{4}^{\underline{h}}$ Wave in Dec. (-5').
- 23^d $16\frac{1}{2}$ ^h to 19^h Irregular oscillations in H.F. (\pm 20).
- 24^d 13^h to 21^h Oscillations in H.F. (± 12), followed, from 21^h to 25^d 2^h, by irregular triple wave (+ 40, 30, + 25). 21^h to 23^h Wave in Dec. (- 7'), with steep rise and gradual, oscillatory decline.
- 25^d $3\frac{3^{h}}{4}$ to $4\frac{1}{4}$ ^h Decrease in Dec. (-4'); increase (+5') to $4\frac{1}{2}$ ^h, and return (-5') to $4\frac{3^{h}}{4}$; increase (+ 10') to $6\frac{1}{4}$ ^h, and decrease (-8') to 9^h. $5\frac{3^{h}}{4}$ to 7^h Wave in H.F. (-30). $12\frac{1}{2}$ ^h to 14^h Triple wave in H.F. (+ 10, -20, + 10) and in Dec. (-1', +2', -1'). $20\frac{1}{4}$ ^h to $20\frac{1}{2}$ ^h Decrease in Dec. (-3'), with slow recovery. $23\frac{1}{2}$ ^h to $26\frac{1}{2}$ 0 Wave in H.F. (-20).
- 26d $3\frac{1}{2}$ h to $5\frac{1}{2}$ h, $7\frac{1}{2}$ h to $9\frac{1}{2}$ h Waves in H.F. (-25, -25), superposed on diurnal curve. 4^h to $5\frac{1}{4}$ h Wave in Dec. (+4'), followed till 9^h by further wave (-5'). $21\frac{1}{4}$ h to $21\frac{3}{4}$ h Wave in H.F. (+30) and in Dec. (-3').
- 28^d 3^h to $8\frac{1}{2}$ ^h Slow oscillations in Dec. ($\pm 2'$). 14^h to 15^h Movements in Dec. (-5') and in H.F. (+45), forming chief features of irregular double waves in Dec. and H.F. 21^h to 23^h Double wave in Dec. (-4', +4'), and wave in H.F. (+25).
- 20d 10h to 31d 10h See Plate II.
- 31^d 10^h to 11^h Decrease in H.F. (-50), followed by increase till $14\frac{1}{2}$ ^h. $14\frac{1}{2}$ ^h to $19\frac{1}{4}$ ^h Irregular waves in H.F. (+20, -40, +30, -20, +20). $15\frac{1}{2}$ ^h to 19^h Two waves in Dec. (-8', -5').

August

- 1d oh to 3h Small oscillations in Dec., with peak (+ 3') at 2h. 10\frac{3}{4}h to 11h Decrease in H.F. (- 30), followed by increase (+ 70) till 13\frac{1}{2}h. 14h to 20\frac{1}{2}h Oscillations in H.F. (\pm 15). 22h to 23h Wave in H.F. (+ 55) and double wave in Dec. (- 5', + 2'), both with rapid commencement. 22h to 2d 1h Wave in V.F. (- 12).
- 2^d 7^h to 9^h Wave in H.F. (-50). 13^h to 17½^h Oscillations in H.F. (± 15). 16¾^h to 17½^h Wave in V.F. (+ 20). 17¾^h to 19½^h Double wave in H.F., the first wave having two crests (-20, -20, +15). 18^h to 19^h Wave in Dec. (-4′). 21½^h to 22^h Wave in H.F. (+25).
- 3^d $6\frac{1}{2}$ ^h to 10^h Oscillations in H.F. (± 10) and Dec. (± 2'). 14^h to 15 $\frac{1}{4}$ ^h Wave in H.F. (- 50). 15 $\frac{1}{4}$ ^h to 19 $\frac{1}{2}$ ^h Oscillations in H.F. (± 10). 19 $\frac{1}{2}$ ^h to 21 $\frac{1}{2}$ ^h Triple-peaked wave in Dec. (- 6', -12', 10') and in H.F. (+ 40, +65, +30).
- 4^{d} $1\frac{1}{2}^{h}$ to 5^{h} Two waves in Dec. (+ 3', + 6'). 2^{h} to 4^{h} Triple wave in H.F. (+ 10, 20, + 15). 16^{h} to $16\frac{3}{4}^{h}$ Double wave in H.F. (+ 20, 20).
- 5^{d} 21 $\frac{3}{4}$ h to 23h Wave in H.F. (+ 25) and in Dec. (- 3').
- 6d Ih to 5h Oscillations in Dec. ($\pm 2'$). 5h to $6\frac{1}{2}$ h Wave in H.F. (-35) and in Dec. (+3'). $15\frac{3}{4}$ h to $17\frac{1}{2}$ h Double wave in H.F. (+20, -25). $16\frac{1}{2}$ h to $17\frac{1}{4}$ h Decrease in Dec. (-5'), followed by further oscillatory decrease till $21\frac{1}{2}$ h. 20h to 22h Two waves in H.F. (-30, -35). 23h to 7^d $0\frac{1}{2}$ h Double wave in Dec. (+3', -3').
- 7^{d} 2½h to 6h Wave in Dec. (+ 4'). $16\frac{1}{4}$ h to $16\frac{3}{4}$ h Wave in H.F. (+ 20).
- 9d 6th to 15h Loss of register in Dec.
- 11d $10\frac{1}{2}$ h to $15\frac{1}{2}$ h Loss of register in V.F. 15h to 19h Oscillations in H.F., with peaks at $16\frac{3}{4}$ h (+ 20) and $17\frac{3}{4}$ h (- 25). $22\frac{1}{2}$ h to 24h Two waves in H.F. (+ 15, + 20).
- 17^{d} 20h to 20¹/₄h Wave in H.F. (+ 40) and in Dec. (- 3').
- 18d Ih to 2h Wave in Dec. (+4'). 17 $\frac{3}{4}$ h to 18h Wave in H.F. (-25). 18h to 19h Wave in Dec. (-4'). 23h to 24h Wave in H.F. (+30), with steep rise.

1914. August

- 19^d $0\frac{1}{4}$ ^h to $1\frac{1}{2}$ ^h Wave in Dec. (+3'). 2^{h} to $4\frac{1}{2}$ ^h Double wave in Dec. (-3', +2'), wave in H.F. (-20). $12\frac{1}{4}$ ^h to 14^h Double wave in H.F. (+15, -15). $17\frac{1}{4}$ to $18\frac{1}{4}$ ^h Wave in Dec. (-3') and in H.F. (+20). $21\frac{1}{4}$ ^h to $22\frac{1}{2}$ ^h Wave in Dec. (-11') and in H.F. (+25), with steep commencement.
- 20^d o^h to 5^h Oscillations in H.F. (\pm 15) and in Dec. (\pm 2'). 12½^h to 15^h Wave in Dec. (\pm 3'), and double wave in H.F. (\pm 15, \pm 25). 16½^h to 17½^h Wave in H.F. (\pm 25). 19½^h to 20½^h Wave in Dec. (-6') and in H.F. (-30).
- 23^d $4\frac{1}{2}$ ^h to $6\frac{1}{2}$ ^h Wave in Dec. (+ 7'), double wave in H.F. (- 15, + 25), followed till 24^h by numerous oscillations in H.F., including several sharp movements (± 20) from 11h to 15h, and a wave (+ 45), with steep rise, from 17^h to 18^h. 12½^h to 13½^h Wave in Dec. (+5'). 20½^h to 21½^h Wave in Dec. (+4'). $23\frac{1}{2}$ h to 24^{d} $1\frac{1}{4}$ h Wave in Dec. (+4') and in H.F. (+20), with peak at 24^{h} .
- 24^{d} $19\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Wave in H.F. (-25). $22\frac{1}{4}^{h}$ to 25^{d} $0\frac{1}{2}^{h}$ Double wave in Dec. (+2', -4').
- 25^d 15½^h to 17½^h Oscillations in H.F. (\pm 15). 19^h to 20^h Wave in Dec. (- 5'). 22½^h to 24^h Wave in H.F. (+55), and decrease in Dec. (-5').
- $26^{\rm d}$ $15\frac{1}{2}^{\rm h}$ to $19\frac{1}{2}^{\rm h}$ Oscillations in H.F. (\pm 10). $22^{\rm h}$ to $23^{\rm h}$ Wave in H.F. (\pm 20).
- 27^{d} $21\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Decrease in Dec. (-3').
- 28^{d} 11½h to 11½h Wave in H.F. (-20). $20\frac{3}{4}$ h to 21¾h Truncated wave in Dec. (-5'). $21\frac{1}{2}$ h to 22h Decrease in V.F. (-15). $21\frac{1}{2}$ h to $22\frac{3}{4}$ h Wave in H.F., with two peaks (+35, +20). $21\frac{3}{4}$ h to 29^{d} $2\frac{1}{2}$ h Complicated wave in Dec., with oscillatory rise to a peak (- 12') at 14h
- 29^d o_4^{1h} to 5_2^{1h} Decrease (- 35) and superposed quadruple wave in H.F., with peaks at o_4^{3h} (+ 20), 2^h (- 40), 4^h (+ 25), and 5^h (- 15). o_2^{1h} to 1^h Decrease in V.F. (- 12). 3^h to 5_2^{1h} Wave in Dec. (- 3'). 5_2^h to 24^h Oscillations in H.F. and Dec., the principal movements being from 18^h to 19^h, i.e. waves in H.F. (+40) and in Dec. (-7'), with steep commencement.
- $30^{d} 8\frac{3}{4}^{d} \text{ to } 10\frac{1}{4}^{h} \text{ Wave in H.F. } (-25).$ $16\frac{1}{2}^{h} \text{ to } 10^{h} \text{ Waves in Dec. } (-8') \text{ and in H.F. } (+40).$ $19\frac{1}{2}^{h} \text{ to } 21^{h}$ Waves in H.F. (+40) and in Dec. (-5'). $22\frac{3}{2}$ h to $22\frac{3}{4}$ h Wave in Dec. (+3').

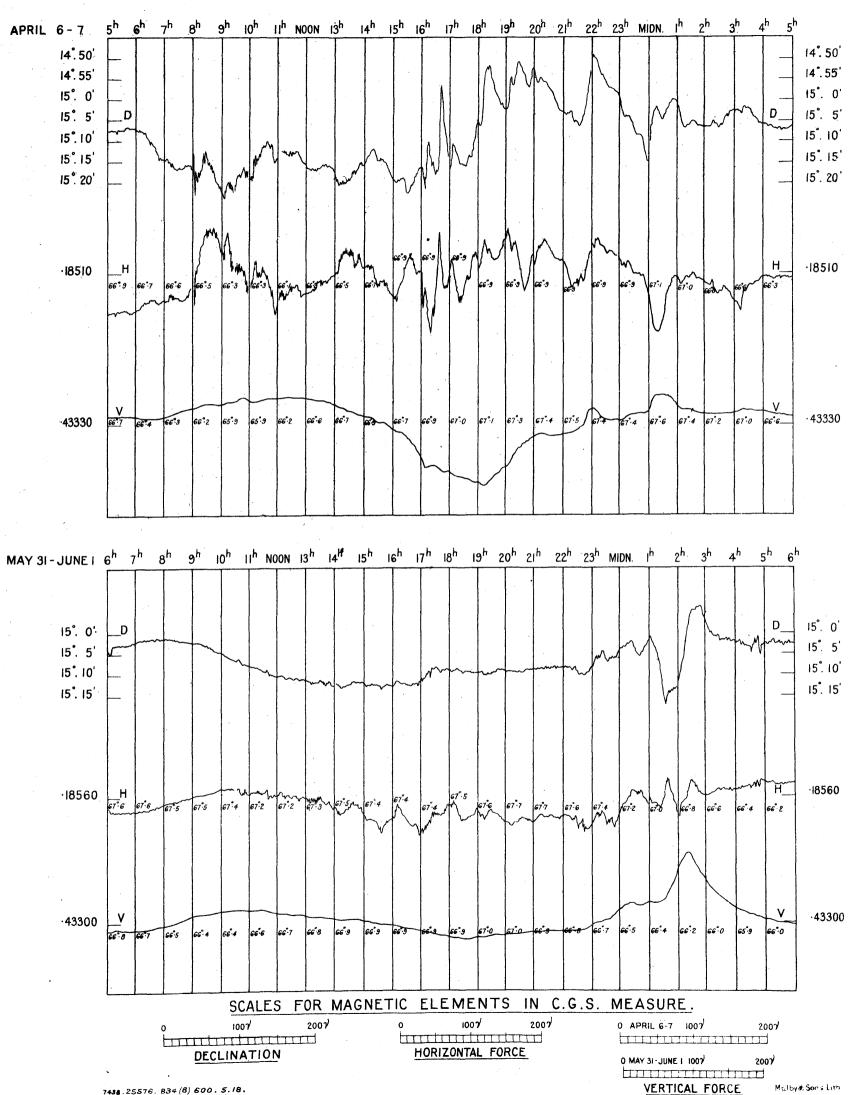
- September 3^{d} 22 $\frac{1}{4}^{h}$ to 24^h Wave in Dec. (- 3').
 - $5^{\rm d}$ $0^{\frac{3}{4}}$ h to 2h Wave in H.F. (+ 25). 12h to 17th Quadruple wave in H.F. (+ 15, 20, + 15, 15) and in Dec. ($\pm 2'$). 23h to 24h Wave in H.F. (± 20).
 - $6d o_{\frac{1}{2}h}$ to $1\frac{3}{4}h$, and $1\frac{3}{4}h$ to 3h Two waves in Dec. (+5', +5') and small oscillations in H.F. 1h to 3hDecrease in V.F. (-16). $22\frac{3}{4}$ h to $23\frac{3}{4}$ h Wave in Dec. (-3').
 - 8d 22 $\frac{1}{2}$ h to 23 $\frac{3}{4}$ h Wave in H.F. (+ 20) and in Dec. (- 4'), followed by decrease (- 3').
 - 9^{d} 4h to 6h Double wave in H.F. (-25, +25) and wave in Dec. (+5). 9^{1}_{2} h to 10^{1}_{2} h Wave in H.F. (-20).
 - 12^{d} 20h to 21h Wave in Dec. (-7') and in H.F. (+30).
 - 13^{d} 22h to 22 $\frac{3}{4}$ h Wave in Dec. (- 3').
 - 16d oh to 20h Various slight displacements from normal curve in H.F. (± 15) and Dec. (± 2').
 - $17^{\mathbf{d}}$ 20h to 21h Wave in Dec. (-4').
 - 18d 12h to 8h Succession of movements in Dec., with turning points at 21h (+ 2' from normal), 3h (- 3'), 4^{1h}_{2} (+ 5'), 5^{h} (+ 1') and 6^{1h}_{2} (+ 5'); also oscillations (\pm 15) in H.F., with principal peak at 6^{h} (- 20). 2^{h} to 5^{h} Decrease in V.F. (- 15).
 - 22^d 23¹/₂h to 23^d 0¹/₂h Wave in H.F. (+ 25). 23^h to 23^d 1¹/₄h Irregular decrease in Dec. (- 7').
 - 23d 11h to 13h Partial recovery in Dec. (+5'). 3h to $4\frac{1}{2}h$ Truncated wave in Dec. (-5'), followed till 8h by oscillations $(\pm 2')$. $4\frac{1}{2}^{h}$ to $6\frac{1}{2}^{h}$ Wave in H.F. (+25). $17\frac{1}{2}^{h}$ to $18\frac{1}{2}^{h}$ Wave in Dec. (-5'), $18\frac{1}{2}^{h}$ to 21^{h} Wave in Dec. (-11'), with steep commencement and oscillatory decline. 17^{h} to 21^{h} Oscillations in H.F., with peaks at $17\frac{1}{4}^{h}$ (+15), $17\frac{3}{4}^{h}$ (-15), $18\frac{1}{4}^{h}$ (+5), $18\frac{1}{2}^{h}$ (-15), 19^{h} (+25), $20\frac{1}{4}^{h}$ (-15). $21\frac{1}{2}^{h}$ to $21\frac{3}{4}^{h}$ Increase in H.F. (+30). $21\frac{1}{2}^{h}$ to 23^{h} Wave in Dec. (+6').
 - 24^d oh to 8h Oscillations in H.F. (± 15) and in Dec. $(\pm 2')$.
 - 27d 6h to 28d 6h See Plate III.
 - 28d 21 $\frac{1}{2}$ h to 24h Oscillations in H.F. (± 15).
 - 29^d 4^{1h} to 6^h Double wave in H.F. (- 20, +20), wave in Dec. (+7'). 5^h to 6^h Decrease in V.F. (- 14). 6^{h} to 6^{h} Increase in Dec. (+ 3').
 - 30d 2h to 3h Wave in Dec. (+3'). 18h to $19\frac{1}{2}$ h Wave in H.F. (+35) and truncated wave in Dec. (-6'). 19_2^{1h} to Oct. 1d 6h Several oscillations in H.F. (\pm 20) and in Dec. (\pm 3'). 22h to 23₄^{1h} Decrease in V.F. (- 22).

October

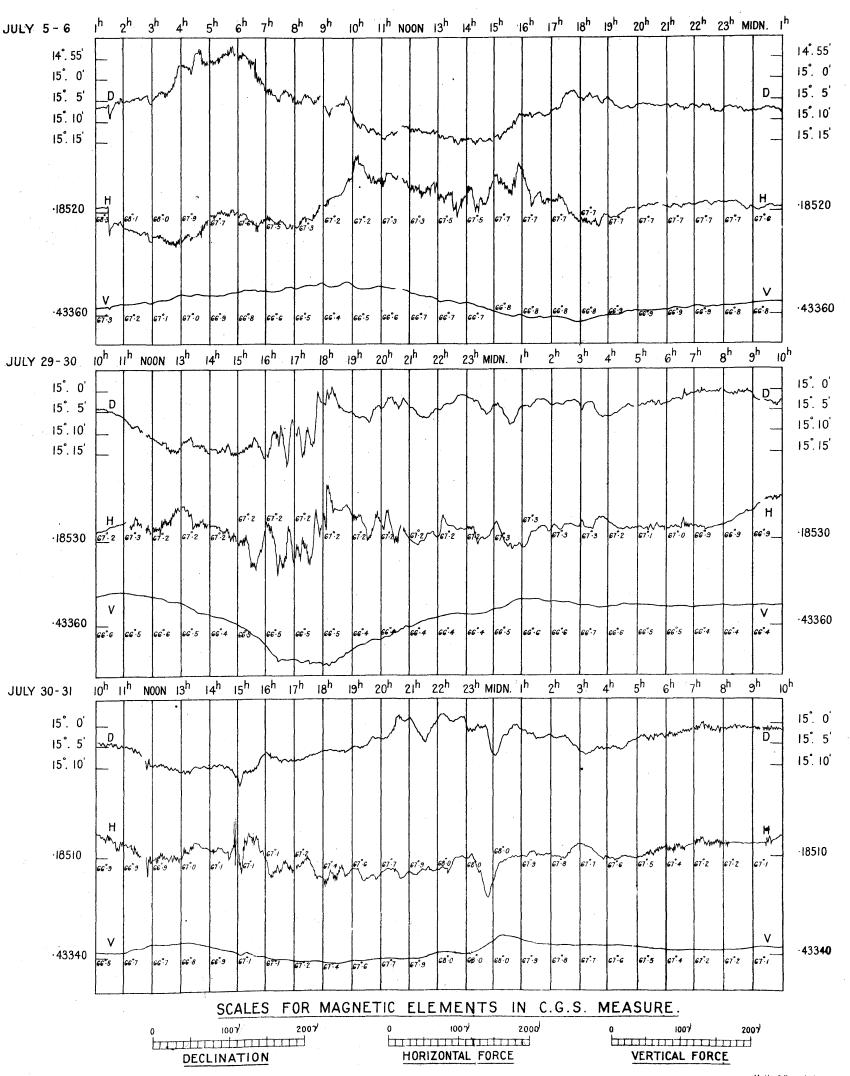
- 1^{d} 7_{3}^{dh} to 8_{4}^{dh} Decrease in H.F. (-20). 12^{h} to 18^{h} Oscillations in H.F. (\pm 10). 14^{h} to 15_{2}^{h} Wave in Dec. (-3'). 23\frac{3}{4}^h to 2^d 0\frac{3}{4}^h Wave in H.F. (+50) and double wave in Dec. (+6'. -3'), with sudden commencement.
- $2^{\mathbf{d}}$ oh to 0^{1}_{2} Decrease in V.F. (-15). 1^{1}_{4} to $5^{\mathbf{h}}$ Triple wave in Dec. (-3', +2', -2').
- $3^{\rm d}$ $3^{\rm h}$ to $3^{3\rm h}$ Wave in Dec. (+ 5') and increase in H.F. (+ 25). $16^{\rm h}$ to $20^{\rm h}$ Wave in H.F. (- 30), with indentation (+ 15) at $18^{\rm h}_2$. $21^{\rm h}_2$ to $22^{\rm h}_4$ Wave in Dec. (- 6') and in H.F. (+ 25).
- 4^{d} 5h to 6h Wave in Dec. (+ 5'). $21\frac{1}{2}$ h to $22\frac{3}{4}$ h Wave in H.F. (+ 20), with steep rise.
- $5^{\mathbf{d}}$ 20½h to 22h Wave in H.F. (+ 30), and in Dec. (- 6'), with sharp rise and wavy decline.
- 6d 21h to 22¼h Wave in Dec. (-4'), with notable pulsations on the commencing side. 21½h to 23h Irregular indented wave in H.F. (+45). 22¼h to 23¼h Wave in Dec. (-6'). 23h to 23¾h Wave in H.F. (+20). 22h to 23ħ Decrease in V.F (-12).
- $7^{\text{d}}\ 1_{4}^{\text{1h}}\ \text{to}\ 2_{4}^{\text{3h}}\ \text{Wave in Dec.}\ (+\ 8')\ \text{and double wave in H.F.}\ (-\ 15,\ +\ 15).$ $1_{4}^{\text{3h}}\ \text{to}\ 2_{2}^{\text{1h}}\ \text{Decrease in V.F.}\ (-\ 15),\ \text{followed by slow recovery.}$ $1_{4}^{\text{2h}}\ \text{to}\ 16_{2}^{\text{1h}}\ \text{Wave in Dec.}\ (-\ 5').$ $18_{4}^{\text{1h}}\ \text{to}\ 19_{2}^{\text{1h}}\ \text{Wave in Dec.}$ (-5') and in H.F. (+20).
- 8d $21\frac{1}{2}$ h to $22\frac{1}{4}$ h Wave in H.F. (+ 20). $22\frac{1}{4}$ h to 23h Wave in Dec. (+ 4'). $22\frac{1}{4}$ h to 24h Truncated wave in H.F. (+30), with steep rise.
- 9^d 1^h to 4^h Irregular double wave in Dec. (-3', +5'). 2^h to 3^h Wave in H.F. (-30). 21½h to 23^h Wave in Dec., with sharp peak (-8') at 22^h. 21¾h to 23½h Wave in H.F. (+55), with preliminary reversal (- 12), and peak just after 22h. 22h to 23h Decrease in V.F. (- 12).
- 10d $17\frac{1}{2}h$ to 19h Wave in Dec. (-5'). 18h to $18\frac{1}{2}h$ Wave in H.F. (+20). 21h to 22h Wave in H.F. (+20) and small movement in Dec. (+2', -2').
- 11d $3\frac{3}{4}$ h to $4\frac{1}{2}$ h Wave in Dec. (+4'). $20\frac{1}{2}$ h to $21\frac{1}{2}$ h Wave in H.F. (+20), decrease in Dec. (-3').
- 13d 19h to 23h Four angular waves in Dec. of diminishing amplitude and duration (-3', -3', -2', -1'). $20\frac{1}{2}$ h to $22\frac{1}{2}$ h Two waves in H.F. (+ 15, + 20).
- 14^{d} 19^h to 20^h Wave in Dec. (- 3').
- 15d oh to 1h Wave in Dec. (+4').
- $16^{d} o_{3}^{d} h$ to $1_{3}^{d} h$ Wave in Dec. (+4'). $20_{3}^{d} h$ to 23^{h} Wave in Dec. (-6') and in H.F. (+30).
- 17^{d} 1h to $2\frac{1}{2}$ h Wave in Dec. (+9') and in H.F. (+20). $1\frac{1}{2}$ h to $2\frac{1}{4}$ h Decrease in V.F. (-18). 22^{h} to 23^{h} Waves in Dec. (+4') and in H.F. (+30), and decrease in V.F. (-12).
- 18d 20h to 21h Wave in Dec. (-3') and in H.F. (+20).
- 19^d Sudden increase in H.F. (+10) at 1^h . 2^h to 5^h Wave in H.F. (-25).
- 21d 2h to 4h, 4h to 5h, 8h to 9h Movements in Dec. (-3', +5', -5'). 3h to 9h Oscillations in H.F. (± 15) . $15\frac{1}{2}$ h to 17h Wave in H.F. (-30). $15\frac{3}{4}$ h to $16\frac{3}{4}$ h Decrease in Dec. (-4').
- 22d 10½h to 23h Wave in Dec. (-4), with indented crest. 21h to 22½h Two waves in H.F. (+20, +20).
- 25d 211h to 26d 11h Loss of register in H.F. and Dec.
- 26d 11h to 17h Loss of register in V.F.
- $27^{\rm d}$ 16h to $16\frac{3}{4}$ Rapid oscillations in H.F. (-15, +20). $16\frac{1}{2}$ h to 19h Waves in H.F. (-40) and in Dec. (+6'), with gradual decline.
- 28d 2h to 29d 2h See Plate III. 14h to 15h Loss of register in H.F., Dec., and V.F.
- 29^d 3^h to 4^h Regular pulsations in V.F.; oscillations in Dec. (+ 2', 3', 4'). 4^h to 5½^h Loss of register in Dec.; Wave in H.F. (+ 70). 4½^h to 5^h Decrease in V.F. (- 45). 5½^h to 7^h Wave in Dec. (+ 6') and in H.F. (- 20). 7^h to 10½^h Oscillatory decrease in H.F. (- 75). 8½^h to 9½^h Loss of register in V.F. 10th to 11h Loss of register in H.F., Dec., and V.F.; likewise also from 14th to 15th, and from 16h to 16th. 16th to 19h Wave in Dec. (- 10'), with outstanding peak from 17th to 18h, contemporaneously with a wave in H.F. (+40).
- 30d 2h to 4h Irregular wave in Dec. (+8'). $21\frac{1}{2}$ h to $22\frac{1}{2}$ h Wave in Dec. (+4').

- November 1^{d} $12\frac{1}{2}$ to $14\frac{1}{2}$ Wave in H.F. (-35) and (with double crest) in Dec. (-3', -5'). $12\frac{1}{2}$ to 19^{h} Wave in V.F. (+30). $14\frac{1}{2}$ h to 19h Wave in H.F. (-30), with superposed oscillations (±15) from $15\frac{1}{2}$ h to $17\frac{1}{2}$ h. $15\frac{1}{2}$ h to $17\frac{1}{2}$ h Wave in Dec. (- 12'), with steep commencement and preliminary peak (- 9') at $16\frac{1}{4}$ h.
 - 2^d $19\frac{3}{4}$ to 21^h Wave in Dec. (-4'), with sharp rise and gradual decline.
 - $3^{d} 6\frac{1}{2}^{h}$ to $8\frac{1}{4}^{h}$ Wave in Dec. (+ 6') and in H.F. (- 20). 16^{h} to $17\frac{1}{4}^{h}$ Wave in Dec. (- 10') and double wave in H.F. (-30, +25). 20^h to 22^h Wave in Dec. (-9') and oscillations in H.F. (± 15) . $23\frac{1}{2}h$ to 4^d $0\frac{3}{4}h$ Wave in Dec. (+8') and in H.F. (+20).

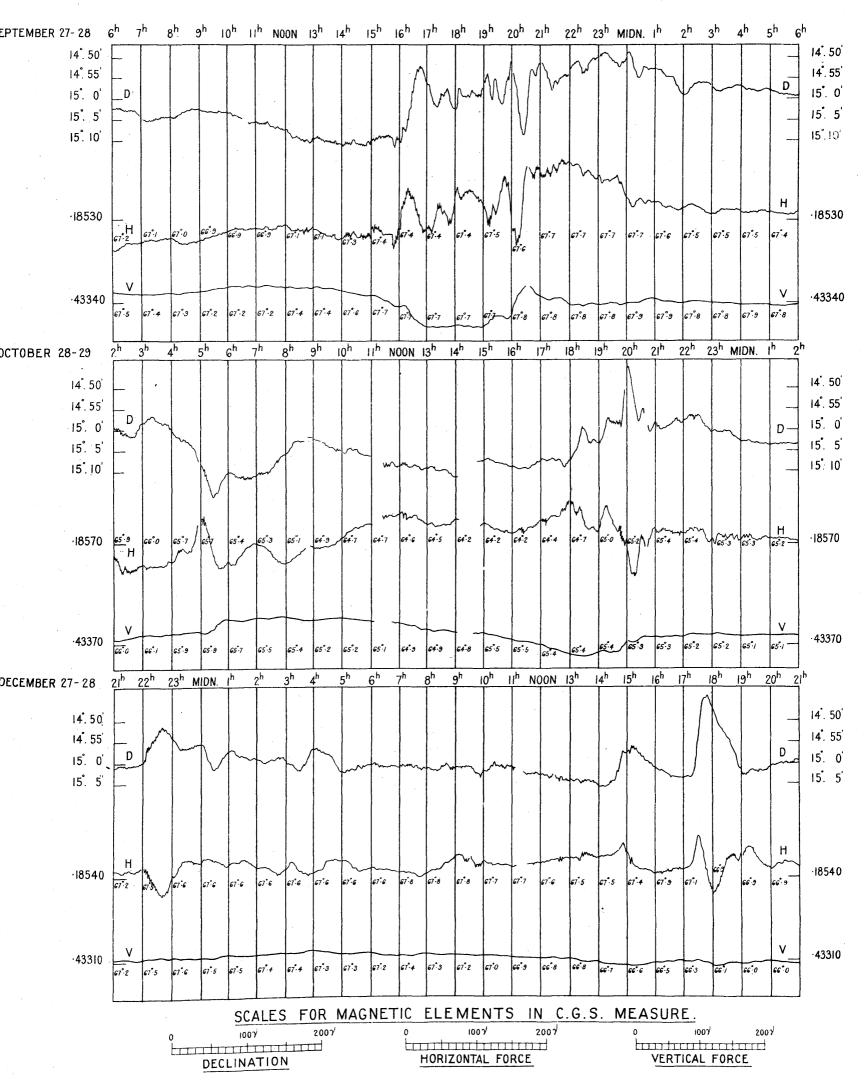
```
November 4^{d} oh to 0\frac{3}{4}^{h} Decrease in V.F. (-15). 5\frac{1}{4}^{h} to 7\frac{1}{2}^{h} Wave in Dec. (+8'), double wave in H.F. (-15, +10). 6^{h} to 7^{h} Decrease in V.F. (-12). 12\frac{1}{2}^{h} to 13\frac{1}{4}^{h} Wave in Dec. (+4'). 14\frac{1}{2}^{h} to 17^{h} Wave in Dec. (-4'). 15\frac{1}{4}^{h} to 15\frac{3}{4}^{h} Wave in H.F. (-20). 18^{h} to 19\frac{1}{4}^{h} Wave in Dec. (-8'). 18^{h} to 19\frac{3}{4}^{h} Wave
                        in H.F. (+35), with steep rise and gradual decline. 19\frac{3}{4}^{h} to 20\frac{1}{2}^{h}, 20\frac{1}{2}^{h} to 21\frac{1}{4}^{h} Two waves in Dec. (-6', -6'). 19\frac{3}{4}^{h} to 22\frac{1}{2}^{h} Triple-crested wave in H.F. (+40, +60, +35). 22\frac{1}{4}^{h} to 24^{h} Truncated wave in
                        Dec. (-3'). 20h to 24h Wave in V.F. (-20).
                  5^{d} 13h to 14h Wave in H.F. (-25). 17h to 18h Wave in Dec. (-4') and in H.F. (+20). 19h to 19\frac{1}{2}h
                        Wave in Dec. (-3'). 19\frac{1}{4}h to 21h Wave in H.F. (+35), with steep rise and gradual decline.
                  6^{d} 15\frac{1}{4}^{h} to 16\frac{1}{2}^{h} Wave in Dec. (-3').
                  7^{\mathbf{d}} 22\frac{1}{2}^{\mathbf{h}} to 23\frac{1}{4}^{\mathbf{h}}, 23\frac{1}{4}^{\mathbf{h}} to 8^{\mathbf{d}} \cdot \frac{1}{2}^{\mathbf{h}} \text{ Two waves in Dec. } (-5', -5') \text{ and in H.F. } (+30, +10).
                 10d 22h to 11d 01h Slow decrease in Dec. (-4'), followed by increase (+5') to 1h, and decrease (-2') to 1hh.
                 11d 10h to 14h Increase in Dec. (+9'), decreasing (-5') to 15\frac{1}{2}h. 12h to 13h Decrease in H.F. (-55). 12h
                    to 24^{\text{h}} Wave in V.F. (+ 55). 14\frac{1}{2}^{\text{h}} to 15\frac{1}{4}^{\text{h}} Wave in H.F. (+ 20). 15\frac{1}{2}^{\text{h}} to 17^{\text{h}} Double wave in Dec. (- 9', + 4'). 16\frac{1}{2}^{\text{h}} to 17\frac{1}{4}^{\text{h}} Wave in H.F. (- 35). 17\frac{3}{4}^{\text{h}} to 19\frac{1}{2}^{\text{h}} Double wave in H.F. (- 25, + 35), followed by triple wave (- 15, + 10, - 12) to 20\frac{1}{4}^{\text{h}}. 18^{\text{h}} to 19^{\text{h}} Wave in Dec. (-4'). 19^{\text{h}} to 20\frac{1}{2}^{\text{h}}
                    Wave in Dec. (-12'), with narrow peak. 234h to 24h Wave in H.F. (+25) and in Dec. (+3').
                 12^{d} 15_{4}^{3h} to 17_{4}^{1h} Wave in Dec. (-7') and in H.F. (+20). 20^{h} to 21^{h}, 21^{h} to 22^{h} Waves in Dec. (-3', -4').
                       20\frac{1}{2}h to 21\frac{1}{2}h Wave in H.F. (+ 30).
                 13^{d} 2h to 3^{h} Wave in Dec. (+ 3') and in H.F. (+ 15).
                 14d 21th to 24h Wave in Dec. (- 11'), with sharp rise (- 7') and brief arrest before reaching the crest;
                       two waves in H.F. (-25, -20).
                 15^{d} 17^{\frac{1}{2}h} to 21^{h} Loss of register in H.F. and Dec. 22^{\frac{1}{2}h} to 23^{h} Double wave in H.F. (+ 20, - 15). 23^{\frac{1}{2}h}
                       to 16^{d} Ih Wave in Dec. (+3').
                 16^{d} 19<sup>h</sup> to 20<sup>h</sup> Wave in H.F. (-25) and small wave in Dec. (-2'). 23\frac{1}{2}^{h} to 17^{d} 0\frac{1}{4}^{h} Wave in Dec. (+5').
                 17^{d} 3h to 5h Loss of register in H.F. and in Dec. 17\frac{1}{2}h to 19^{h} Wave in Dec. (-5'). 21\frac{3}{4}h to 23^{h} Wave in
                       H.F. (+55), with steep rise, and irregular wave in Dec. (+4'). 22^h to 24^h Wave in V.F. (-15). 23^h
                       to 18d in Wave in Dec. (-3'), with crest at 23\frac{1}{2}h.
                18d \ 21\frac{1}{2}h \ \text{to} \ 23^h \ \text{Wave in H.F.} \ (+20). \ 22^h \ \text{to} \ 22\frac{1}{2}h \ \text{Wave in Dec.} \ (-3').
                19<sup>d</sup> 3<sup>h</sup> to 3\frac{3}{4}<sup>h</sup> Wave in Dec. (+ 3'). 20<sup>h</sup> to 20\frac{3}{4}<sup>h</sup> Wave in Dec. (- 3') and in H.F. (+ 20).
                26d 173h Sudden increase in H.F. (+ 20), followed by slow decrease (- 40) to 20h. 19h to 22h Decrease
                       in Dec. (-7'). 19\frac{1}{2}h to 23^h Wave in V.F. (+20). 22^h to 23\frac{3}{4}h Triple-crested wave in Dec. (-5', -6',
                       -6'), and double-crested wave in H.F. (+55, +30).
                27d oh to 3h Decrease in V.F. (-20). 2h to 4h Wave in Dec. (+5').
                29d 20d to 22h Irregular wave in Dec. (-5') and in H.F. (+50), the latter with steep rise.
                3^{d} 21\frac{3}{4}h to 23h Wave in Dec. (-5') and in H.F. (+35).
                 5^{\rm d} oh to 5^{\rm h} Long flat-crested wave in Dec. (-3'). 0_{3}^{\rm hh} to 3_{2}^{\rm hh} Wave in H.F. (+25).
                 7^{d} 14<sup>h</sup> to 14½<sup>h</sup> Wave in H.F. (- 20). 14½<sup>h</sup> to 16<sup>h</sup> Wave in H.F. (- 20).
                 8d o\frac{3}{4}h to 2h Wave in Dec. (+ 3'). 2h to 5h Wave in Dec. (+ 3'). 20\frac{1}{4}h to 21\frac{1}{2}h Wave in Dec. (- 4').
                       22^{1h} to 24^{h} Double wave in Dec. (-2', +2').
                 9<sup>d</sup> 19<sup>h</sup> to 20½<sup>h</sup> Wave in Dec. (-4'), immediately succeeded by larger wave with triple crest (-10', -9', -8', \text{ at } 21\frac{1}{4}^{h}, 22\frac{1}{4}^{h}, 23\frac{1}{2}^{h}). 20¼ to 21<sup>h</sup> Wave in H.F. (+50), with steep rise.
                _{16^{d}} _{17\frac{1}{2}^{h}} to 20<sup>h</sup> Large wave in H.F. (-65), with net decrease (-30); double-crested wave in Dec. (-4', -7'), with net decrease (-2'). 23<sup>h</sup> to 24<sup>h</sup> Wave in Dec. (-3').
                18d 11h to 17th Loss of register in H.F. and Dec.
                19^{d} 2^{1h}_{2} to 3^{1h}_{2} Wave in Dec. (-3'). 18^{3h}_{4} to 19^{3h}_{4} Wave in Dec. (-4').
                22d 18h to 20h Wave in H.F. (-30), and in Dec., with double crest (+3', +5').
                27d 21h to 28d 21h See Plate III.
                20^{d} 1h to 2h Wave in Dec. (+3').
                30^{d} 21^{\frac{1}{2}h} to 23^{h} Wave in Dec. (-6') and in H.F. (+30).
                31d 10h to 14h Loss of register in H.F. 10h to 16th Loss of register in Dec. 19h to 20h Wave in Dec. (- 3').
```



The state of the s						,
				:		
		•			•	



Topic of the state of district and an experience to				Manus - Na application and the Charles Miles			
		The second secon	and the second s				
				•			
							•
						•	
				•			
	3-						
						٠	
							1
					•		1
							1
	•						1
							i
							1
							1
							1
							ı



•

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1914.

		BARO- METER.			Тк	MPERATU	RE.				rence bet			Ti	MPERATU	IRE.	e No.	·
MONTH	Phases of	Iourly rected to 32°			Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	ano	ir Temper d Dew Po emperatur	int	Humidity on = 100).	Of Rac	liation.	Of the Earth	in Gaugaving surf	Electricity.
and DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	(trentest.	Least.	Degree of Humidity (Saturation = 100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
		in.	0	0	0	0	0	0	0	•	0	0	79	34.5	0.0	43.92	in.	$\mathrm{sP}:\mathrm{sP}:\mathrm{mP}$
Jan. 1		30·383 30·277	36·5 45·2	34·0 37·2	9·2 11·2 7·1	39·1 32·4	$\begin{vmatrix} - & 6 \cdot 2 \\ + & 0 \cdot 7 \\ + & 3 \cdot 2 \end{vmatrix}$	30·6 37·3 40·0	35.0 38.1	3.4 4.1 2.6	8·3 5·9	1.3	79 85 88	46.3	24.9	43.21	0.008	${}^{\mathrm{mP}}_{\mathrm{wP, wN : wP : mP}}$
3	In Equator: Apogee.	30.259	44.3	36.1	12.9	43.6	+ 5.3	41.8	39.7	3.9	6.5	1.2	85	54.0	29.2	43.27	0.000	wP
1 5 6	First Quarter	29·977 29·530 29·487	49·8 49·8 40·1	36.6	13.2	42.6	+ 4·4 - 1·6	40.3	37.5	5·1 5·7	9.3	2·8 3·8	83 80	48.5	29·I 25·8	43·39 43·59	0.000	$egin{array}{ll} wP,\ wN:\ wP:\ mP \\ wP:\ mP \end{array}$
7 8		30.004	39·8 50·4	29·1 38·9	10.7	34·7 44·6	$\begin{vmatrix} -3.3 \\ +6.7 \end{vmatrix}$	31.7	26·8 41·8	7·9 2·8	10.1	5·0 1·4	72 90	42·8 54·5	17.0	43·51 43·29	0.059	${ m mP:sP:sP} \ { m wP}$
9		29.869	22.4	20.4	5.0		+15.1	51.8	50.6	2.4	4.1	0.6	92	62.2	44.1	43.21		wwP
10 11 12	Greatest Dec. N. Full	29·911 30·072 30·315	54.0 42.1 34.0	42·1 32·4 29·3	9·7 4·7	51·6 34·6 31·2	- 3.3	50·4 32·7 28·6	49·2 29·6 21·8	2·4 5·0 9·4	4·8 9·4 12·0	1.8 4.9	92 81 67	63.0 53.6 42.1	39·0 29·9 24·0	43.62 44.25 44.42	0.000	$\begin{array}{c} wwP \\ wwP : wP : wP \\ wP : vP : mP \end{array}$
13 14		30·294 30·117	36·0 35·2	33.5	2·8 3·1	34.3	- 3.8	32.0	28.1	6·2 7·9 4·6	8·5 12·8 5·8	2.0	77 72 83	41·8 56·0 42·0	30·3 26·0 25·1	44.09 43.59 43.29	0.002	$wP:wP:mP \ wP:mP \ wP:mP \ mP$
15 16 17	Perigee In Equator	30·077 29·902 29·664	37·8 40·8 41·5	35·I 31·2	5·7 9·4	35.0 37.3 37.4	- 1·0 - 1·1	33·3 36·0 36·0 32·6	34·1 29·5	3.3	6·0 6·1 7·7	1.0 2.4 4.1	89 88 82	60·1 54·5 53·1	32·5 23·1 23·1	42·87 42·72 42·68	0.002	$ \begin{array}{c} wP,\ wwN:\ mP:\ mP\\ wP:\ wP:\ mP\\ wP:\ wP:\ mP \end{array}$
18 19 20	Last Quarter	29·855 29·844 29·821	37·8 34·1 34·0	31.8	2.8	34·4 32·7 32·8 32·9	- 4·2 - 6·0 - 6·0 - 5·9	30.9	27·3 24·9 26·6	5·4 7·9 6·3	10.1	4.8	80 71 77	41.8	30.1	42·59 42·39 42·10	0.006	$ \begin{array}{l} wP:wP:sP\\ mP:sP:mP\\ mP:sP\end{array}$
21 22 23	 Greatest Dec. S.	29·917 29·973 30·011	35·1 37·0 36·8	28.3	3·7 8·7 15·1 18·2	32.8	- 6·0 - 10·7 - 9·6	30.8	26·7 19·7 23·1	6·1 8·5 6·2	7.7 9.2 8.2	3.5	78 70 77	61·1 53·0 58·9	19·7 8·0 4·0	41·86 41·65 41·41	0.001*	$\begin{array}{c} mP \\ mP:sP:sP \\ sP:mP \end{array}$
24 25 26	 New	30·090 30·083 29·922	42·6 45·0	34.5	8·2 10·5	38·2 41·9	- 0.9	36.9			5·2 5·9 8·0	1·2 0·4 1·6	89 92	40·8 49·2 53·3	25·I 25·9 25·0	40.84	0·010* 0·006 0·014	$\begin{array}{c} wP \\ wP, \ mN : wP : wP \\ wP : mP : mP \end{array}$
27 28 29		29·9 <u>5</u> 8 29·980 29·843	43.0 49.0 52.5	33·0 39·0 45·9	10.0	37·2 43·4 48·0	+ 3.8	42.1	40.5	2.9	5·9 9·4	0.7	90 83	65·2 83·2	32.8	41.01	0.001	vN, wP : wP : wP wP : wP : wwN, wP
30	In Equator	29.808	51.4	45.2	5.9	47.9	+ 8.2	46.4	44.7	3.2	5.0	1.7	90	58·9 69·8	42.4	41.59		wP wP
31	Apogee	29.826	50.3	43.2		46.9	- 7·2	44.9	42.7	4.2	8.5	2.9					Sum	
Means		29.969	42.5	34.3	8.3	38.4	- O•2	36.6	33.4	4.9	7.9	2.3	82.4	52.5	27.3	42.68	0.504	
Number of Column for Reference.	I	2	3	4	5	6	7	8	9	10	II	12	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 65 years' observations, 1841–1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

* Rainfall (Column 17). The amount entered on January 23 and 25 is derived from fog.

The mean reading of the Barometer for the month was 29^{ln}·969, being 0^{ln}·175 higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 55°4 on January 9; the lowest in the month was 19°9 on January 24; and the range was 35°5. The mean of all the highest daily readings in the month was 42°·5, being 0°·6 lower than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 34°·3, being 0°·6 lower than the average for the 65 years, 1841–1905. The mean of the daily ranges was 8°·3, being 1°·1 less than the average for the 65 years, 1841–1905. The mean for the month was 38°·4, being 0°·2 lower than the average for the 65 years, 1841–1905.

1	le.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	Е МОМ Е	TERS.			
	unshir	zon.		OSLER'S.			Robin- son's	CLOT	JDS AND WEATHER.
MONTH and DAY,	tion of S	above Horizon.	General I	Direction.	Pre on Squar	ssure the e Foot.	Move- e Air.		1
1914	Daily Duration of Sunshine.	Sun ab	А.М.	Р.М.	Greatest.	$ \frac{\text{Mean of } z_4}{\text{Hourly}} $ Measures.	Horizontal ment of th	А.М.	Р.М.
Jan. 1	hours. 0.0 0.0	hours. 7.8 7.9 7.9	N:W W N:Var.:WSW	W : Calm NW : W : NNW W	lbs. 0.4 1.2	lbs. 0.01 0.05 0.08	miles. 161 249	10, sltf : pcl,sltf, hofr: pcl, sltf	8, sltf : 10 : 10
4 5 6	0·0 0·0 0·5	7·9 7·9 8·0	W:SW WSW:NW W:NW	W:WSW W:WSW NW:NNW	10.7	0·61 0·97 0·93	554	pcl, w : 10, w : 10, s, sltr, glm	10, sc,n,mr: 10, sc, w : 9, w 9, cis, thcl: 1, hofr : pcl, luha, hofr 5, cu, cus, w: pcl, w : pcl, m, luco, hofr
7 8 9	0·9 0·3 0·0	8·0 8·0	NNW: WSW: W WSW: SW W: WNW	W:WSW WSW:W W:WNW	4.6	0·13 0·52 0·55	462		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
10 11 12	0·0 0·6 0·9	8·1 8·1 8·2	WSW: W E ESE: E	W : Var. E : ESE E : ENE : NE	6.4	0.88	459	10, sltr : 10, sltr : 10, s, n 10, w : 9, w : 9, eu, n, w 10 : 10, sltsn: 10, sltsn, w	10, s, n, thr: 10, sc, s: 10, sltr 8, cu, n, w: 9, w: 10, w pcl, ocsn: 9, ocsn: 10
13 14 15	0·0 2·0 0·0	8·2 8·2 8·2	NE : ENE NNE : NE : E ENE : NE	E : ENE : NE ENE NE : ENE	6.6		505	IO, W : IO, W : 10, s, n, w, slt-sn IO, W : 10, ocsn, w : pel, eus, w pel, hofr: pel : 9, eus, sl, r	5, cu, cus, w: 9 : 9
16 17 18	0·8 0·1 0·7	8·3 8·4	E : NE ENE : NE : E ENE : NE : E	$\begin{array}{c} \mathbf{NE} : \mathbf{ENE} \\ \mathbf{ENE} : \mathbf{E} \\ \mathbf{ESE} : \mathbf{E} : \mathbf{SE} \end{array}$	0.7	0.02 0.03 0.08		10 ; 10	9, cus,s,n : 10, ocsltr 9, cus, n : pcl, hofr : 1, hofr pcl : 10
19 20 21	0.0 0.0	8·4 8·4 8·5	SE : ESE ENE : NE : E ENE : SE	ESE : ENE : E E : ENE SE : ENE : E	4.4	0·08 0·44 0·05	389		8, cus, n : 10, sltsn : 10, sltsn 10, w : 10 : 10 9, s, n : 9 : 10
22 23 24	0·6 5·0 1·3	8·5 8·6 8·6	E: ESE: SE SE: Calm: ENE Calm: SSW	$\begin{array}{c} \text{ESE}: \text{SE} \\ \text{Calm} \\ \text{SW}: \text{WSW} \end{array}$	0.1	0·05 0·00 0·06	120	10 : 10 : pcl, cus 1, hofr : 1,h,hofr: 0, sltf 0, sltf, hofr: pcl, sltf, hofr: thcl, sltf	9, cus, s, n : 9 : pcl 0 : o, sltf, hofr 7, thcl, s : 1, hofr
25 26 27	0·0 0·0 0·4		SW SW: WSW: Calm W: WNW	SW: WSW W WNW: W: WSW	5 · I	0.17	275	pcl, hofr: 10 : 10, n 10,0cr, W : 10, sltr, sltf : thcl, s, sltf pcl, hofr: 9, lishs : 9, cus, n	10, n, w : 10, s, n, w : 10, w 6,thcl,cis: s : 1, hofr 8, cus, n : 8 : pcl, sltr
28 29 30	1·6 3·2 0·0	8·9 8·9	WSW SW:WSW SW:WSW	WSW : SW WSW : SW WSW	4.1	0.44	415	10, sltr : 10 : 9,cu,cus,sltsh 10 : 9 : 4,ci,cis,cus 10, ocmr, w : 10, ocmr, w: 10, cus, 8c,w	7,thcl, soha: 10 : pcl, shr pcl, w : 10, ocmr : 10, sltsh, w 10, s, n, w : 10, fqmr, w : 9. w
31	0.9	9.0	sw	WSW:SW	7:3	1.07	578	pcl : pcl, w : pcl, cu, cus, w	9, w : 10, w : 10,w,ocslt1
Means	0.6	8.3				0.37	346		
Number of Column for Reference.	19	20	2 I	22	23	24	25	26	27

The mean Temperature of Evaporation for the month was $36^{\circ} \cdot 6$, being $0^{\circ} \cdot 6$ lower than

The mean Temperature of the Dew Point for the month was 33°4, being 1°9 lower than

The mean Degree of Humidity for the month was 82.4, being 5.6 less than

The mean Elastic Force of Vapour for the month was oin 191, being oin o15 less than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs. 3, being ogr. 1 less than

The mean Weight of a Cubic Foot of Air for the month was 558 grains, being 4 grains greater than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 7.8.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.077. The maximum daily amount of Sunshine was 5.0 hours on January 23.

the average for the 65 years, 1841-1905.

The highest reading of the Solar Radiation Thermometer was 83.2 on January 29; and the lowest reading of the Terrestial Radiation Thermometer was 4°00 on January 24.

The Proportions of Wind referred to the cardinal points were N. 4, E. 8, S. 4, W. 13. Two days were calm.

The Greatest Pressure of the Wind in the month was 10.7 lbs. on the square foot on January 5. The mean daily Horizontal Movement of the Air for the month was 346 miles; the greatest daily value was 578 miles on January 31; and the least daily value was 120 miles on January 23.

Rain (o'n co5 or over) fell on 13 days in the month, amounting to o'n 504, as measured by gauge No. 6 partly sunk below the ground; being 1 in 377 less than the average fall for the 65 years, 1841-1905.

		Baro- meter.			Ti	EMPERAT	URE.				rence bet			T	EMPERATU	JRE.	e No.	
MONTH and	Phases of	fourly rected to 32°		1	Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	an	ir Tempe d Dew Po mperatur	$_{ m oint}$	Humidity on=100).	Of Rac	liation.	Of the Earth	l in Gaug ving surfe ve the Gr	Electricity.
DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean,	Greatest.	Least.	Degree of Humidity (Saturation=100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
Feb. 1	 First Quarter	in. 29·923 29·965	55·1 51·5 56·6	45·3 37·5	9·8 14·0	° 49.7 45.2 45.4	+ 5.7	° 47.3 42.5 43.4	° 44.7 39.4 41.1	5.0 5.8 4.3	o 10·1 10·2 11·8	° 2·7 2·0 0·9	84 81 86	81·2 76·0 74·8	38·2 24·5 28·5	42·59 43·03 43·40	in. 0.000 0.000 0.001*	$egin{array}{c} wwP:wP \ wP \ wP \end{array}$
3 4 5 6	First Quarter Greatest Dec. N.	29·926 29·951 29·930 29·738	53·0 55·0 52·5	39·9 38·0 37·2 36·6	15·0 17·8 15·9	43·8 44·3 43·8	+ 4·3 + 4·7	42.0 41.8 41.5	39·8 38·9 38·8	4·0 5·4 5·0	9·0 13·7 9·5	1·8 2·5 1·9	86 81 82	70·4 87·0 78·0	27·3 25·2 26·0	43.39	0.001*	$\begin{array}{c} wP \\ wP: mP: mP \\ wP: wP: wP, vN \end{array}$
7 8 9	 	29·524 29·402 29·616	51·5 50·0 54·5	43·7 44·1 44·1	7·8 5·9 10·4	46·4 47·4 47·6	+ 8.1	44·5 46·1 45·7	42·4 44·7 43·6	4·0 2·7 4·0	10·8 4·5 7·3	0.6 1.1	87 91 87	89·2 56·1 78·3	38·6 40·9 38·9	43·37 43·41 43·68	0.440	vN, wP: wP,vN: wwP, wwN wwP, wwN: wwP, wwN: wP, wN wP
10 11 12	Full Perigee	29·692 29·493 29·383	56·0 49·7 50·3	43·3 44·1 41·1	12·7 5·6 9·2	47·6 46·2 46·6	+ 7.4	45·6 44·6 43·6	43.6 42.8 40.2	4·0 3·4 6·4	8·5 7·3 11·9	3·0 0·6 3·0	86 89 79	92·9 53·8 87·0	35·3 35·9 33·0	43·97 44·16 34·32	0.423	wP wP: wP, wN: wP, wN wP, wN: wP: wP, ssN
13 14 15	In Equator	29·652 29·654 29·601	52·1 59·0 55·6	38·6 48·7 42·1	13·5 10·3 13·5	45·2 52·4 50·7	+13.1	42·5 50·0 47·6	39·4 47·6 44·4	5·8 4·8 6·3	11·4 11·8 12·2	1·5 1·7 2·0	81 84 80	84·2 89·0 87·0	30·9 47·4 33·2	44·48 44·49 44·71	0.031	wP, wN : wP : wP, wN wwP : wP : wP wwP : wP : wP
16 17 18	Last Quarter	29·794 29·848 29·377	48·3 49·3 44·9	40·6 33·1 33·9	7·7 16·2 11·0	43.7 41.8 41.3	+ 4·2 + 2·2 + 1·8	41·3 38·7 38·9	38·5 34·9 36·0	5·2 6·9 5·3	7·6 12·0 10·6	3·9 2·0 2·2	81 78 82	58·7 83·9 59·3	31·5 23·1 25·7	45·10 45·25 45·01	0.012	$\begin{array}{c} \text{wP}: \text{wP}: \text{mP} \\ \text{wP}: \text{mP}: \text{mP}, \text{vN} \\ \text{vN}: \text{mP}: \text{sP} \end{array}$
19 20 21	Greatest Dec. S.	29·293 29·342 29·020	48·2 51·0 50·6	33·1 35·1 35·6	15·1 15·9 15·0	41·3 44·1 41·9	+ 4.6	39·5 42·1 40·1	37·2 39·7 37·8	4·4 4·1	5·7 11·2 6·8	1·1 0·8 1·4	86 84 87	64·3 80·6 55·0	24·7 25·7 29·1	44·61 44·49	0.098	$\begin{array}{c} mP:wP\\ wP:wP:wP,wN\\ wP,vN:vP,vN:mP \end{array}$
22 23 24	 	28·565 28·909 29·215	51·2 52·0 50·1	37·9 35·1 33·7	13·3 16·9 16·4	44·I 41·6 41·5	+ 4·4 + 1·8 + 1·5	41·8 39·2 39·3	39·1 36·2 36·6	5·4 4·9	9·4 13·3 10·5	1·7 1·8 1·7	82 82 83	86·1 91·3 76·8	29·8 27·9 22·0	44·41 44·32 44·19	0.000	$\mathbf{vN}: \mathbf{wP}, \mathbf{ssN}: \mathbf{wP}$ \mathbf{wP} $\mathbf{wP}: \mathbf{mP}: \mathbf{mP}$
25 26 27	New In Equator 	29·613 29·755 29·995	43·0 47·0 53·4	33·9 32·3 29·2	9·1 14·7 24·2	37·4 39·6 40·3	- 2·7 - 0·6 0·0	36·5 37·2 37·5	35·3 34·1	2·1 5·5 6·3	4·9 12·2 14·7	0·3 2·2 1·1	92 81 78	61·6 65·0 91·5	22·9 21·4 18·7	44.02 43.82 43.69	0·000 0·000 0·002*	wP: mP: mP mP: sP: : mP: mP
28	Apogee	29.986	55.7	31.0	24.7	43.0	+ 2.7	39.3	34.9	8.1	16.0	2.0	73	98.5	20.5	43.47	0.002* Sum	mP
Means		29.577	51.7	38.2	13.5	44.4	-!· 4 ·9	42.1	39.5	4· 9	10.2	1.7	83.3	77.1	29.5	44.04		
Number of Column for Reference.		2	3	4	5	6	7	8	9	10	ΙΙ	I 2	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 65 years' observations, 1841–1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

* Rainfall (Column 17). The amount entered on February 3, 4, 5, 27, and 28 is derived from fog.

The mean reading of the Barometer for the month was 29th 577, being oth 225 lower than the average for the 65 years, 1841-1905.

The highest in the month was 59 % on February 14; the lowest in the month was 29 2 on February 27; and the range was 29 8. The mean of all the highest daily readings in the month was 51°.7, being 6°.5 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 38°.2, being 4°.0 higher than the average for the 65 years, 1841–1905. The mean of the daily ranges was 13°.5, being 2°.5 greater than the average for the 65 years, 1841–1905. The mean for the month was 44°.4, being 4°.9 higher than the average for the 65 years, 1841–1905.

	ine.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	ЕМОМЕ	TERS.			
	Sunshi	izon.		Osler's.			Robin- son's	Chon	JDS AND WEATHER.
MONTH and DAY, 1914.	Daily Duration of Sunshine.	Sun above Horizon.	General	Direction.	Squar	essure the re Foot.	l Move- he Air.		
	Daily Du	Sam	A.M.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Move- ment of the Air.	A.M.	Р.М.
Feb. 1 2 3	5:3 7:0	hours. 9·1 9·1	WSW:SW SW:SSW SW:SSW	WSW:SW SSW:SW SW:SSW	6·0 3·4	Ibs. 0.86 0.28 0.06	520 326	10, w : 10, w : pel, lish, w pel : 1, ci, cu o, hofr : pel : pel,thel,soha	I, ci, cis : I : 1, luco, hof
4 5 6	5·6 8·2 6·6	9.3	SSW:SW SW:SSW SSW:S	SW : SSW SW : SSW : S SSW : SW	1.4	0·12 0·19	297	o, hofr : 0	i : o : o o : o, hofr pcl, cu : 9, n : 10, sltr
7 8 9	2·9 0·0 0·3	9.5	SW SW Calm:S:SSW	SW SW SSW : S	12.8	1.44	597	10, r : 9 : 8, eu, eus,w 10, thr, stw : 10, sltr. W: 10, se,s, fqr,w 10 : 10 : 9	pcl,soha,fqr,w: 10,fqr,stw: 10,sltr,stv 10, sc,s.r.w : 10, ocr : 10, thr 10, n : 9 : thcl
IO II I2	5·1 5·1	1 / / !	SSW: WSW: SW SW: SSW WSW: SW	SW:SSW SW:SSW SW:SSW	6.8	0.99	518	pcl, m : pcl : v, cu, cus 10, w : 10,sltr, w: 10,s,n,cr, w pcl, w : pcl, shr: pcl, cus, w	3, cu, cus : pcl : 9,sltsh,luh 10, r, w : 10, r, w 5, cu. w : thcl, soha, w : 10, luha. r,
13 14 15	4·4 4·6 1·2	9.8	SW:W:WSW SW:WSW SW:WSW	SW WSW : SW WSW : W	9.8	1.32	634	10, r, stw: pel : 5,cieu, eu, s,w 10, fqthr, w: 10, sltr : pel, ci, eu, w 9, ocr, stw: 9, sc,cu,stw	pcl. w : 10, ocshs, w: 10, ocr, st
16 17 18	6.6	10.1 10.0 10.0	WSW:SW:Calm Calm:WSW:W SW:WNW:W	Calm: N WSW: SW - NW: W	4.4	0.32	344	pcl : 10, sltm : 10, s, n 1 : licl, hofr: 1, cu 10, r, w : 10, fqr	10, s, n : 10 5, cu, cus : 8, cu, cus : 9, r, w 8, cis,cu,n : pcl : 0
19 20 21	2.0	10·2 10·3	W:SW:WSW W:WSW:SW SW	SW : Calm : NW SW : SSW SSW : Calm : Var.	8.0	0.41	366	o, ho,-fr : 9, s, n 9, : th-cl, str-m, : 6 ho-fr : 6 10, shr, stw : pcl : 10. s	10, fqthr : 10, fqthr : 10 pcl, s, soha: 10, s, ocr, w : 10, ocr, w 10, s, n, r, sn, sl: pcl, sltr : pcl
22 23 24	7.1	10.3	SE:S:SW SW:SSW S:Calm:SE	SW SW : SSW : S E : Calm	1.9		308	10, hy,-r,w: 10 : 8,eu,eus,w 1, ho,-fr : 1 : 5,ei,eu,eus pcl, ho,-fr: p,-cl, ho,-fr : 6,ei,-s,eu,h,so,-ha	8, cu, cus : pcl : pcl
25 26 27	0.2	10·5 10·6 10·7	$\begin{array}{c} \operatorname{Calm}:\operatorname{NNE}\\ \operatorname{Calm}:\operatorname{W}:\operatorname{WSW}\\ \operatorname{Calm}:\operatorname{SW} \end{array}$	NNE : W WNW : Calm : WSW WSW : SW	0.8	0.00	169	o, f, hofr: 10, f : 9, s pcl, f : 10, sltf : 8, s, sltf o, sltf, hofr : 0, sltf	7, s, sltf : thcl, sltf : thcl, f thcl, s : o, sltf, hofr o : o, sltm, hofr
28	8.9	10.7	sw	SW	1.2	0.06	237	o. hofr : o. hofr : o	o ; pcl ; pcl
Means	3.8	9.9				0.40	366		
Number of Column for Reference	19	20	21	22	23	2.1	25	26	27

The mean $Temperature\ of\ Evaporation$ for the month was $\pm 2^{\circ}$ -1, being \pm° - \pm higher than

The mean Temperature of the Dew Point for the month was $39^{\circ} \cdot 5$, being $4^{\circ} \cdot 1$ higher than

The mean Degree of Humidity for the month was $83\cdot3$, being $2\cdot2$ less than

The mean Elastic Force of Vapour for the month was $\circ^{\text{in} \cdot 242}$, being $\circ^{\text{in} \cdot \circ 35}$ greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs.8, being ogr.4 greater than

The mean Weight of a Cubic Foot of Air for the month was 544 grains, being 9 grains less than

The mean amount of *Cloud* for the month (a clear sky being represented by o and an overcast sky by 10) was 5.8.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.382. The maximum daily amount of Sunshine was 9.0 hours on February 27. The highest reading of the Solar Radiation Thermometer was 98° 5 on February 28; and the lowest reading of the Terrestrial Radiation Thermometer was 18° 7 on February 27.

the average for the 65 years, 1841-1905.

The Proportions of Wind referred to the cardinal points were N. 1, E. 0, S. 11, W. 14. Two days were calm.

The Greatest Pressure of the Wind in the month was 18.5 lbs. on the square foot on Febuary 12. The mean daily Horizontal Movement of the Air for the month was 366 miles; the greatest daily value was 719 miles on February 15; and the least daily value was 154 miles on February 27.

Rain (0 no 14 days in the month, amounting to 2 in 440, as measured by gauge No. 6 partly sunk below the ground; being 0 in 960 greater than the average fall for the 65 years, 1841-1905.

		BARO- METER.			Ti	MPERATU	JRE.				rence bet			Т	EMPERATU	TRE.	o No. ace is und.	
MONTH and	Phases of	fourly rected to 32°		ı	Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	an	ir Tempe d Dew Po nperature	oint	Humidity	Of Rac	liation.	Of the Earth	in Gauge ving surfa e the Gro	Electricity.
DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation=100.)	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	incerticity.
		in.	0	0	0	0	0	0	0	0	0	0		0	0	0	in.	D D D N
Mar. 1 2 3		29·835 29·847 29·786	52·5 46·8 47·5	39.0 33.6 36.2	13·5 13·2 11·3	39.8	+ 5.6 - 0.6 + 1.2	36·6 39·0	38·1 32·4 35·7	7·9 7·4 6·0	17·5 14·2 10·2	1·7 2·8 2·5	75 75 80	81·1 69·6 65·7	26·0 25·2 29·1	43·32 43·34 43·39	0.000	$ \begin{array}{c} wP:mP:mP,ssN\\ mP:sP:ssP\\ mP:sP:mP \end{array} $
4 5 6	First Quarter Greatest Dec. N.	29·552 29·434 29·264	53°4 52°9 57°0	43·6 49·0 44·7	9·8 3·9 12·3	50.2		46·7 48·1 46·8	44·5 45·9 42·2	4·3 4·3	5·7 6·9 13·5	1·5 2·1 4·1	85 86 72	67·2 61·1 101·5	38·6 43·2 36·4	43·33 43·5 I 43·90	0.039	wP wP wP:wP:mP
7 8 9		29·428 29·315 29·262	46·5 53·0 48·8	40·I 45·0 34·I	6·4 8·0	43·3 49·3 39·9	+ 2·3 + 8·2 - 1·1	41·7 47·6 39·2	39·8 45·8 38·3	3·5 3·5	6·9 4·8 2·7	0·9 1·7 0·9	88 88 95	57·1 64·2 47·5	30·0 40·0 32·0	44·32 44·57 44·72	0.405	wP: vN, mP: mP, vN wN, wP: wwP: wwN, wwl wP: wP, vN: vN, wP
10 11 12	Full : In Equator : Perigee	29·486 29·786 29·627	46·0 46·1 57·5	32.2	13.8 16.8 18.5		- 2·7 - 4·3 + 6·7	35·6 33·7 44·9	32·0 29·5 41·8	6·2 7·2 6·0	13·2 15·2 12·5	2·9 2·1 1·6	79 76 80	82·8 85·3 94·1	23·0 19·0 30·9	44·81 44·47 44·01	0.013	wP: mP, sN: mP: sP: vP wP, vN: wP: wP
13 14 15		29·791 29·360 29·541	55·0 53·9 51·0	41·2 44·4 44·6	13·8 9·5 6·4	48·0 48·5 48·1	+ 6·7 + 7·0 + 6·4	46·5 45·6 45·1	44·9 42·5 41·8	3·1 6·0 6·3	6·4 12·2 11·9	1·5 2·4 1·7	90 80 79	67·4 100·4 92·8	30·1 41·1 36·6	43·89 44·27 44·41	0.224	wP wwP, wwN : wP, vN : vP, v wP : wP, wwN : wP
16 17 18	Last Quarter: Greatest Dec. S.	29·356 29·695 29·164	49·6 50·7 49·1	38·9 35·2 33·2	10·7 15·5	44·6 41·7 40·7	+ 2·7 - 0·3 - 1·3	41·1 37·8 37·6	37·0 33·0 33·7	7·6 8·7 7·0	11·6 14·5 17·0	3·2 2·7 3·3	74 71 77	64·2 92·2 90·8	29·7 26·8 23·0	44·62 44·77 44·59	0.020	wP, wwN : wP, wN : mI mP : mP : vP, ssN wP, vN : : vP, ssN
19 20 21	Greatest Dec. v.	29·026 28·690 29·001	46·3 39·2 45·7	32·0 32·9 31·9	14·3 6·3 13·8	37·2 35·9 38·2	- 4·7 - 6·0 - 3·7	35·9 34·8 35·8	34·I 33·I 32·6	3·1 2·8 5·6	7·2 4·7 9·8	1·9 0·8 1·4	88 90 80	88·9 47·3 67·0	21·0 25·6 23·2	44·40 44·11 43·61	0.528	vP, ssN : wP, wwN : mP, ss vP, ssN : vP, ssN : mP mP : mP, ssN : mP
22 23 24	 	29·210 29·345 29·059	50·2 50·2 53·1	29·1 32·6 35·4	21·1 17·6 17·7	39·4 41·0 43·3	- 2·6 - 1·2 + 0·9	36·6 39·1 40·7	32·9 36·7 37·6	6·5 4·3 5·7	14·8 9·9 13·3	1·4 1·5 2·6	78 85 80	86·3 80·2 102·2	17·5 22·9 27·7	43·30 43·93	0.029 0.078 0.016	wP: vP, vN: mN, mP wP: wP, wN: mN, mP mP: vP, ssN: mP, mN
25 26 27	 In Equator : New Apogee	28·943 29·029 29·598	53·9 51·7 47·5	34·7 39·9 32·2	19·2 11·8	43.7	- 0·3 + 0·7 - 2·7	39·6 40·8 38·3	37.4	6·2 6·3 5·2	14·8 13·2 9·8	1·5 2·0 2·0	79 78 82	110·2 84·2 77·2	26·0 28·4 20·3	43·02 43·19 43·32	0.039 0.125 0.017	$\begin{array}{c} wP:wP:mP,vN\\ wP,sN:mP:sP,ssN\\ mP,ssN:sP,ssN:sP \end{array}$
28 29 30		29·885 29·815 29·919	56·8 51·2 54·0	27·8 42·9 39·9	29·0 8·3 14·1	45.5	- 1·9 + 1·4 + 4·1	38·3 42·6 47·0	34·0 39·2 45·2	6.3	15.6	1.8 4.1 2.2	75 79 89	75·9 75·6	17·9 34·5 28·5	43.44	0.000 0.038 0.058	sP : wP wP : wP : vN, mP wP
31		30.040	65.3	46.3	19.0	55.4	+10.5	49.3	43.5	11.9	21.5	5.0	65	117-1	32.7	43.88	0.000	wP:wP:mP
 Ieans		29.454	51.0	37.4	13.6	43.8	+ 1.9	41.1	37.9	5.8	11.3	2.2	80.6	80.7	28.6	43.86	Sum 3.928	
umber of lumn for Reference	I	2	3	4	5	6	7	8	9	10	I I	12	13	14	15	16	17	18

TEMPERATURE OF THE AIR.

The highest in the month was 65°·3 on March 31; the lowest in the month was 27°·8 on March 28; and the range was 37°·5. The mean of all the highest daily readings in the month was 51°·0, being 1°·2 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 37°·4, being 2°·3 higher than the average for the 65 years, 1841–1905. The mean of the daily ranges was 13°·6, being 1°·1 less than the average for the 65 years, 1841–1905. The mean for the month was 43°·8, being 1°·9 higher than the average for the 65 years, 1841–1905.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29in.454, being oin.292 lower than the average for the 65 years, 1841-1905.

	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AND	емомет	ERS.	,		
	sunshi	izon.		OSLER'S.			Robin- son's,	Clouds .	AND WEATHER.
MONTH and DAY,	ation of	Sun above Horizon.	General I	Direction.	on	ssure the e Foot.	Move- te Air.		1
1914.	Daily Duration of Sunshine.	Sun ab	А.М.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Movement of the Air.	A.M.	Р.М.
Mar. 1 2 3	8.8	hours. 10.8 10.9	SW:W:NW WNW:W:NNW W:WNW	WNW: WSW: W NW: WNW: W WNW: W	2.7	lbs. 0·32 0·18	324	o, hofr : o,h,hofr: 6,cu,cus,h	1, ci : pcl,sltsh: pcl 8, cu, cus : 9 : 1, thcl 10, s, n : 10
4 5 6	0.0	11.1 11.1 11.0	WSW: W W WNW: W	W: WSW W: WNW: NW	6.0	0.70	562	10, r : 10, ocsltr 10 : 10, cu, s, n 9 : pcl, w : s,cis,cus,soha,w	10, eu, n, ocsltr: 10, w : 10, ocsltr 10, sc, s, sltr, w : 10, sltr, w : 10, sltsh, w 8, eu, stw : pcl
7 8 9	0.0	11·2 11·2	W : Calm : Var. SW : WSW : W Var. : E	Calm: W W: WSW ENE: NE: NNE	7.2	0.85	545	pcl : 9 : 10, sltr 10, r : 10, r, w : 10, ocsltr, w 10, r : 10, r	10, sltr, sltf: 10, ocsltr, sltf: 10, sltsh 10, sc, s, ocsltr, w: 10, r 10, r: 10, r, sl, sn: 10, sltsh
IO II I2	6.7	11·4 11·5	WNW : NW W : NW SW : W	NW:W:WNW WNW:W:SW WNW:W	1.1	0·13 0·04 0·57	234	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{llllllllllllllllllllllllllllllllllll$
13 14 15	2.5	11·6 11·7 11·7	WSW : SSW WSW : SW W	WSW:SW WSW:SW:W WSW:SW:W	24.4	0·31 1·60 0·85	694	9, 0cr : 10, cr : 10,sc,sltr 10, w : 10,fqr,w : 8.cus,s.shsr, w 10, sltsh, w : pcl, w : pcl, w	10, ocsltr, w: 10, ocsltr, w: 9 8, ocr, sl, hl, sq: 10, r, sl, hl, stw: 9, W 10, fqr, w: 10, shr, w: pel, w
16 17 18	7.3	11.9	WSW: W: WNW WNW: W SW: SSW: WNW	NW:N:NNW W:WSW:SW WNW:W:SW	2.7	1.93 0.32 0.45	389	IO, OCr : 9, shr, stw: 10, sc. s. sltr, stw O : I : 3, CUS 10, sltr, w: 10, OCr : 10	9,sltr,stw: 2, w : 0, w 7, cu, cus : pcl, shr, soha: pcl pcl, cu, s, soha: 9, sltsn : 0, hofr
19 20 21	0.0	I 2·0 I 2·I I 2·I	SSW : SW Variable W : WNW : NW	SW: WSW NNE: N: WNW WNW: NW: W	4.3	0.30	368	pcl : 10,0cr,sl,sn: 10, cr o,m,hofr: pcl : 10, 0csltr	8, eus, s : 9, ocsltr : 1, hofr 10, se, cr, sl, sn : 10 : pcl 10, r : pcl, hl : 0, sltf, hofr
22 23 24	1.0	12.3	W: WSW: Calm W: WSW Calm: SSW	NW: Var.: W SW: SSW: WSW W: WSW	4.6	0.04 0.18	322	o, hofr : pcl : 10, s, n 9 : pcl : 6, thcl	pcl,shr,sl,sn: pcl : 0, hofr 10, s, n, sltr:10, r : 10, r 8,eus,shs-r:pcl : 9
25 26 27	1.1	12·4 12·5 12·5		SW:S:SE NNE:NW NNE:NE:Calm	0.7	0·03 0·00	205	10, r : 10, r : 9 10, sltf : 10, sltsh : 10, s, n	9, cus, shr: 9, shr: 9 10, cus, n, shr: pcl: 1, m. hofr
28 29 30	0.0	12·6 12·7 12·7	Calm : SW SSE : S SW : SSW	SW:S:SSE SSW:Calm:SW S:SW	1.6	0·04 0·10 0·46	211	10 : 10 : 10, s, thr	cu, thcl : thcl, soha : 9 10, s : 10, sltr : 9 10, sc, s, n, sltsh: 10, ocsltr, w: 10, W
31	11.3	12.8	SW: WSW	WSW : SW	5.8	0.69	487	10, W : 1, W	3, ci, cis : thcl, soha : pcl, luha
Means	2.8	11.8				0.41	377		
Number of Column for Reference	.l	20	2 I	22	23	24	25	26	27

The mean Temperature of Evaporation for the month was $41^{\circ} \cdot 1$, being $1^{\circ} \cdot 7$ higher than

The mean Temperature of the Dew Point for the month was 37° .9, being 1° .6 higher than

The mean Degree of Humidity for the month was 80.6, being 0.1 greater than

The mean Elastic Force of Vapour for the month was oin-228, being oin-014 greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs.6, being ogr. I greater than

The mean Weight of a Cubic Foot of Air for the month was 542 grains, being 7 grains less than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 7.4.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.240. The maximum daily amount of Sunshine was 11.3 hours on March 31.

the average for the 65 years, 1841-1905.

The highest reading of the Solar Radiation Thermometer was 117°·1 on March 31; and the lowest reading of the Terrestrial Radiation Thermometer was 17°·5 on March 22.

The Proportions of Wind referred to the cardinal points were N. 4, E. 1, S. 5, W. 19. Two days were calm.

The Greatest Pressure of the Wind in the month was 24.4 lbs. on the square foot on March 14. The mean daily Horizontal Movement of the Air for the month was 377 miles; the greatest daily value was 714 miles on March 16; and the least daily value was 136 miles on March 27.

Rain (0^{in.}005 or over) fell on 26 days in the month, amounting to 3^{in.}928, as measured by gauge No. 6 partly sunk below the ground; being 2^{in.}408 greater than the average fall for the 65 years, 1841-1905.

		BARO- METER.			Th	MPERAT	JRE.				rence bet ir Tempe			Т	EMPERATU	re.	v. No.	
MONTH and	Phases of	Fourly rected to 32°		(Of the Ai	r.	-	Of Evapo- ration.	Of the Dew Point.	and	ir Tempe I Dew Po emperatu	int	Humidity	Of Rad	liation.	Of the Earth	in Gauge ving surfa re the Gre	Electricity.
DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest,	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation = 100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
Apr. 1 2 3	Greatest Dec. N. First Quarter	in. 29·817 29·741 29·790	66.8 62.6 59.8	42·9 43·3 38·2	23·9 19·3 21·6	53·5 50·4 48·0	+ 8·2 + 4·7 + 2·0	48·2 48·2 44:5	42·9 45·9 40·7	° 10.6 4.5 7.3	° 20·2 13·3 16·0	o·8 o·4	67 85 76	0 117·2 109·0 102·1	28·4 29·5 28·6	44·37 44·91 45·30	0.005	$egin{array}{c} \mathbf{mP} \\ \mathbf{wP}: \mathbf{mP}: \mathbf{mP} \\ \mathbf{wP}: \ldots: \mathbf{mP} \end{array}$
4 5 6		29·767 29·497 29·346	55·9 56·8 58·0	41·3 41·2 45·3	14·6 15·6 12·7	46·6 49·4 49·5	+ 3.1	44·4 46·8 44·4	41·9 44·0 38·9	4·7 5·4 10·6	18·9 11·3	2·0 0·8 1·5	85 83 66	98·5 94·6 107·3	29·6 31·3 37·0	45·68 45·91 46·09	0.250	$\begin{array}{c} \text{wP, wN: sN, mP: mP} \\ \text{wP, sN: wP: wP, wN} \\ \text{wP: mP: mP} \end{array}$
7 8 9	 In Equator	29·237 29·348 29·525	52·1 56·2 53·5	39·6 36·0 37·0	12.5	43·8 45·0 46·7	- I·I	41·2 41·7 44·5	38·1 37·9 42·0	5·7 7·1 4·7	14·6 16·8 11·9	0·0 1·0	80 76 85	104·6 112·5 88·5	32·6 27·9 29·1	46·22 46·23 46·09	0.087	vP, ssN $mP: mP: vP, ssN$ $mP: wP$
10 11 12	Perigee : Full	29·565 29·685 29·972	60·1 60·8 61·8	43·7 41·7 39·1	16·4 19·1 22·7	50·8 49·1 49·3	+ 3.3	46·7 46·1 44·5	42·4 42·9 39·3	8·4 6·2 10·0	15·2 13·1 18·4	1·9 1·5 1·2	79 79 68	119·1		46·11 46·22 46·48	0.041	wP, sN : wP, sN : wP wP, wN : wP : mP mP : wP
13 14 15	Greatest Dec. S.	29·892 30·134 30·335	66·3 58·1 57·2	36·1 42·3 35·6	30·2 15·8 21·6	51·3 49·4 45·0	+ 3.0	46·7 43·7 41·0	41·9 37·6 36·4	9•4 11•8 8•6	16·4 19·3 17·0	0·9 5·9 2·8	70 64 72	112·6 107·0 119·2	28.3	46·62 46·78 47·02	0.000	$mP: vP: mP \\ mP: sP: sP \\ mP: mP: vP$
16 17 18	Last Quarter	30·282 30·065 29·992	55°9 58°5 60°2	33·9 39·3 41·2	22·0 19·2 19·0	44·4 48·9 50·9			37·7 40·8 36·8	6·7 8·1 14·1	13·7 17·7 22·5	1·5 0·2 5·1	77 74 58	123·3 124·5 116·9	27.2	47·13 47·17	0.000	$\begin{array}{c} mP \\ mP: wP \\ mP: wP: mP \end{array}$
19 20 21		30·042 30·103 30·133	66·1 72·3 73·6	39·2 38·2 37·1	26·9 34·1 36·5	52·6 55·3 56·4	+ 6.8	45·7 46·6 48·0	38·8 38·3 40·2	13·8 17·0 16·2	25·2 28·7 27·5	2·0 3·6 3·8	61 53 54	128·0 130·6 132·8	24.1	47·29 47·55 47·82	0.000	$\begin{array}{c} mP:wP:wP\\ mP:vP:mP\\ mP:vP:wP \end{array}$
22 23 24	In Equator Apogee	30·051 30·100 30·126	65·5 61·0 62·1	45·I 44·3 41·5	20·4 16·7 20·6	53·7 51·2 52·1	+ 2.6	49°4 46°2 47°9	45·2 41·0 43·6	10.2	15·0 19·2 14·4	3·9 1·7 2·2	72 68 73	105·0 108·8 120·9	27.5	48·12 48·51 48·76	0.008	vP: ssN, ssP: ssN, vP $wP: mP: sP$ mP
25 26 27	New 	30·234 30·364 30·281	58·8 61·0 65·4	39·8 31·7 35·9	19·0 29·3 29·5	46.7	+ 2·3 - 1·9 + 1·6	46·0 41·9 45·5	40·9 36·5 40·4		19·8 19·8	3·5 1·5	69 68 69		28·8 17·1 26·0	48·91 49·18 49·22	0.000	$\begin{array}{c} mP:mP:wP\\ mP:wP:wP\\ mP:wP:mP \end{array}$
28 29 30	Greatest Dec. N.	30·126 29·867 29·794	64·1 69·6 51·6	40·5 44·3 . 44·1	23.6 25.3 7.5	54.1	+ 2·5 + 5·1 - 1·9	47·5 50·3 45·0	43·6 46·6 42·6	7·7 7·5 4·6	17·2 19·2 8·5	0·9 0·2 1·3	75 75 85	132·2 131·6		49·29 49·46 49·62	0.000	mP: wP: mP mP: wP wP: mP: mP
Means		29.907	61.1	40.0	21.1	49.8	+ 2.5	45.4	40.9	8.9	17.3	1.9	72.2	113.8	28.0	47.17	Sum I·IIO	
Number of Column for Reference	1	2	3	4	<u></u> 5	6	7	8	9	10	11	12	13	14	15	16	17	18

The main reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point temperatures (Column 10) is the difference between the numbers in Columns 6 and 0, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29 in 907, being 0 in 159 higher than the average for the 65 years, 1841-1905.

The highest in the month was 73°·6 on April 21; the lowest in the month was 31°·7 on April 26; and the range was 41°·9. The mean of all the highest daily readings in the month was 6°·1, being 3°·9 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 40°·0, being 1°·0 higher than the average for the 65 years, 1841–1905.

The mean of the daily ranges was 21°·1, being 2°·9 greater than the average for the 65 years, 1841–1905. The mean for the month was 49°·8, being 2°·5 higher than the average for the 65 years, 1841–1905.

	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	ЕМОМЕ	rers.			
	Sunshi	izon.		OSLER'S.			Robin-	Crot	UDS AND WEATHER.
MONTH and DAY, 1914.	ation of	Sun above Horizon.	General	Direction.	on	ssure the re Foot.	l Move-		I
-5-4	Daily Duration of Sunshine.	Sun al	A.M.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Movement of the Air.	A.M.	P.M.
April 1 2 3	7·6 3·0	hours. 12.8 12.9	Calm : S : SW. WSW : SW W : WSW	W: WSW WSW: NNE: W W: WSW	0.6	lbs. 0.15 0.01	152	10 : 10 : 8, cu, cus	pcl, s, soha: ci, cis, s : pcl, d, luha, lucc 10, s, n, sltr: pcl : o, m, d 7. s, soha: pcl : pcl
4 5 6	2.1	13·1 13·1 13·2	WSW : SW SSW : W W : WNW	W : WSW : SW W : WSW WNW : W : WSW	6.3	0.05 0.64 1.82		10, ocr : 10, shsr : 9, cu, n, ocsltr, w	9, sltr, soha: v, luha: thcl, luha 9, cu, cus, n, ocsltr, w: 10, fqr, w 6, cu, cus, g: 5, stw: thcl, luha
· 8 9	9.7	13·2 13·3 13·4	WSW: W W W:SW	WSW: W W: NW SW	5.5	0.62 0.18 0.83	330	9, fqr : pel, w : pel., cu, w o, hofr : o : 1, eu, thel pel : pel, cis, cu. cus, soha	¹⁰ , cu, s, n, fqr, w: 9. fqr, w: pcl, luha 5, cu: pcl, fqr: pcl 10, cu, n, fqthr, w: 10, sc, fqthr, w
10 11 12	3.9	13·4 13·5 13·6	SW: WSW SSW: Calm: SW WSW: W	WSW : SW SW : NW : W WSW : W : SW	3.9	0.62	466 288 278		6 s, hysh, hl, : thcl, soha, prh: thcl, luha pcl, ci, cu: pcl : 1, thcl 1, cu : o, d
13 14 15	9.6	13.6 13.7 13.8	SW : Calm N : NW Calm : E	SW:W:NW NW:N:NNE ENE:SE:Calm	6.5	0·10 0·32 0·10			9, cus, n : 10 : 9 5, cu : 0 : 0 5, cu : 0 : 0
17	10.5	13.9 13.9	Calm: E: ESE E: SE SE	ESE : SE : E ESE : SE SE : ESE	10.0		217 378 306	o, hofr : 1, cu : 3, cu 9 : 8 : 1, cu, w o, hofr : 0	1, thel : o, d o, w : o o : o, w : o
20	I 2·2	14·0 14·1 14·1	ESE : E : SE Calm : ENE Calm : E	ESE : E SE : Calm E : SE	1.0	0·25 0·05 0·02	165		o, w : o : o, hofr o : thcl : thcl
22 23 24	3.8	14·2 14·3	W: Calm: SE SW: W: N W	SW: WSW NW: N NW: WNW: N	1.4	0.32		9, thcl : 10 pcl, d : 10, lishs : 10, sc, s 1, h : pcl : 9, cu, s, w	9, sltr : pcl : 0, hyd pcl, cu, cus: pcl : 1, h 10, s, n, w : 9 : 10, shr
26	I 2·2	14·4 14·4 14·5	N: NNE: ENE Calm: E Calm	NE : SE : ESE ESE : SE : Calm ESE : SE	0.3	0.00	331 108 141		8, cu, cus : pcl : o 3, ci, cis : ci, cis : o, hofr o : o, h, d
28 29 30	9.4	14·6 14·6 14·7	E : Calm : ESE Calm : ENE ENE : NE	SE E : SE : ENE ENE : E	0.5	0·07 0·00 0·27	135	o, sltf : o : 1 10, f : 10, sltf : 3, thcl 0, m : 10 : 10, cu, s, n	o : o : pcl o : o : 1, thcl 10, cu, s, n : 10, W
Means	7.7	13.8				0.28	291		
Number of Column for Reference	19	20	21	22	23	24	25	26	27

The mean Temperature of Evaporation for the month was 45° -4, being 1° -5 higher than

The mean Temperature of the Dew Point for the month was $40^{\circ}.9$, being $0^{\circ}.8$ higher than

the average for the 65 years, 1841-1905.

The mean Degree of Humidity for the month was 72.2, being 3.6 less than

The mean Elastic Force of Vapour for the month was oin-256, being oin-008 greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs.9, being the same as

The mean Weight of a Cubic Foot of Air for the month was 544 grains, being 1 grain greater than

The mean amount of *Cloud* for the month (a clear sky being represented by o and an overcast sky by 10) was 4·3.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.560. The maximum daily amount of Sunshine was 12.4 hours on April 28.

The highest reading of the Solar Radiation Thermometer was 132°·8 on April 21; and the lowest reading of the Terrestrial Radiation Thermometer was 17°·1 on April 26.

The Proportions of Wind referred to the cardinal points were N. 3, E. 8, S. 5, W. 10. Four days were calm.

The Greatest Pressure of the Wind in the month was 21 0 lbs. on the square foot on April 6. The mean daily Horizontal Movement of the Air for the month was 291 miles; the greatest daily value was 759 miles on April 6; and the least daily value was 108 miles on April 26.

Rain (oin oo5 or over) fell on 12 days in the month, amounting to 1in 110, as measured by gauge No. 6 partly sunk below the ground; being oin 456 less than the average fall for the 65 years, 1841-1905.

		BARO- METER.			TE	MPERATU	RE.				rence bet			T	MPERATU	RE.	e No. ace is bund.	
MONTH	Phases of	fourly rected to 32°		(of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	and	l Dew Po emperatur	$_{ m int}$	Degree of Humidity (Saturation = 100).	Of Rad	liation.	Of the Earth 3 ft. 2 in.	l in Gaug siving surf ve the Gr	Electricity.
and DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of (Saturati	Highest in Sun's Rays.		below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
	1	in.	0	0	0	0	0	0	۰	0	0	0		0	0	0	in.	n DD
May I		30·043 30·136	52·3 55·8	38·9	13·4 16·7	44·8 46·0	-4.5 -3.5	39·0 40·8	32·2 35·0	12·6 11·0	17.3	6·3 4·6	66	138.5	28.2	49·82 49·76	0.000	$egin{array}{l} \mathbf{vP}:\mathbf{sP}:\mathbf{vP} \\ \mathbf{vP}:\mathbf{wP}:\mathbf{wP} \\ \mathbf{wP}:\mathbf{wN},\mathbf{wP}:\mathbf{wP} \end{array}$
3	First Quarter	29.885	66.9	40.2	26.7	52.5	+ 2.7	47.8	43.0	9.5	15.2	4.7	70	131.1	28.5	49.70	0.000	•
4		29.619	66.0	49.5	16.5	56.3	+ 6.3	52.4	48.8	7:5	15.7	0.8	75	102.3	41·5 41·1	49.72 50.03		wN, $wP : wP : mPwP : vP$, $ssN : vP$
5 6	In Equator	29·474 29·506	61·8 59·2	49·3	11.1	53.5	+ 3.2	49·4 48·3	45.3	8·2 8·0	12.1	3.1	73 75	96.0	44.8	50.35		mN, wP : mP : mP
7	1	29.314	65.2	48.0	17.2	53.7	+ 3.0	50.6	47.6	6.1	13.8	1.2	80	127.2	46.0	50.58		wP : vP, ssN : ssN, vP
7 8	Perigee	29.399	58.1	44.4	13.7	49.3	- 1.7	44.4	39.1	10.2	17.1	3·8 3·7	67 76	116.6 62.7	38·9	50·70 50·72	0.082	wP : vP, ssN : mP wP, wN : sP : sP
9	Full	29.662	48.1	44.2	3.9	45.9	- 5.3	42.4	38.4	7.5	9.5		'					mP: wP, ssN: vP
10		29.853	53·1	39.4	13·7 12·0	46·7 49·5	- +·8 - 2·3	44.3	41·6 38·9	2.1	12.8	5.4	83	80.2	29·5 35·7	50.81	0.000	mP:mP:sP
I I I 2	Greatest Dec. S.	29·782 29·957	55·9 56·0	43.9	14.0	47.6	- 4.5	43.1	38.1	9.3	16.3	2.9	71	126.1	36.9	50.40	0.000	$\mathrm{mP}:\ldots:\mathrm{sP}$
13		30.019	55.0	41.7	13.3	49.2	- 3.2	45.8	42.2	7.0	10.3	2.8	77	84.0	34.1	50.41		${}^{\mathrm{mP}}_{\mathrm{wP}:\mathrm{mP}:\mathrm{wP}}$
14		30·069	70·2 64·8	45·1	25·1 19·4	56·4 55·2	$\begin{vmatrix} + & 3.8 \\ + & 2.4 \end{vmatrix}$	23.1	50·0 49·1	6·4 6·1	14.8	0.8	80 81	114.1	34.2	50·51 50·71		wr . mr . wr
15										11.4	23.0	1.3	66	130.3	34.7	51.08	0.000	${ m wP}$
16 17	Last Quarter	30·165	66·0 70·7	44·5 43·7	21·5 27·0	54·5 55·7	+ 1.5 + 2.6	48·7 49·4	43.4	12.3	22·I	3.7	64	131.9	28·I	51.44	0.000	$ wP: wP: vP \\ vP: vP: wP $
18		30.129	74.3	42.5	31.7	58.0	+ 4.7	49.9	42.7	15.3	27.1	5.5	57	134.3	29.5	51.82		
19	In Equator	30.192	75.2	42.3	32.9	58.4	+ 4.9	51.9		12.2	23.1	2·2 I·2	64 76	121.7	31.1	52·18 52·59		$egin{array}{l} \mathrm{wP} : \mathrm{sP} : \mathrm{wP} \\ \mathrm{wP} \end{array}$
20 2 I	Apogee	30·177 30·088	73·8 80·6	44·2 48·2	29·6 32·4	59·5 65·4	+ 5·7 + 11·2	55·5 57·8	51·6	7·6 13·8	29.7	1.8	60	144.3	35.9	53.08	0.000	wP: wP: mP
22		29.955	83.4	48.5	34.9	65.6	+11.0	58.4	52.5	13.1	25.7	1.8	64	137.3	34.6	53.51	0.253	wP : wP : vP, ssN
23		29.700	70.7	48.3	22.4	57.9	+ 3.0	55.9	54.1	3.8	10.6	0·9 2·8	87	121.7	48·1	54·00 54·43	0.011	${ m vP,vN} \ { m wP:wP,wN:wP}$
24	• •	29.967	56.3	42.0	14.3	49.6		45.3	40.7	8.9	14.4			- '				mP
25	New	30.079	54·9	39.0		45·9 45·7	- 10·1	40·5 41·0	34·4 35·6		18·4 17·4	4·4 4·9	64	126.7	28.0	54·49 54·12	0.000	sP: mP
26 27	Greatest Dec N.	29·992 30·005	56·1	39·1	17·0 23·0	49.2	1			12.5	18.1	2.8		131.1	26.3	53.90	0.000	mP
28		29.985	62.1	37.9	24.2	49.3	- 6.9	45.4	41.2	8.1	17.6	3.3	73	118.0	24.1	53.61		$mP: vP: wP, wN \\ wP: mP: wP$
29		29.882	64.2	46·1	18.1	53·6 56·5		50.4	47.3	6·3 6·2	14.1	0.4	78 80	92.1	39.6	53·45 53·55		$\mathbf{wP} : \mathbf{mP} : \mathbf{wP}$ $\mathbf{wP} : \mathbf{mP} : \mathbf{wP}$
30		29.876	66.3	46.3						8.2	18.7	1.6		129.4	41.3	53.70		wP: wP: wP, wN
31		29.869	71.0	48.3	22.7	58·4	- I·3	54.1	50.2	0.2	10./		/ 3				Sum	,
Means		29·906	63.7	43.8	19.9	53.0	- o.i	48.3	43.7	9.2	16.9	2.7	71.3	117.0	34.8	51.79		
umber of blumn for Reference	I	2	3	4	5	6	7	8	9	10	11	I 2	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon. taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29in.906, being oin.112 higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 83°4 on May 22; the lowest in the month was 37°6 on May 27; and the range was 45°8. The mean of all the highest daily readings in the month was 63°·7, being 0°·2 lower than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 43°·8, being 0°·1 higher than the average for the 65 years, 1841–1905.

The mean of the daily ranges was 19°·9, being 0°·3 less than the average for the 65 years, 1841–1905. The mean for the month was 53°·0, being 0°·1 lower than the average for the 65 years, 1841–1905.

	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	EMOME'	TERS.			
	unshir	zon.		OSLER'S.			Robin- son's.	CLO	UDS AND WEATHER.
MONTH and DAY, 1914.	Daily Duration of Sunshine.	Sun above Horizon.	General	Direction.	Pre on Squar	ssure the e Foot.	Move-		1
	Daily Du	Sun a	A.M.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal ment of tl	A.M.	P.M.
May I	6·4 9·0	hours. 14·7 14·8 14·9	$\begin{array}{c} \textbf{ENE}: \textbf{NE} \\ \textbf{E}: \textbf{SE} \\ \textbf{SSE}: \textbf{S}: \textbf{SSW} \end{array}$	NE : ENE : ESE ESE : SE SSW : SW	4.5	0.42	miles. 396 294 284	9 : pcl : 4, cicu,cu	9 : pcl : 9 1, w : 0, w : 0 8, cu, s : pcl : 10
4 5 6	5.6	14·9 15·0 15·1	SW: WSW WSW W: WNW	WSW:SW WSW:WNW:W W:WSW:SW	5.8		503	10, ocr,w: 10, ocr : 8, cu, cus, w pcl : 9 : 9, cis, cu, cus, sh-r, w 10, ocmr: 9 : 8, cus, n	pcl, cu, cus, w: 8, soha, w: pcl 8,shsr,hl, w : 9,sc,cus,ocsltr,w 10, s, n : 10, s, n : 10, ocsltr
7 8 9	12.1	15·1 15·1 15·2	SW: W W W: NW: N	WSW: W W: WNW: WSW N: NNE	10.0	1.22		10 : 9, W : pcl, cu, cus,w 10, W : pcl, W : v,shsr,hl,sqs 10, W : 10,ocsltr,w: 10, n, W	9, sc, n, tsm, hyshs, w : 10, n, tsm, hyr, w: 10, W 7, cu, shsr, w : pcl, W : pcl. W 10, n, ocsltr : 10, n
IO II I2	2.3	15·3 15·4		SW: WSW: NNW WNW: WSW: NW N: Calm	2.3		257 278 295	9 : pcl : 10, s, ocsltr 10 : 10 : 9, cis, cu 10 : pcl : 8, cu, cus	10, cr : 10 10, s, n : pcl : 10 7, cu, cus : 10
13 14 15	4.9	15·4 15·5 15·5	NNW : Calm : Var.	W: WSW NNE: SE: Calm ESE: SE	0.5	0.02	260 142 170	9 : thcl, h : 6, cu, s, h	10, s, n : 10, ocmr 9 : pcl : 9 1, cu : 1 : pcl
17	13.9	15·6 15·6 15·6	ENE: NNE: NE	ENE : E NE : ESE NE : ESE : Calm	1.9	0.10	282 221 179	0 : 0	o : 0 I, cu : I : 0 o : I, cis : I, cis
20		15·7 15·7 15·8	Calm: N Calm: E Calm: SW	N:E:ESE NE:Calm WSW:SW:W	0.1	0·02 0·00 0·09	1	o, h : o, h o : I, thcl : 2, cu I, h, m, d: o : o	o, h : o : pcl, d o : o
22 23 24	1.7	15·9 15·9	$egin{array}{l} { m SW:Calm} \\ { m ESE:SE:WSW} \\ { m NNE} \end{array}$	SW : S : SE W : NNW : N NE : ESE : E	2.6	0.20		o : 0 pcl, l, t, shr: 9 : 9, cu, cus 10 : 10, sltr : 9, cu, cus, n	
26	8·3 6·3 13·5	16.0	NE: NNE N: NNE N: NNE	NNE : N NNE NNE : NE : Calm	3.2	0.45	319 377 306	pcl : 9 : 9, lishs	8, cu, cus : pcl : 1 9, cu, n : pcl : 0 5, cu, cus : pcl, cu, cus : 10
28 29 30	1.4	16·1 16·1 16·2	Calm: WSW: NNE Calm Calm	N : ESE : Calm N : SSE : Calm N	0.1	0.00	95 103	pcl : pcl : 8 cu, s, n 10 : pcl, thcl: 9, cu, s, n pcl,sltf: pcl, h : 9, s	10, s, n, sltr: 10 : 10, sltr 10, cu, n : 10, cu, n : 9 10, s, n : 10, sltsh : 10
31	8.2	16.2	N : NW : W	WNW: NNW: N	I · 2	0.05	251	10 : pel, liel : 4, cus	7, s, n : 10, cr : pcl, sltr
Means	6.7	15.5				0.28	279		
Number of Column for Reference	19	20	21	22	23	2.4	25	26	27

The mean Temperature of Evaporation for the month was $48^{\circ}\cdot 3$, being $0^{\circ}\cdot 7$ lower than

the average for the 65 years, 1841-1905.

The mean Temperature of the Dew Point for the month was $43^{\circ} \cdot 7$, being $1^{\circ} \cdot 3$ lower than

The mean Degree of Humidity for the month was 71.3, being 2.9 less than

The mean Elastic Force of Vapour for the month was oin-285, being oin-014 less than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 3grs.2, being ogr.2 less than

The mean Weight of a Cubic Foot of Air for the month was 540 grains, being 2 grains greater than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 6.2.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.434. The maximum daily amount of Sunshine was 14.1 hours on May 8.

The highest reading of the Solar Radiation Thermometer was 144° 3 on May 21; and the lowest reading of the Terrestrial Radiation Thermometer was 24° 1 on May 28.

The Proportions of Wind referred to the cardinal points were N. 8, E. 6, S. 4, W. 8. Five days were calm.

The Greatest Pressure of the Wind in the month was 10.0 lbs. on the square foot on May 8. The mean daily Horizontal Movement of the Air for the month was 279 miles; the greatest daily value was 604 miles on May 8; and the least daily value was 91 miles on May 20.

Rain (oln-005 or over) fell on 10 days in the month, amounting to 1ln-631, as measured by gauge No. 6 partly sunk below the ground; being oln-284 less than the average fall for the 65 years, 1841-1905.

<u> </u>		BARO METER.			Ti	EMPERAT	JRE.				rence bet		1	Ti	MPERATU	RE.	e No. ace is ound.	
MONTH	Phases of	Iourly rected to 32°			Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	and	ir Tempe l Dew Po aperature	int	Humidity on = 100).	Of Rad	liation.	Of the Earth	in Gauge iving surf re the Gro	Blectricity.
and DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Hignest.	Lowest.	Daily Range,	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Daily Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation = 100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. i6, whose receiving surface is inches above the Ground.	
		in.	0	0	0	0	0	0	٥	0	0	2.0	6-	° 136·2	38.5	53.88	in.	wP
June 1 2 3	First Quarter In Equator	29·919 29·899 30·047	62·3 68·0 68·0	44.7 46.2 46.9	21·8 21·1	52·8 56·3 56·6	- 4.6 - 1.5 - 1.5	47·3 52·4 50·5	41·8 48·8 44·9	7·5 11·7	19·1 17·0 22·1	1·3 2·7	67 75 66	126.0	37·6 36·8	54·05 54·30	0.000	$\mathbf{wP} : \mathbf{mP} : \mathbf{wP}$
4 5 6	Perigee	29·943 29·851 29·842	73·3 59·6 59·5	45·6 47·3 48·1	27·7 12·3 11·4	56·7 51·8 52·9	- 1·6 - 6·6 - 5·4	52·2 48·9 50·8	48·0 46·0 48·7	8·7 5·8 4·2	18·8 13·7 6·1	0·8 3·0 0·4	72 80 87	131·4 103·9 82·5		54.65 54.82 55.00	0.008	
7 8 9	Full: Greatest Dec. S.	29·610 29·429 29·429	58·0 57·0 65·6	43·8 40·3 43·0	14·2 16·7 22·6	51·1 47·5 53·1	- 7·1 - 10·6 - 4·9	48·2 45·0 48·6	45·2 42·2 44·1	5·9 5·3 9·0	13·1 12·4 18·5	o·4 o·7 o·4	80 83 71	104·8 121·6 119·9	1	54·79 54·75 54·49	0.086	wP, wN : vP, ssN : vP, v vP, ssN wP : wP : vP, sN
10 11 12		29·652 29·749 29·754	65·8 69·8 71·1	47·1 50·1 53·0	18·7 19·7 18·1	56·7 56·6 59·3		51·4 51·8 57·0	46·5 47·3 55·0	9·3 4·3	19·6 23·2 13·5	0.0 0.0 0.0	68 71 86	138·3 135·3 131·8	41.1	54·41 54·52 54·74	0∙086	$\begin{array}{c} \text{wP, sN: wP: wP} \\ \text{wP: wP, ssN: vP, wN} \\ \text{wP} \end{array}$
13 14 15	Last Quarter : In Equator	29·765 29·774 29·860	77·6 74·5 76·3	55·3 53·1 50·8	22·3 21·4 25·5	64·2 61·9 61·9		57·9 59·1 56·0	52·6 56·8 51·0	10·9 2·1 11·6	22·8 13·3 22·1	0·0 1·5 1·2	66 84 67	142·2 132·2 141·3		55·19 55·67 56·14	0.332	$\begin{array}{c} \text{wP} \\ \text{wP} : \text{vP}, \text{vN} : \text{sN}, \text{wP} \\ \text{wP} \end{array}$
16 17 18	Apogee	29·900 29·890 29·846	64·8 72·6 81·5	49·2 45·5 48·6	15·6 27·1 32·9	5 5 ·6 59·4 63·4		52·5 55·3 58·2	49·6 51·7 53·9	6·o 7·7 9·5	11·4 17·0 21·7	1·7 0·0 0·2	81 76 71	135·3 133·5 141·2	35.7	56·43 56·90 57·07	0.000	wP wP wP
19 20 21		29·865 29·760 29·655	83·4 75·8 70·2	52·4 54·1 52·0	31·0 21·7 18·2	64·4 62·5 58·7	+ 4.9 + 2.6 - 1.6	59·8 58·7 54·7	56·0 55·5 51·1	8·4 7·0 7·6	22·2 17·1 18·5	o·9 o·0	74 78 76	141·1 136·9 130·3	42·9 44·2 41·5	57·42 57·86 58·24	0.000	wP: wP, wN: vP, ssN wP wP, wN: wP
22 23 24	Greatest Dec. N.: New.	29·761 29·816 30·015	72·8 65·3 72·9	48·3 52·1 45·7	24·5 13·2 27·2	58·8 56·6 60·4	- 1·8 - 4·3 - 0·8	52·8 52·5 54·4	47.5 48.7 49.2	11·3 7·9 11·2	22·7 16·6 20·8	1·2 0·2 1·1	67 75 66	149·4 119·4 134·1		58·51 58·50 58·60	0.277	$\begin{array}{c} \text{wP} \\ \text{wN, wP : vP, vN : mP} \\ \text{wP} \end{array}$
25 26 27		30·107 30·172 30·098	77·2 72·2 80·8	53.0 47.2 45.8	24·2 25·0 35·0	62·8 59·9 63·7	± 1·4 - 1·6 ÷ 2·1	57·3 53·3 55·6	47.5	12.4	22·8 22·2 26·9	0·6 3·1 0·8	70 64 58	138·7 141·2 137·0	37.3	58·53 58·82 58·98	0.000	wP wP wP:vP:mP
28 29	In Equator First Quarter	30·121 30·082 29·930	88·1 81·9 80·3	56·1 54·4 56·5	24·2 27·5 31·6		+ 5·4 + 6·7 + 10·9	62.5	49·7 58·0 55·9		29·9 19·6 32·8	2·9 3·4 4·8	54 69 55	135·2 137·1 152·1		59·22 59·60 60·12	0.000	$\begin{array}{c} wP:wP:vP\\ wP\\ wP\end{array}$
Means		29.851	71.5	49.2	22.3	59.1	0.3	54.2	49.8	9.3	19.3	1.2	71.9	131.5	40.9	56.54	Sum 1.338	
Tumber of olumn for Reference	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean readings of the Barometer for the month was 29 in 851, being oin 036 higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 88°·1 on June 30; the lowest in the month was 40°·3 on June 8; and the range was 47°·8.

The mean of all the highest daily realings in the month was 71°·5, being 0°·8 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 49°·2, being 0°·7 lower than the average for the 65 years, 1841–1905. The mean of the daily ranges was 22°·3, being 1°·5 greater than the average for the 65 years, 1841–1905.

The mean for the month was 59°·1, being 0°·3 lower than the average for the 65 years, 1841–1905.

1	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AND	ЕМОМЕТ	ERS.			
	Sunshi	izon.		Osler's.			Robin- son's.	CLOUDS AND WEATHER.	
MONTH and DAY, 1914.	ation of	above Horizon.	General	Direction.	on Squar	ssure the e Foot.	Move ne Air.		•••
	Daily Duration of Sunshine.	Sun a	A.M.	:P.M.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Move ment of the Air.	А.М.	
June 1 2 3	3·6	hours. 16·2 16·3 16·3	N:NNE SW:WSW:W NE:NNE	NE : Calm : SW NNE : N : NE N : NE : SW	1.8	lbs. 0·13 0·03 0·02	miles. 296 222 167	pcl : licl, cu : 6, cus 9, cu, s, soha : thcl : pcl 9 : 10, s, n : 10, sl	
4 5 6	0.2	16·3 16·4 16·4	Calm:W:NW	N:NNE:NE NNW:N NW:W:SW	4.3	0·13 0·15 0·00	267		tsh
7 8 9	4.7	16·4 16·4 16·4		Var. : NNW N : NE Calm : SW	2.9	0·03 0·15 0·01	196 239 112	1 *	cr tr, l, t
10 11 12	9.5	16·5 16·5 16·5	SW : SE ENE : NE NE	ESE : E : ENE NE : NNE NE : NNE : N	4.3	0·37 0·35 0·02	353		csltr
13 14 15	5.3	16·5 16·5 16·5	NNE : NE NE NE : NNE	ENE : NE NE : Calm NE : NNE	2 · I	0·45 0·13 0·23	253	10 : 10 : 8, cu, s, n 6, cu, w : 5, w : pel pel : pel : 7, cus, n pel : 2, cu, cus 4, cu, cus : 0	
	11.9	16·5 16·6	NNE : NE Calm : ENE Calm : Var.	NNE : NE E : Calm S : ESE : Calm	0.6	0.01 0.01	229 123 112		h cl
19 20 21	8.2	16·6 16·6	S: Calm: SW SSW: SW SW: Calm	SW : Var. WSW : SW SW : WSW	0.7	0·01 0·03 0·05	225	licl : o	
23	6.3	16·6 16·6	SW: WSW SW: WSW WSW: W: WNW	SW: WSW WSW: NW: NNW WNW: W: WSW	3.8	0·10 0·15 0·07		9, r : 10, fqr : 10, n, hyshs 10, n, ocr : pcl : 1, th	
	13.4	16·6 16·6 16·5	WSW: W NE: Calm: SE Calm	W: N: NNE ENE: E: Calm W: N: NNE	I · 8	0.08	277 190 127	pcl : 0 : 1, cu 1, cu, thcl : 0	el
29	10.0	16·5 16·5 16·5	NNE : NE W : WSW : NNE SSW : SW	N: NW: W NNE: SE: S SW: SSW	0.1	0·00 0·00 0·04		thcl: 1: pcl, cu, cus, h 9, cus, s, n: 6: 1	:1
Means	8.9	16.5				0.95	227		
Number of Column for Reference.	19	20	2 I	22	23	24	25	26 27	

The mean Temperature of Evaporation for the month was 54°-2, being 0°-7 lower than

The mean Temperature of the Dew Point for the month was 49°.8, being 1°.1 lower than

The mean Degree of Humidity for the month was 71.9, being 1.7 less than

The mean Elastic Force of Vapour for the month was oin 358, being oin or 15 less than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 4grs.o, being ogr.2 less than

The mean Weight of a Cubic Foot of Air for the month was 532 grains, being t grain greater than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 5·1.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.539. The maximum daily amount of Sunshine was 15.2 hours on June 30.

the average for the 65 years, 1841-1905.

The highest reading of the Solar Radiation Thermometer was 152° 1 on June 30; and the lowest reading of the Terrestial Radiation Thermometer was 30° 9 on June 8.

The Proportions of Wind referred to the cardinal points were N. 10, E. 5, S. 4, W. 6. Five days were calm.

The Greatest Pressure of the Wind in the month was 5.2 lbs. on the square foot on June 13. The mean daily Horizontal Movement of the Air for the month was 227 miles; the greatest daily value was 404 miles on June 13; and the least daily value was 112 miles on June 9 and 18.

Rain (oin.005 or over) fell on 9 days in the month, amounting to 1in.338, as measured by gauge No. 6 partly sunk below the ground; being oin.700 less than the average fall for the 65 years, 1841-1905.

		BARO- METER.			Ti	EMPERATI	TRE.				erence bet ir Tempe		<u></u>	Т	EMPERATU	JRE.	e No. ace is ound.	
MONTH and	Phases of	Hourly rrected to 32°	,		Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	an	d Dew Po emperatu	$_{ m int}$	Degree of Humidity (Saturation=100).	Of Rac	liation.	Of the Earth 3 ft. 2 in.	in Gaug iving surf ove the Gr	Electricity.
and DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of (Saturati	Highest in Sun's Rays.	Lowest on the Grass.	below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
		in.	0	0	٥	0	0	0	0	3	٥	0	56	° 156·1	° 48·1	60.69	in.	wP: wP: vP, ssN
July 1		29·688 29·499	9 2·1 79 · 9	58·1	34·0 18·8	75.0 67.7	+13.5 + 6.1	65.4	58·5 59·7	16·5 8·0	33.4	3·6 4·8	75	137.8	53.3	61.25	. , ,	wP
3	Perigee	29.639	76.1	54.0	22.1	58.9		57.0	55.3	3.6	15.1	1.7	88	149.1	53.3	61.73	0.083	wP, mN : wP, wN : wP
4	.	29.857	76.8	48.2	28.6	62.5	+ 0.4	54.4	47.5	15.0	27.5	6.5	58	143.5	35.4	61.94	0.000	wP wP
. 5		29.662	70.9	45.2	25.7	57.8	- 4.5	53.6	49·8 51·2	8·0 6·5	15.3	0.4	75	131.0	32·9 44·9	61·77 61·60		wP, wwN : wP, ssN : wP
6	Greatest Dec. S.	29.581	70.0	51.8	18.2	57.7	- 4· 7	54.3	51 2			, 4					• •	
7	Full	29.785	72.7	49.5	23.2	58·8	- 36 - 0·0	54·3 58·5	50·3 56·0	8·5 5·5	19.9	1.0	74 82	142.2	42.4	61·47 61·22		$\mathbf{wP}: \mathbf{wP}, \mathbf{ssN}: \mathbf{wP}$ $\mathbf{wP}: \mathbf{wP}, \mathbf{wN}: \mathbf{wP}$
8 9		29·838 29·987	73·1	51.9	21.2	61·5 64·2	- 0·9 + 1·8	58.2	53.2		20.6	0.8	67	141.1	44.3	61.30	, ,	wP
				e 7.6	26.8	64.8	+ 2.3	59.3	54.8	10.0	21.6	1.2	71	146.8	40.4	61.32	0.000	wP
10		30·003 29·915	78·4 81·8	51.6	24.6	67.9		62.8	58.8	9.1	19.0	0.9	72	143.3	49.2	61.54	0.000	wP
I 2		29.870	78.1	58.2	19.9	66.1	+ 3.2	63.0	60.5	5.6	15.3	1.6	82	133.8	49.1	61.84	0.032	wP : vP, vN : wP
13	In Equator	29.906	81.5	58.3	23.2	68.2	+ 5.1	62.5	58.0	10.2	22·I	1.1	70	145.2	50.6	62.27	, ,	wP wP
14		29.837	83·8 72·8	56.1	27.7	68·1	+ 4·8 - 0·5	61·6 58·1	56·5	8.8	26·0 16·4	1.5	66 73	156.8	47·4 53·9	62·61 62·79		vP, $ssN : wP : vP$, ssN
15	Last Quarter: Apogee	29.717	/2.0	57.2	15.6	02-9	- 0.5		34 1	0.0			{					$\mathbf{wP}: \mathbf{wP}, \mathbf{wN}: \mathbf{wP}$
16	••	29.776	72.3	53.1	19.2	62.0	- I·4	56·7 58·3	52·1	9·9 10·7	18.1	3.5	71 69	140.9	47·8 48·1	63·03 63·02		wP
17 18		29·837 29·820	78·2 80·0	55.0	23.2	64·1	+ 0·7 + 2·2	59.9	55.3	· '	20.2	0.8	71	152.0	42.1	62.99	0.000	wP
		20.555	77.0	60.2	17.0	66.7	+ 3.5	62.0	58.2	8.5	15.8	2.8	74	145.2	56·o	63.12	0.024	wP: wwP:ssN, wP
19 20	Greatest Dec. N.	29·577 29·422	77·2 78·0	61.2	16.8	67.0	+ 3.8	62.4	58.7	8.3	14.3	2.2	75	140.1	56.8	63.31		wwP, sN : wwP : wP
2 I		29.568	76.1	58.4	17.7	66.0	+ 2.8	6o·8	56.6	9.4	16.8	2· I	72	113.2	51.8	63.45	0.000	WI
22		29.518	74.9	54.9	20.0	60.6	- 2.5	57.3	54.4	6.2	13.8	1.3	81	127.2	46.0	63.57		$\mathbf{wP}: \mathbf{wP}, \mathbf{sN}: \mathbf{vP}, \mathbf{vN}$ \mathbf{wP}
23	New	29.516	66.4	51.1	15.3	57.8	- 5·2 - 3·4	53·4 55·0	49°5 51°0	8·3 8·5	15.7	0.8	73	109.4	45·2 47·8	63.42		wP wP
24	• •	29.496	66.9	54.0	12.9	59.5	3 +			1	• •			ĺ		- ,	ĺ .	$\mathbf{wP}: \mathbf{mP}, \mathbf{wN}: \mathbf{mP}$
25		29.457	67.0	52.4		57.3	- 5·4	51.3	45·9 44·5	10.6	18.4	2·6 4·5	69	132.2	45.9	62·74 62·32	0.005	wP: wP, sN: vN, wP
26 27	In Equator	29·445 29·427	65·0 66·2	50·8	14.2	55·1	- 7·4 - 6·1	49·7 51·7	47.4		15.9	1.9		119.0	45.7	62.02	0.016	wP: mP: mP
Ĺ			60.1		12.0		- 1.3	55.0	49.8	11.2	18.1	4.7	67	120.9	45.9	61.79	0.000	$\mathbf{wP}: \mathbf{wP}: \mathbf{mP}$
28 29	Perigee First Quarter	29·546 29·729	69·1	55·2 48·6	13.9	56.5	- 5.8	52.9	49.6	6.9	11.9	1.6	77	91.8	38.7	61.60 60.62	0.000	wP wP
30		29.862	71.3	49.8		58.3		52.9	48·1	10.2	19.9	1.9	70	135.6	40.1			
31		29.854	72.7	48·1	24.6	60.5	- I·7	55.5	51.2	9.3	17.3	I•2	71	121.6	40.1	61.59	0.015	wP
Means		29.698	74.5	53.9	20.6	62.5	- O·2	57.5	53.2	9.2	18.3	2·I	72.2	133.2	46.3	62.16	Sum 1·409	
Number of olumn for Reference.	I	2	3	4	5	6	7	8	9	10	1 I	12	13	14	15	16	17	18

TEMPERATURE OF THE AIR.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29 in 698, being oin 101 lower than the average for the 65 years, 1841-1905.

The highest in the month was 92° 1 on July 1; the lowest in the month was 45° 2 on July 5; and the range was 46° 9.

The mean of all the highest daily readings in the month was $74^{\circ}.5$, being $5^{\circ}.6$ higher than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was $53^{\circ}.6$, being $5^{\circ}.6$ higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was $25^{\circ}.6$, being $5^{\circ}.3$ less than the average for the 65 years, 1841-1905. The mean for the month was $62^{\circ}.5$, being $5^{\circ}.2$ lower than the average for the 65 years, 1841-1905.

	le.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	ЕМОМЕ	TERS.		1							
	Sunshin	izon.		OSLER'S. ROBIN SON'S				CLOUDS AND WEATHER.							
MONTH and DAY, 1914.	ation of 8	above Horizon.	General	Direction.	O	Pressure on the Square Foot.									
	Daily Duration of Sunshine.	Sun a	A.M.	Р.М.	Greatest. Mean of 24 Hourly Measures. Horizontal		Horizontal Move- ment of the Air.	A.M. P.M.							
July 1 2 3	I I · 2	hours. 16.5 16.5 16.5	Calm: NE: Var. Calm: S: SW SW: Calm: Var.	SSW: S SW NNW: NW: N	1.4	0.10	240	o : pcl : 3, cis, cicu, cu 5, cu, cus, n : pcl, cus, s, n : 9, l, shr							
4 5 6	2.0	16·4 16·4 16·4	Calm: SSW: SW	$\begin{array}{c} WSW:SW\\ SW:WSW:Calm\\ WSW:SW:SSW \end{array}$	0.6	0·05 0·02 0·14	157	pcl : pel : 10, 0csltr 10, 0csltr : 10, cr							
7 8 9	4.0	16·4 16·4 16·3	SSW: SW Calm: SSE: S W: WSW	$\begin{array}{c} SW:SSW\\SW:WSW\\WSW:Calm:NE \end{array}$	2 · I	0·13 0·09 0·05	271 228 190	pcl : pcl : 8,cu,cus,sltsh pcl,sltsh: 10, fqr : 10, s, n, r 9 : 9 : 5,cu,cus,h,soha							
10 11 12	8.6	16·3 16·3	Calm: SSE: ESE E: ENE ENE: Calm: WNW	ESE : E E W : Calm : SW	I · 2	1 / 1	190 215 158	pcl : 10 : 5, licl 2, cis, thcl.soha: pcl : pcl							
13 14 15	9.9	16·2 16·2 16·2	$\begin{array}{c} WSW:W\\ Calm:S:SSW\\ W\end{array}$	WSW:SW:Calm SSW:SW NW:SW:W	1.9	0.13	198 224 231	pcl : pcl : 4, cu 8, cu, cus : 8 : 9							
16 17 18		16·1 16·1	W:WSW WSW:SW WSW	W:NNW:WSW SW:WSW:W WSW:SW	I.0	0.05	264 220 264	9 : 9 : 6, cu, n 6, cu : pcl : thcl : pcl : pcl : pcl : pcl : pcl : pcl							
19 20 21	i.6	16·0 16·0 15·9	SW : S : SE E : ESE : SE Calm : N	SSE : S : E SSE : S : Calm SSW	I·7	0.00 0.10	249 200 135	9 : 10, lishs : 9, s, n 9, cu, n, sltsh : 9 : 10							
22 23 24	2.2	15·9 15·8 15·8	Variable N:NW:W W:WNW	W: WSW: W	4.0		375	I : 1 : 5,cis,cus 10, s, n, shr: 10, r : pcl 9 : pcl : 10, cu, s, n 10, cu, s, n,w: 10,sc,n,shr: 10,shr 10, shr : 9 : 9, cu, cus 10, sc, n, w: pcl, shr: pcl							
25 26 27	3.5	15.7	WSW: W: WNW W: WNW WSW: W: WNW	WNW: NW: W WNW: W NW: NNW	3.7		448	pcl : pcl, w : pcl,cu,n,fq-r,w 8, cu, n, w : pcl,cu,n,w: pcl,shr,s 10, ocshs: pcl : 10, cus, s, n 9, cus, s : pcl, shr : 8 9, cu, cus : 9 : 10							
28 29 30		15·6 15·5 15·5	NNW: N: NNE Calm: N: NNE N	N: Calm N: NNE: NE N: NE: S	0.9	0·04 0·06 0·05	I 8 2	10 : 9 : 10, cu, n							
31	4.0	15.4	SSW : S : SE	SSW:S:SE	0.8	0.03	188	thel : thel : 5,s,thel,soha 10,s,soha : 10, s,n,sltr : 10, sltr							
Means	5.88	16.1			••	0.14	246								
Number of Column for Reference.	19	20	21	22	23	24	25	26 27							

The mean Temperature of Evaporation for the month was $57^{\circ} \cdot 5$, being $0^{\circ} \cdot 4$ lower than

the average for the 65 years, 1841-1905.

The mean Temperature of the Dew Point for the month was $53^{\circ} \cdot 2$, being $0^{\circ} \cdot 6$ lower than

The mean Degree of Humidity for the month was 72.2, being 0.6 less than

The mean Elastic Force of Vapour for the month was oin-406, being oin-009 less than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 4grs. 5, being ogr. 1 less than

The mean Weight of a Cubic Foot of Air for the month was 526 grains, being 1 grain less than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 7.0.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.360. The maximum daily amount of Sunshine was 14.2 hours on July 10.

The highest reading of the Solar Radiation Thermometer was 156°.8 on July 14; and the lowest reading of the Terrestial Radiation Thermometer was 32°.9 on July 5.

The Proportions of Wind referred to the cardinal points were N. 5, E. 3, S. 7, W. 13. Three days were calm.

The Greatest Pressure of the Wind in the month was 9:1 lbs. on the square foot on July 25. The mean daily Horizontal Movement of the Air for the month was 246 miles; the greatest daily value was 524 miles on July 25; and the least daily value was 135 miles on July 21.

Rain (0ⁱⁿ·005 or over) fell on 17 days in the month, amounting to 1ⁱⁿ·409 measured by gauge No. 6 partly sunk below the ground; being 0ⁱⁿ·990 less than the average fall for the 65 years, 1841-1905.

		BARO- METER.	Temperature.						Difference between				TEMPERATURE.			e No.		
MONTH and	Phases of the	Hourly rrected to 32°	Of the Air,					Of Evapo- ration.	apo- Dew		the Air Temperature and Dew Point Temperature.			Of Radiation.		Of the Earth	l in Gauge iving surfa re the Gro	Electricity.
DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	of 24	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation = 100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Electricity.
Aug. 1 2 3	Greatest Dec. S.	in. 29·624 29·473 29·607	81.6 73.2 71.8	59·2 55·0 53·3	22·4 18·2 18·5		+ 5.9 + 0.5 - 1.7	62·1 60·0 56·6	57.4 57.8 53.3	0 10·7 4·8 7·1	° 19.0 12.3 15.8	° 2·7 ° 4 ° 2	69 84 78	° 146.5 134.2 136.8	51.0	61·67 61·72 61·99	0.339	$\begin{array}{c} wP:wP:vP,ssN\\ vP,ssN:wP,vN:wN,wP\\ wP \end{array}$
4 5 6	 Full	29·559 29·519 29·654	71·3 68·6 70·9	50·7 51·6 50·1	20·6 17·0 20·8	59·0 58·1 58·2	- 3·I - 4·0 - 4·0	55·4 56·7 55·6	52·2 55·4 53·2	6·8 2·7 5·0	14·4 5·9 14·8	0·4 0·0	78 90 84	130·8 125·7 135·1	41·1 45·1 44·8	61·93 61·83 61·78	0.375	$\begin{array}{c} \text{wP}: \text{wP}, \text{ wN}: \text{wP} \\ \text{wP}: \text{vP}, \text{ssN}: \text{wP}, \text{ssN} \\ \text{wP} \end{array}$
7 8 9	 In Equator	29·769 29·876 29·889	72·2 67·2 71·0	51·8 46·3 60·6	20·4 20·9 10·4	59·8 58·4 64·5	- 2·4 - 3·9 + 2·2	54·4 56·4 62·0	49·7 54·6 59·9	3·8 4·6	20·I 6·2 9·I	1·9 1·8	69 87 85	133·1 94·4 100·9	39.2	61·69 61·30	0.056	$\begin{array}{c} wP:wP:mP\\ . wP:wwP\\ wwP \end{array}$
IO II I2	 Apogee	29·978 30·130 30·127	73·3 75·5 74·7	56·5 48·8 49·4	16·8 26·7 25·3	64·2 62·1 62·3	- 0.3	60·6 55·9 56·5	57·5 50·5 51·5	6·7 11·6 10·8	11·5 23·0 24·9	0·4 1·0 0·8	79 67 69	123·7 113·2 139·1	46·2 41·2 39·9	61·60 61·72 61·82	0.000	wwP:wwP:wP wP wP
13 14 15	Last Quarter	30·020 29·872 29·762	79:4 78:8 68:0	55.4 57.4 56.4	24.0 21.4 11.6	66·0 65·8 60·8	+ 3·5 + 3·3 - 1·6	60·2 60·6 58·5	55·5 56·4 56·6	9·4 4·2	24·0 24·3 10·7	0·2 0·2 0·9	69 72 86	140·4 140·8 96·0	51.1	61·88 61·97 62·10	0.000	$egin{array}{c} & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & \\ & & \\ & \\ & & \\ & \\ & & \\ & \\ & \\ & \\ & & \\ & $
16 17 18	Greatest Dec. N.	29·779 29·913 29·978	75·9 74·4 71·6	55·0 54·0 47·1	20·9 20·4 24·5	64·2 61·6 58·7		57·0 55·6 53·1	51·0 50·4 48·1	13·2 11·2 10·6	26·I 23·9 20·6	1·9 1·8 2·3	62 68 68	144·1 142·4 127·7		62·28 62·25 62·22	0.000	$egin{array}{c} \mathrm{wP} \\ \mathrm{wP} : \mathrm{wP} \\ \mathrm{wP} \end{array}$
19 20 21	··· New	29·945 29·935 29·895	70·9 72·2 77·4	51·1 51·2 51·5	19·8 21·0 25·9	59·2 61·6 62·2		55·0 56·3 57·1	51·2 51·7 52·7	8·0 9·9 9·5	18·3 18·9 20·9	2·9 2·9 1·2	75 71 72	120·4 124·1 128·6	39.1	62·16 62·15 62·12	0.000	$egin{array}{c} \mathbf{wP} \\ \mathbf{wP}, \mathbf{wwN} : \mathbf{wP} : \mathbf{wP} \\ \mathbf{wP} : \mathbf{wP} : \mathbf{vP}, \mathbf{ssN} \\ \end{array}$
22 23 24	In Equator Perigee	29·896 29·876 29·799	77·8 79·2 83·7	51·2 58·3 56·0	26·6 20·9 27·7			58·1 62·3 61·5	53·8 59·7 56·4	9·5 5·8 11·6	22·3 13·8 25·7	o·6 o·6 o·o	72 83 66	139·2 132·8 140·5		62·12 62·13 62·38	0.001	wP wwP wwP:wwP:wP
25 26 27	 	29·762 29·581 29·769	81·3 65·8 69·4	55.2	10.6	65·7 60·0 61·2	,	60·4 58·0 57·6	56·0 56·2 54·4	9·7 3·8 6·8	21·5 8·0 14·6	2·3 1·9 1·3	71 88 79	93.1	48.9	62·60 62·61 62·60	0.140	$egin{array}{c} \mathbf{wP} \\ \mathbf{wP} \\ \mathbf{wP}, \ \mathbf{wN} : \mathbf{wP} : \mathbf{wP} \end{array}$
28 29 30	First Quarter Greatest Dec. S.	30·073 30·125 30·074	76·2 81·9 79·1	54·6 52·1 54·4	21·6 29·8 24·7	63·1 65·2 64·3	1 .	59·3 59·3 61·0	56·1 54·4 58·3	7·0 10·8 6·0	14·9 23·2 17·7	1·8 1·4 0·2	1 - 1	119·1 127·7 125·2	44.6	62·53 62·60 62·41	0.000	$\begin{array}{c} wP \\ wP \\ wP \end{array}$
31		30.112	72.3	58∙0	14.3	64.8	+ 4.9	61.4	58.6	6.2	12.9	1.3	80	111.1	49.8	62.39	0.000	wP
Means		29.851	74.4	53.6	20.8	62.5	+ 0.9	58.2	54.5	8.0	17.4	1.5	75.7	126.5	45.8	62.06	Sum I·I74	
Number of Column for Reference.	I	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29in.851, being oin.068 higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 83°.7 on August 24; the lowest in the month was 46°.3 on August 8; and the range was 37°.4. The mean of all the highest daily readings in the month was 74°.4, being 1°.7 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 53°.6, being 0°.6 higher than the average for the 65 years, 1841–1905. The mean of the daily ranges was 20°.8, being 1°.1 greater than the average for the 65 years, 1841–1905.

The mean for the month was 62°.5, being 0°.9 higher than the average for the 65 years, 1841-1905.

	Je.	1	WIND AS DEDUCED	FROM SELF-REGISTERING AN	EMOME	TERS.							
MONTH and DAY,	dunshi	izon.		OSLER'S.			Robin- son's	CLOUDS AND WEATHER.					
	Daily Duration of Sunshine.	Sun above Horizon.	General 1	Direction.	Pressure on the Square Foot.		Move-						
		Sun a	A.M.	P .M.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Move- ment of the Air.	A.M.	Р.М.				
Aug. 1 2 3	4·4 5·2	hours. 15.4 15.3 15.3	SE:SSW:SW SW:SSW SW	SW:SSE:S SW:WSW SW	6.1	lbs. 0·30 0·34 0·29	327		pcl, cus, s, soha: IO, OCr : IO, r, hy-sh 8, ci. cis, cus, : pcl, hysh, hl : I 7, cis, cu, soha: pcl, ci, cis, cu : pcl				
4 5 6	1.1	15·2 15·2 15·1	SW: WSW SW: SSE: S W: WSW	WSW : SW : SSW WSW : W W : WSW : SW	2.2	0·10 0·06 0·35		pcl : pcl : s, cu, n, tqhyshs 9, sltsh : 10 : 9, shsr 1 : pcl : pcl, s, n	8,eu,eus,n: pel : pel ro,s,n,fqshs,l,t: pel, ocshs: pel ro, s, n, r : 9, r : 9				
7 8 9	0.2	15·1 15·0 15·0	WSW SW:SSW SSW:SW	W:NW:WSW SSW:SW SW	4.0	0.29	229 356 386	pcl : 9 : p-cl, ci, ci-s, s, so-ha pcl, luha : 9 : 10, sltr 10, sltr : 10	8,ci,cu,cus: pcl : 1 10, fqr : 10 : 10, ocsltr 10 : pcl : pcl				
		14·9 14·9 14·8	SW: WSW W: Calm: WSW Calm: ENE: SE	$egin{array}{ll} W:WNW \ N:NE:SE \ ESE:E \end{array}$	0.1	0·04 0·00 0·20	219 131 235	9 : 9 : 10, s, n 1, hyd : 1 : 0, h 0, m, hyd : 1, licl : 0	o, h : pcl : licl, d : o, d : o, hyd				
	0.0 11.1 10.0		E : ESE ENE : E Calm : E	ESE : E E E : ENE : NE	4.5	0·23 0·31 0·13	27 I	pcl,licl: 9, m : 1, ci, licl pcl, d : pcl : 1, cis, cu 9 : 10 : 10, s, n	o : o, hyd o : o : pel 10, s, n, r : 10, r : pel				
16 17 18		14·6 14·5 14·4	NE : ENE : E NNE : N Calm : NE	NE : ENE : NNE N : NNE : NE NNE : NE : Calm	1.9	0·39 0·15 0·01	368 262 162	9 : 9 : 5, cu, cus pcl : 9 : 6, cis, cu pcl : pcl : 3, ci, cu, cus	4, cu, w : pcl, cu : 0 8, cu, cus : pcl : 0 5, cu, cus : pcl : pcl				
19 20 21	3.5	14·4 14·3 14·3	Calm Calm Calm : WSW	NE: ESE: Calm Calm: Var. W:S:SW	0.1	0.00 0.00 0.02	111 82 212	thcl : 9, sltsh,: 8, cu, s, h pcl, h : pcl, h : 7, cu, cus, s, soha pcl, m : pcl : 5, cu, thcl, soha	8, cu, s : pel, cu, s, d : pcl, d 10, s, soha : 10, s : 10 5, cu, cus, soha : pcl : 0				
22 23 24	3.6	14·2 14·1 14·1	Calm: WSW: W SSW: SW Calm: S: SSW	W:SW SW:SSW S:Calm	1.7	0·07 0·12 0·06	220 259 180	I : 0 : 3, cu, thcl 9, sltsh : 10 : 10, s, n I : 1 : 8, ci, cu, s	8, cu, s, soha: 9,soha,sltr: 10. 0cr 8, cu, cus: 3 : 1 pcl, cu, cus: pcl,sltsh: pcl				
25 26 27		14·0 13·9 13·9	$\begin{array}{c} {\rm Calm}: {\rm Var.} \\ {\rm SSW}: {\rm S} \\ {\rm W}: {\rm NNW} \end{array}$	W:WSW:SW SSW:SW:W N	1.7	0.10	199 267 226		6, cu, h : 2, d : pcl ro, sc, n, ocsltr : 9, cu, s, n : 9 9, cu, s, n, sltr : 10 : 9				
28 29 30	11.3	13·8 13·8 13·7	$egin{array}{c} N \\ Calm \\ WSW: Calm: W \end{array}$	Calm : SSE W : Calm W : N : Calm	0.0	0.00		pcl : 9 : 6, cu, cus, s, h 1, m : 0, h, m : 0, h pcl : 10, sltm : 5, s, sltm	7, cu,cus,n: 9 : thcl, o : o, hyd o : o				
31	0.7	13.6	NE : Calm	NE : E	0.1	0.00	152	pcl, m : pcl, m : 9, s, n	10, s, n : 9, s, n : 8				
Means	5.9	14.5	••			0.13	230						
Number of Column for Reference.	19	20	2 I	22	23	24	25	26	27				

The mean Temperature of Evaporation for the month was $58^{\circ} \cdot 2$, being $0^{\circ} \cdot 7$ higher than

the average for the 65 years, 1841-1905.

The mean Temperature of the Dew Point for the month was 54°.5, being 0°.5 higher than

The mean Degree of Humidity for the month was 75.7, being 0.6 less than

The mean Elastic Force of Vapour for the month was oln-425, being oln-007 greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 4grs.7, being ogr.1 greater than

The mean $Weight\ of\ a\ Cubic\ Foot\ of\ Air\ for\ the\ month\ was\ 528\ grains,\ being\ the\ same\ as$

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 5.9.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.409. The maximum daily amount of Sunshine was 13.2 hours on August 12.

The highest reading of the Solar Radiation Thermometer was 146° 5 on August 1; and the lowest reading of the Terrestial Radiation Thermometer was 36° 2 on August 18.

The Proportions of Wind referred to the cardinal points were N. 3, E. 5, S. 7, W. 10. Six days were calm.

The Greatest Pressure of the Wind in the month was 6.1 lbs. on the square foot on August 2. The mean daily Horizontal Movement of the Air for the month was 230 miles; the greatest daily value was 386 miles on August 9; and the least daily value was 82 miles on August 20.

Rain (oin oo5 or over) fell on 11 days in the month, amounting to 1 in 174, as measured by gauge No. 6 partly sunk below the ground; being 1 in 170 less than the average fall for the 65 years, 1841-1905.

		BARO- METER.			ТЕ	MPERATU	JRE.			Diffe	rence bet ir Tempe	ween	Δ.	Ti	EMPERATU	RE.	e No. face is round.	•
MONTH	Phases	Fourly rected to 32°		(Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	ane	d Dew Po emperatu	$_{ m int}$	Humidity	Of Rac	liation.	Of the Earth	in Gaug iving surf ve the Gr	Electricity.
and DAY, 1914.	of the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation=100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
		in.	0	0	0	0	0	0	0	0	0	0		. 0	0	0	in.	$\mathbf{w}\mathbf{w}\mathbf{P}:\mathbf{w}\mathbf{P}:\mathbf{w}\mathbf{P}$
Sept. 1		30·177 30·121 30·013	74·2 75·9 82·0	53·6 49·1 45·9	20·6 26·8 36·1	64·8 62·1 62·6	+ 5.0 + 2.4 + 3.0	59·3 57·1 58·2	54·8 52·8 54·5	9·3 8·1	25·6 21·7 23·2	2·8 0·8 0·2	71 72 75	133·3 129·2 134·9	43·8 38·0 39·0	62·50 62·62 62·58	0.000	wr:wr:wr wP wP
4 5	Full In Equator	29·922 29·962	75·0 70·0	50·4 52·5	24·6 17·5	61.8	+ 2.1	57·7 56·0		10.5	18.8	1·2 5·1	77 69	137.7	40·3 41·6 35·9	62·51 62·38 62·40	0.000	wP wP wP
6 7		29·998 29·878	75·9 80·6	47.0	32.3	63·4 67·0	+ 1·5 + 4·4 + 8·2	55·0 59·5 61·8	56.3	7·1 9·4	19·9 19·7	1·4 1·0 1·3	78 72	130.7	39·8 43·1	62·31 62·32	0.000	$_{\rm wP}^{\rm wP}$
8 9	Apogee	29·696 29·675	81.0 80.0	23.9	25.8	64.4	1 '	58.6	57.6		21.8	1.7	69	140.1	41.6	62.43		wP: wP: vP, vN
10 11 12	Last Quarter	29·728 29·594 29·601	74·6 66·2 62·0	58·6 51·6 48·5	16·0 14·6 13·5	64·6 58·7 54·2	+ 6·2 + 0·6 - 3·8	60·7 55·3 50·9	57·5 52·3 47·7	7·1 6·4 6·5	16·0 15·4 15·3	2·3 2·1	78 79 78	123·9 99·1 108·6	47·9 44·5 42·2	62·49 62·42 62·44	0.251	$\begin{array}{c} wP \\ wP: vN, wP: mP \\ wP: wP, wN: wP \end{array}$
13 14	Greatest Dec. N.	29·590 29·461	65·6 72·5	49·3 53·6 48·8	16.3	55·7 61·6 56·0	- 2·I + 3·9 - I·6	50·5 57·4	45·6 53·8 45·0	10·1 7·8	17·2 14·9	1·2 0·6 3·0	69 76 67	115·6 120·7 120·1	43.6 47.2 41.7	62·01 61·67 61·35	0.104	$egin{array}{c} \mathbf{wP} \\ \mathbf{wwP} : \mathbf{wP} \\ \mathbf{wP} \end{array}$
15 16 17		29·699 29·765 29·482	66·1 68·5 71·1	48.6	17·3 19·9 17·1	56·8 58·4	- 0·7 + 1·2	50·3 52·3 54·2	48.2	8·6 8·o	18·8 20·6	2·I	73 75	125.0	41·8 47·1	61·12 60·80 60·62	0.000	$\begin{array}{c} \text{wP} \\ \text{wP} \\ \text{wP} : \text{mP} : \text{mP} \end{array}$
18	In Equator : New	29·617 29·695	63·5 60·2	52·0 47·6	11.5	55·8 52·8	- 1·1 - 3·7	49.9	44.4	I I·2	16.4	5·1	66	107.9	46·0 39·1	60·02 60·39	0.000	$\mathbf{wP}: \mathbf{mP}: \mathbf{mP}$ $\mathbf{wP}: \mathbf{mP}: \mathbf{mP}$ $\mathbf{wP}, \mathbf{vN}: \mathbf{ssP}, \mathbf{ssN}: \mathbf{mP}$
20 21	 Perigee	29·836 30·107	55·7 59·6	45·3 44·2	10·4 15·4	49·2 50·7	- 7·0 - 5·2	45·7 45·7	42.0	7·2	18.8	2·6 3·9	76 68	106.3	38·0	59.69		wP: mP: mP
22 23 24	· · · · · · · · · · · · · · · · · · ·	30·184 30·216 30·184	61·5 67·1 70·0	37·0 35·3 41·7	24·5 31·8 28·3	48·8 50·1 53·0	$ \begin{array}{rrrr} - & 6.8 \\ - & 5.3 \\ - & 2.3 \end{array} $	44·7 46·6 49·5	40·3 42·9 46·0	8·5 7·2 7·0	17·7 17·9 20·5	1·4 0·7 0·0	72 77 77	107·6 124·0 120·4	28·5 27·4 29·2	59·18 58·72 58·40	0.000	$\begin{array}{c} \mathbf{w}\mathbf{P}:\mathbf{v}\mathbf{P}:\mathbf{v}\mathbf{P}\\ \mathbf{w}\mathbf{P}\\ \mathbf{w}\mathbf{P} \end{array}$
25 26	Greatest Dec. S: First Quarter	30·080 30·063 30·167	69·7 73·9 66·4	41.6 40.1 50.2	28·1 33·8 16·2	56.4	- I·I + I·2 + I·9	49·3 51·2 52·2	44·6 46·4 47·8	9·5 10·0	23·2 21·5 16·3	0·0 0·4 3·5	69	118·0 120·6 100·6	29·8 30·5 42·0	58·10 57·96 57·76	0.000	$\begin{array}{c} wP \\ wP \\ wP \end{array}$
27 28 29		29·951 30·147	63·7 59·0	49.3	14.4	56·2 50·9	+ 1·3 - 3·8 - 8·9	52·3 45·6 42·6	48.6 40.2 39.2	7·6	11·2 17·8 11·9	1·9 4·5 0·7	76 67 79	91·7 106·0 75·5	43·2 30·8 23·9	57·71 57·62 57·49	0.000	$\begin{array}{l} wwP:wP:wP\\ wP:mP:mP\\ wP:vP:wP\end{array}$
Means		29.894		33·8 47·6	21.3	45·5 57·2	- 0.1	52.6	48.3		18.5	1.9		119.5	38.8	60.67	Sum	
Number of column for Reference.	I	2	3	4	5	6	7	8	9	10	11	I 2	13	14	15	16	17	18

The results apply to the civil day.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-Bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers. The mean reading of the Barometer for the month was 29in.894, being oin.083 higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 82° to on September 3; the lowest in the month was 33° to 8 on September 30; and the range was 48° to 1. The mean of all the highest daily readings in the month was 68° to, being 1° to higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 47° to, being 1° to lower than the average for the 65 years, 1841–1905.

The mean of the daily ranges was 21°·3, being 3°·1 greater than the average for the 65 years, 1841–1905. The mean for the month was 57°·2, being 0°·1 lower than the average for the 65 years, 1841–1905.

	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	темоме:	TERS.		
	Sunshi	izon.		OSLER'S.			Robin- son's	CLOUDS AND WEATHER.
MONTH and DAY, 1914.	ation of 8	Sun above Horizon.	General I	Direction.	on	ssure the e Foot.	Move- e Air.	·
-9-4	Daily Duration of Sunshine.	Sun at	A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Move- ment of the Air.	А.М. Р. М .
Sept. 1 2 3	9·9	hours. 13.6 13.5	NE : E : ESE Calm : SE Calm : ENE	E : ESE ESE : Calm Calm : SE	0.8	lbs. 0·14 0·03	miles. 242 134 89	
4 5 6	4.4	13·4 13·3 13·2	Calm: ENE: E ENE: E ENE: Calm: ESE	ESE : E : ENE E : ENE E	2.5	0·22 0·29 0·09	315	o : o, sltm : 2, cu 2, cis, cu : cis, d : pol,ois,luha,d 5, cu, cus : 1, thcl : 1 4, cis : o : o, hyd
7 8 9	7.3	13·1 13·1	Calm : ENE E : SSW Calm : S	$\begin{array}{c} ESE:E\\ SSW:S:Calm\\ SSW:SE \end{array}$	0.9	0·03 0·04 0·05	140 177 143	o : m : I, m thcl, luha : pcl : 8, ci, cis, cu pcl : 9 : 7, ci, cu 2, cis : thcl : pcl 6, ci, cis, cicu : 2, ci, cicu : pcl 80ha 4, ci, cis, cicu : 9, shr : 9, shr
10 11 12	2.0	13·0 12·9 12·9	ESE : SE : SSE SW WSW : W	S:SSW W:WNW SW:Var.	4.9	0·03 0·39 0·28	183 386 347	pcl : pcl : 9,cu,cus,n 9, sltr : 10 : 10, n,fqr,w pcl : pcl : 9,cu,cus, w : pcl : 9 9,cu,cus,w : pcl, w : 1 10, r : 10, r
13 14 15	5.1	12·8 12·7 12·7	WNW:W SW:WSW WSW	W: WSW: SW WSW SW	10.7	0·73 1·10 0·27	471 569 374	pcl, sltsh : pcl, w : 7, cu, cus, w 9, ocr : 10, fqr : 9, sltsh, w pcl, w : pcl : 6, ci, cu, soha 5, ci, cu : pcl : pcl : pcl
16 17 18	4.6	12·6 12·5 12·5	WSW SW W:NW	WSW:SW SW:WNW:W NW:WNW	13.5	0·20 1·10 0·65	343 586 464	pcl : pcl : 5,cis,cu,s,soha pcl : pcl : pcl pcl : 10, sc, s, r, w
19 20 21	2.8	I 2·4 I 2·4 I 2·3	NNW: N W: NW: NNE N	N:NW:W NNE:N N:NNE	3.9	0·49 0·35 0·23	395 353 286	9 : 9 : 5, cu, w 9, fqr : pcl : 10, n, fqr pcl : pcl : 5, cu, thcl 5, cu, cus, n : pcl : pcl pcl : pcl : 5, cu, thcl 5, cu, cus : pcl : 9
22 23 24	6.6	I 2·2 I 2·I I 2·I	N: Calm: NE Calm: SSE Calm: ENE	Calm S : Calm ESE : SE	0.5	o·oo o·oo o·o3	100 103 144	pcl : I : 1, cu, thcl, h 1, cu, thcl, h: thcl, m : 0, m, d pcl, cu, cus: pcl : 0, hyd 1, cu : 0 : 0. d
	7.2	12·0 12·0 11·9	Calm: SSE Calm: W N: NNW	SSE:S:Calm WSW:NNW:N NW:W:WSW	1.0	0·03 0·07 0·02	206	o, m : o, f : 2, ci 6, ci, cis : 10, s : pcl
28 29 30	9.6	11·8 11·8 11·7	WSW: W: WNW N: NNE Calm	W:NNW:N NNE:NE:Calm Calm:SW	2.2	0·55 0·20 0·00	249	I : pcl : 9, cus, s 10, s, n : 9, s, n : thcl pcl : 1, cu 1, cu : 0, d o, m, h, hofr: 0, m : 3, thcl, sltf. 3, thcl, sltf. 0
Means	6.8	12.6				0.25	270	
Number of Column for Reference.	19	20	2 I	22	23	24	25	26 .

The mean Temperature of Evaporation for the month was 52°.6, being 1°.5 lower than

The mean Temperature of the Dew Point for the month was 48°-3, being 2°-9 lower than

the average for the 65 years, 1841-1905.

The mean Degree of Humidity for the month was 72.7, being 7.5 less than

The mean Elastic Force of Vapour for the month was oin.339, being oin.038 less than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 3grs.8, being ogr.4 less than

The mean Weight of a Cubic Foot of Air for the month was 535 grains, being 2 grains greater than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 4.6.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.537. The maximum daily amount of Sunshine was 11·1 hours on September 6. The highest reading of the Solar Radiation Thermometer was 153°·1 on September 6; and the lowest reading of the Terrestial Radiation Thermometer was 23°·9 on September 30. The Proportions of Wind referred to the cardinal points were N. 5, E. 6, S. 5, W. 8. Six days were calm.

The Greatest Pressure of the Wind in the month was 13.5 lbs. on the square foot on September 17. The mean daily Horizontal Movement of the Air for the month was 270 miles; the greatest daily value was 586 miles on September 17; and the least daily value was 89 miles on September 3.

Rain (0^{ln}·005 or over) fell on 6 days in the month, amounting to 0^{ln}·732, as measured by gauge No. 6 partly sunk below the ground: being 1^{ln}·416 less than the average fall for the 65 years, 1841-1905.

		Baro- Meter.			ТЕ	MPERATU	JRE.				rence bet		1	T	EMPERATU	JRE.	e No. ace is ound.	
MONTH and	Phases of	Hourly reated to 32°		-	Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	and	ir Tempe 1 Dew Po nperature	int	Humidity on = 100).	Of Rac	liation.	Of the Earth	in Gauga iving surfa re the Gro	Electricity.
DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Мези.	Greatest.	Least.	Degree of Humidity (Saturation=100).	Highest in Sun's Rays.	Lowest on the Grass.	3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	,
		in.	0	0	0	0	۰	0	0	0	٥	0		0	° 28·7	° 57·22	in.	wP:wP:vP
Oct. I		30·062 30·091	68·3 59·8	39·9 48·0	28·4 11·8	53·3 53·3	- 0.8 + 0.2	48·7 51·9	44·I 50·0	9·2	17·8 6·7	0.0	7 I 87	71·6	38.0	56.79	0.000	wP
3	In Equator	30.081	68.6	50.7	17.9	58.2	+ 4.9	55.0	52.1	6.1	14.4	0.4	80	114.2	42.5	56.78	0.000	wwP: wP: wP
4	Full	30.158	61.9	47.7	14.2		l	50.5	46.0	9.2	16.4	1.8	72	93.6	38.2	56·74 56·88	0.000	$^{ m wP}_{ m wP}$
5 6	Apogee	30·178 30·082	63·0 59·6	41·0 50·3	22·0 9·3	51·8 54·4	+ 1.9	48·6 51·2	45·4 48·1	6·4 6·3	12.8	0·0 2·6	79 79	103·8 85·5	43.4	56.80	0.000	wP
	1 0-	30.154	62.0	40.8	21.2	51.4	- 0.9	46.3	41.0	10.4	17.6	3.5	68	120.5	31.0	56.79	0.000	wP
7 8		30.140	63.4	36∙0	27.4	48.8	- 3.2	45.1	41.1	7.7	16.7	0.5	75	96.4	25.7	56·30 56·52	0.000	$egin{array}{ll} \mathbf{w}\mathbf{P}:\mathbf{w}\mathbf{P}:\mathbf{v}\mathbf{P} \\ \mathbf{w}\mathbf{P}:\mathbf{m}\mathbf{P}:\mathbf{w}\mathbf{P} \end{array}$
9		30.060	63.1	43.0	20.1	52.4	+ 0.8	48.9	45.3	7.1	14.7	1.3	77	96.1	33.2]	
10	Greatest Dec. N.	29.989	60.4	50.2	10.2	54.5		51·5 48·0	48.6	5.9	8·7 10·6	1·6 0·5	80 83	95.2	42.6	56·30 56·20	0.000	$egin{array}{c} { m wP} \ { m wP}: { m wP} \end{array}$
I I I 2	Last Quarter	29·941 29·795	91.0	39.0	20.1	50·5 46·5	- 0·4 - 4·1	44.3	45·4 41·8	5·1 4·7	14.9	0.0	85	96.5	25.1	56.10		wP, wwN : wP : wP
12	-	29.557	54.0	40.2	13.8	48.8	- 1.5	47.6	46.3	2.5	6.8	0.2	92	79.1	27.9	55.97	0.043	wP, $wwN : wP : wP$
13		29.664	52.9	49.4	3.2	51.4	+ 1.3	50.8	50.2	1.2	3.3	0.0	96	56·2 93·8	45.0	55·72 55·62	0.078	$egin{array}{ll} \mathbf{wP}: \mathbf{wP}, \ \mathbf{wN}: \mathbf{wP} \\ \mathbf{wP} \end{array}$
15		29.871	60.6	50.2	10.4	54.3	+ 4.4	53.3	52.3	2.0	6.2	0.0	93		44.9			
16		29.972	60.2	51.4	8.8	54.1	+ 4·3 + 2·8	52.0	49·9 46·2	4·2 6·2	9.5	3.7	85 80	87·3 79·9	47·2 43·0	55.60	0.000	$egin{array}{c} { m wP} \\ { m wP} \end{array}$
17 18	In Equator	30·007 30·022	56·1 57·8	49·6 46·3	6·5 11·5	51·5	$\begin{array}{c c} + & 2.8 \\ + & 2.2 \end{array}$	49·3 48·2	44.8	6.7	13.5	3.2	78	87.3	35.2	55.59	0.000	wP: wP: mP
19	New : Perigee	30.096	58.3	44.4	13.9	50.5	+ 1.4	47.3	43.9	6.6	13.5	1.1	79	90.0	36.2	55.47	0.000	wP: wP: mP
20		30.020	55.6	47.0	8.6	50.7	+ 1.9	49.1	47.4	3.3	9.9	2.5	89	71.3	39.2	55.30	0.001	$egin{array}{c} { m wP} \\ { m wP} \end{array}$
2 I		29.755	57.9	42.2	15.7	48.3	- 0.3	47.1	45.8	2.5	8.9	0.2	92	89.0	30.4	55.14		
22	• •	29.539	58.9	42.2	16.7	50.7	+ .2.4	49.0	47.2	3.5	9·6 8·1	0·6 2·0	88 87	94·5 75·9	30·4 42·9	55.07 54.00	0.014	$egin{aligned} \mathbf{w}\mathbf{P} : \mathbf{w}\mathbf{P}, \ \mathbf{w}\mathbf{N} \\ \mathbf{w}\mathbf{P} \end{aligned}$
23	Greatest Dec. S.	29·582 29·659	58·1 62·7	48·2 48·4	9·9 14·3	53·6 53·9	+ 5·5 + 6·o	53.1	49·7 52·3	1.6 3.9	7.7	0.0	94	95.0	40·I	54.89	0.114	wP
	First Quarter	29.687	62.1	52.0	0.2	56.0	+ 8.3	54.8	53.7	2.3	6.2	0.0	92	81.0	43.6	54.90	0.277	wP : wwP : wwP, wwN
25 26	···	29.690	61.0	46.4	14.6	54.0	+ 6.1	50.1	46.3	7.7	16.3	2.3	75	94·8 86·6	37.3	55.01 55.02	0.000	$egin{array}{c} \mathrm{wP} \\ \mathrm{wP} : \mathrm{wP} : \mathrm{mP} \end{array}$
27		29.592	57.1	42.7	14.4	49.1	+ 1.6	46.2	43.1	6.0	14.7	0.9						
28		29.424	54.1	34.7	19.4	44.1	- 3.3		39.5	4·6 3·2	12.1	0.0	83	84.5	26·5 28·9	54·79 54·33	0.000	${ m wP} \ { m wP}: { m wP}, { m vN}$
29 30	 In Equator	29·276 29·238	55·0 54·2	40·I 44·I	14·9	46.2	- I·I + 2·0	44·7 48·1	43.0		7:3	0.2	92	87.9	38.5	54.00	0.258	wN, wP : wP : wwP
31		29.194	53.3	44.1	9.2	49.4	+ 2.3	48.0	46.5	2.9	8.4	0.8	90	81.1	38.6	53.70	0.003	wwP : wP : wP
Means		29.825	59.4	44.7	14.6	51.6	+ 1.6	49.1	46.6	5.0	11.1	1.0	83.6	90.4	36.0	55.68	Sum 0.957	
Number of Column for Reference.	I	2	3	4	5	6	7	8	9	10	11	I 2	13	14	15	16	17	18

The results apply to the civil day.

TEMPERATURE OF THE AIR.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables.

The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29in.825, being 0in.104 higher than the average for the 65 years, 1841-1905.

The highest in the month was 68°6 on October 3; the lowest in the month was 34°7 on October 28; and the range was 33°9. The mean of all the highest daily readings in the month was 59°4, being 1°9 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 44°7, being 1°5 higher than the average for the 65 years, 1841–1905. The mean of the daily ranges was 14°6, being 0°3 greater than the average for the 65 years, 1841–1905. The mean for the month was 51°6, being 1°6 higher than the average for the 65 years, 1841–1905.

1			WIND AS DEDUCED	FROM SELF-REGISTERING AN	ЕМОМЕ:	rers.			
	nshine	on.		OSLER'S.			Robin- son's	CLOU	IDS AND WEATHER.
MONTH and DAY, 1914.	Daily Duration of Sunshine.	Sun above Horizon.	General :	Direction.	on Squar	ssure the e Foot.	Move-		
	Daily Dur	Sun a	A.M.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Move- ment of the Air.	A.M	Р.М.
Oct. 1 2 3	ó·0	hours. 11.6 11.6	SW: WSW: W WNW: Calm: N SW: WSW: W	W: WNW: NW N: Calm: SW W: WSW: W	0.3	lbs. 0·10 0·00 0·23	144		: pcl, s : pcl, s
4 5 6	1.3	11·4 11·4 11·3	WNW: NW: NNW Calm: WSW: W NW: W: NNE	NNW: W W: WNW: NW NNE: NE	1.3	0·20 0·10 0·14		9 : pcl : 9, cus, s pcl, luha: thcl : 4,s,h,soha licl : 9 : 10, s, n	9, cu, cus : pcl : thcl, luha pcl, s, soha: pcl, cu : pcl 10, s, n : 10, n : 9
7 8 9	7.0	I I · 2 I I · 1	ENE : SE Calm Calm : WSW	Var. : ESE : Calm WSW : Calm : SSW NNW : N	0.1	0.00 0.00 0.03	116	pcl : pcl : 7, cu pcl, luha: sltf : 3, cu, h 9 : 10, m : 9,cu,cus,s	4, cu : thcl : pcl, luha 2, cu, h : thcl,h,hyd: licl, hyd 10, s : 10 : 9
10 11 12	1.2	10·9 11·0	N : NNE ENE : Calm Calm : SSE	NNE: NE: ESE ESE: SE: Calm Calm: SSE	0.5	0.02 0.01 0.00	113	9 : pcl, h : 8, cu, s, n	8, cus : 9 : 9 10, s, n : pcl, hyd : 0, hyd 9, cu, n : 1
13 14 15	0.0	10·9 10·8 10·7	E : ENE N : NNE : NE ENE	Calm N E: ENE: NE ESE: ENE: NE	0.1	0.00 0.00 0.02		9 : 10,0csltr: 10, 0csltr	
16 17 18	0.0	10·7 10·6 10·5	NE NE NNE : NE	NE NE : NNE NE : NNE	1.6	0·13 0·24 0·14	305		8, cu, cus : 10 : 10 9, cus, s : 9 : pcl, d 9, cus, s : pcl : pcl, d
19 20 21	0.0	10·5 10·4 10·3	N: NNE: NE WE NE: NNE: Calm	NE ENE : NE NE : SE : S	I · 2	o·o8 o·o6 o·oo	220	pcl : pcl : 7, cus, s, n 9 : 10 : 10, s, n pcl,sltr,sltf: pcl, sltf: 7, cu, cus	8, cus,s,n : 9, cus, n : 9 10, cu, cus : 10, lishs : pcl, d, sltr 9, s, n : pcl : pcl
22 23 24	0· I	10·3 10·1	SSE : S SW : WSW Calm : SE : S	SW:SSW WNW:W:WSW SE:SSE:Calm	1.7	0.13		9 : 10 : 9, cus, s 9, ocr : 10, ocr : 10, s,n,sltr 10, ocr : 10 : 9, cus,s,n	9, shr : 9, r : 9, ocr 9, cu,cus,n : 10 9, cus,s,n,shr: pcl : pcl
25 26 27	6.5	10·0 10·0		SW:SSW:W NW:WNW:W WNW:W:WSW	3.3		263 364 275		10,s,n,mr : 10, cr : pcl, r 5, cu, cus : pcl : pcl 2, cicu, cu: 1, h, luha : 1, h, luha
28 29 30	4·8 4·5 3·0	9·9 9·8 9·8	WSW ESE : E NNE : SE : ESE	SW : Calm : SSE ENE : NE : NNE E : ENE : NE	4.0		164 308 373	1, h : 1, hofr : 6, cis, cu, soha pcl, sltr: pcl : 4, cu, cus 10, fqr : pcl : 5, cu	6, cu, cus: 7 : pcl 9, cus, n, ocshs: 9 : 10, r 10, s, n, shr : 10, sltr : 10, sltr
31	0.4	9.7	$\mathbf{E}:\mathbf{SE}:\mathbf{S}$	SE : ESE	2.0	0.18	242	9 : 10, ocr : 10, s, n	9, cu, cus : thcl : pcl, luha
Means	2.2	10.7			••	0.11	221		
Number of Column for Reference	19	20	21	22	23	24	25	26	27

The mean Temperature of Evaporation for the month was 49°·1, being 1°·2 higher than

the average for the 65 years, 1841-1905.

The mean Temperature of the Dew Point for the month was 46° -6, being 0° -9 higher than

The mean Degree of Humidity for the month was 83.6, being 1.4 less than

The mean Elastic Force of Vapour for the month was oin 318, being oin oil greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 3grs.6, being ogr.1 greater than

The mean Weight of a Cubic Foot of Air for the month was 540 grains, being the same as

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 7.4.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.203. The maximum daily amount of Sunshine was 9.2 hours on October 1.

The highest reading of the Solar Radiation Thermometer was 120° 5 on October 7; and the lowest reading of the Terrestial Radiation Thermometer was 25° 1 on October 12.

The Proportions of Wind referred to the cardinal points were N. 8, E. 7, S. 4, W. 7. Five days were calm.

The Greatest Pressure of the Wind in the month was 4.0 lbs. on the square foot on October 29 and 30. The mean daily Horizontal Movement of the Air for the month was 221 miles; the greatest daily value was 373 miles on October 30; and the least daily value was 108 miles on October 12.

Rain (olin-005 or over) fell on 10 days in the month, amounting to olin-957, as measured by gauge No. 6 partly sunk below the ground; being 1 in-825 less than the average fall for the 65 years, 1841-1905.

		BARO- METER.			TE	MPERATU	JRE.				rence bet ir Tempe			Ti	EMPERATU	JRE.	e No. ace is	
MONTH and	Phases of	Hourly rrected to 32°			Of the Ai	r.		Of Evapo- ration.	Of the Dew Point.	an	l Dew Po	int	Humidit	Of Rac	liation.	Of the Earth	in Gaug lying surf re the Gr	Electricity.
and DAY, 1914.	the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation=100.)	Highest in Sun's Rays.		3 ft. 2 in. below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
Nov. 1 2 3	Apogee : Full	in. 29·236 29·284 29·497	59·0 55·7 60·1	6.2	° 13·2 8·8 13·9	50·2 51·2 52·7	+ 3·2 + 4·4 + 6·1	6 48·3 49·3 50·7	6.3 47.3 48.7	3.9 4.0	0 13·2 10·4	0 2·1 1·3 0·0	87 87 87	88·6 66·9 99·0	37.0 33.0	53·58 53·48 53·38	0.032	wwP : wP wwP : wN, wP : wP wP : mN, wP : wP
4 5 6	Greatest Dec. N.	29·579 29·475 29·663	53.6 61.2 61.5	41·1 50·3 48·0	12.5	48·5 54·7 52·9	+ 8.6	48·5 53·1 51·4	48·5 51·5 49·9	0·0 3·2 3·0	1.0	0·0 0·2 0·0	100 89 90	66·4 94·2 90·2	29·0 41·7 40·6	53·28 53·21 53·28	0.081	wP: wP: wwP, wwN wwP: wwP: wP, wN wP: wP: vP, vN
7 8 9		29·921 30·039 30·042	53·4 56·0 58·2	41·2 39·6 49·1	16·4 9·1	47·3 47·8 52·4	+ 1.9 + 2.8 + 7.8	45·8 46·2 50·1	44.4	3·4 4·6	9·0 8·5 10·0	0.0 0.0 2.1	90 89 84	70·1 77·2 79·7	34·0 30·1 42·0	53.15	0.000 0.000	wP wP wP
10 I I I 2	Last Quarter	30·015 29·725 29·741	58·0 59·0 48·8	49·1 42·9 40·2	8·6 8·6	53·0 50·9 44·0		50·8 48·4 41·0	48·6 45·8 37·5	4·4 5·1 6·5	10·4 10·6 10·9	1·4 3·4	85 83 77	73·6 60·0 60·6	36·8 33·0	52·37 52·89 52·80		$egin{array}{c} \mathbf{wP} \\ \mathbf{wP}: \mathbf{wP}: \mathbf{wN}, \mathbf{wP} \\ \mathbf{mP}: \mathbf{mP}, \mathbf{mN}: \mathbf{mP} \end{array}$
13 14 15	In Equator	29·421 29·422 29·115	55.7 48.1 53.7	41·4 29·0 30·0	44·3 19·1 23·7	48·9 39·3 41·9		46·5 35·8 40·2	44.0 31.2 38.1	4·9 8·1 3·8	11·5 16·1 8·1	2·2 2·5 0·9	83 74 87	58·3 64·7 75·9	34·0 24·2 25·6		0·079 0·000 0·209	
16 17 18	Perigee : New	29·384 30·113 30·360	48·1 43·0 46·0	37·0 32·2 31·4	11.1	43·2 37·7 37·7	- 4.9	41·1 35·9 35·4	38.6 33.5 32.3	4·6 4·2 5·4	9·8 9·5 10·9	0·2 0·8 0·0	83 85 81	74·6 62·1 59·9	30·0 25·5 24·I		0·350 0·000 0·000	${ m vN,\ wP:wP:mP} \ { m mP} \ { m mP}$
19 20 21	Greatest Dec. S.	30·104 30·102 29·879	44·3 39·0 38·5	28·9 33·0 32·I	15·4 6·0 6·4	34·6 35·9 35·9	-6.3	34·2 33·1 33·4	33·5 28·9 29·5	1·1 7·0 6·4	2·3 11·5 9·2	0·0 0·0 2·6	96 75 78	44·9 68·8 52·2	26·0 27·1 26·3	49.17	o·183 o·000	$\begin{array}{c} \mathrm{mP} : \mathrm{vP}, \mathrm{vN} : \mathrm{wP} \\ \mathrm{wP} : \mathrm{wP} : \mathrm{sP} \\ \mathrm{mP} \end{array}$
22 23 24	··· First Quarter	29·625 29·642 29·693	40·1 38·5 44·0	34·2 35·9 33·6	5·9 2·6 10·4	37·3 37·5 38·8	- 4.8 - 4.5 - 3.2	34·8 35·5 36·5	31·3 32·7 33·4	6·0 4·8 5·4	7.4 6.8 10.4	3·8 2·6 1·1	80 83 82	56·9 41·9 53·9	28·9 28·2 30·0	48·18 47·81 47·50	0.000 0.000 0.097	$egin{array}{ll} \mathrm{wP}:\mathrm{mP}:\mathrm{mP} \\ \mathrm{wP}:\mathrm{mP}:\mathrm{mP} \\ \mathrm{mP}:\mathrm{mP}:\mathrm{mP},\mathrm{vN} \end{array}$
25 26 27	In Equator	29·648 29·576 29·768	46·5 52·0 49·0	37·3 44·8 40·9	9·2 7·2 8·1	41·7 49·3 45·7	- 0·2 + 7·5 + 4·0	39·8 47·7 43·2	37·4 46·0 40·3	3.3	8·6 5·7 8·4	0·7 1·3 1·5	89	59.4 60.3 68.9	28·9 36·1 31·3	47·32 47·26 47·32	0.126	vN, wP: mP: mP wP: wP: wP, wN wP: wP, mN: wP
28 29 30	Apogee	29·692 29·736 29·466	51·8 53·9 55·7	42·0 44·1 50·8	9·8 9·8 4·9	47·8 50·1 52·9	+ 6·3 + 8·9 + 11·9	46·5 47·2 51·6	45·1 44·1 50·3	2·7 6·0 2·6	4·5 8·6 5·9	1·3 2·0 1·6	91 81 92	58·0 59·3 56·1	32·2 38·0 48·5	47·56 47·80 47·80	0.000	wP: vP, vN: wP wP wwP, wwN: wwN, wwP
Means		29.699	51.1	40.0	11.1	45.4	+ 1.0	43.4	41.0	4.4	9.1	I·2	85.2	66.8	32.8	50.77	Sum 2.616	
Number of Column for Reference.	I	2	3	4	5	6	7	8	9	. 10	11	I 2	13	14	15	16	17	18

The results apply to the civil day.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records.

The average temperature (Column 7) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29in.699, being oin.059 lower than the average for the 65 years, 1841-1905.

The highest in the month was 61°5 on November 6; the lowest in the month was 28°9 on November 19; and the range was 32°6.

The mean of all the highest daily readings in the month was 51°·1, being 2°·1 higher than the average for the 65 years, 1841–1905. The mean of all the lowest daily readings in the month was 40°·0, being 2°·1 higher than the average for the 65 years, 1841–1905. The mean of the daily ranges was 11·1°, being the same as the average for the 65 years, 1841–1905. The mean for the month was 45°·4, being 1°·9 higher than the average for the 65 years, 1841–1905.

	bine.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	ЕМОМЕ	TERS.	1				
MONTH	f Suns	orizon.		Osler's.	,		Robin- son's		CLOUDS	S AND WEATHER.	
and DAY, 1914.	ration o	Sun above Horizon.	General	Direction.	Squar	essure the re Foot.	1 ~ 0			I	
	Daily Duration of Sunshine.	Sun a	A.M.	Р.М.	Greatest.	Mean of 24 Hourly Measures.	Horizontal I ment of the		A.M.	Р.М.	
Nov. 1 2 3	hours. 3·8 0·1 5·6	hours. 9.7 9.6 9.5	SE ESE : SE S : SSW : SW	SE : E SE : SSE : S SSW : S : SE	3.1	lbs. 0·20 0·27 0·20	264	10, sltr	: 10 : 8,cu,cus,s : pcl : 10, s,n,sltr : pcl,fqr: 8, cu	9, cus, s, n: pcl	: pcl : pcl : pcl
4 5 6	0·0 7·0 3·8	9·5 9·4 9·4	$\begin{array}{c} \operatorname{Calm} \\ \operatorname{ESE}:\operatorname{SE}:\operatorname{S} \\ \operatorname{S}:\operatorname{SW} \end{array}$	E: ENE SSE: S SW: SSW: WSW	1.3	0.01 0.11 0.10	227	pcl 10, er pcl	: f : 10, f : pcl : 1 : pcl : 6,cicu,cu	o : pcl, r	: 10, cr : pcl, sltsh : 10
7 8 9	3·5 2·1 0·4	9·3 9·3 9·3	WSW : Calm WSW WSW : SW	W: WNW: WSW WSW WSW: SW	1.0	0·00 0·06 0·25	257	f, sltr pcl pcl	: f : o, sltf : o, m, h : 5,cicu,cu : 9 : 10,cu,cus,s	7, eu : 6 :	: pcl : 8 : pcl
10 11 12	1·9 0·0 3·6	9.0 9.1	WSW: W WSW WNW: W	W:SW:WSW WSW:WNW:NW NW:W	9.3	0·30 1·60 0·77	356 670 498		: pcl : 7, cicu, s : 10, w : 10, sc, s, w : 1 : 5, w	10, sc, s, r, w : 9, r, w	: 9 : pcl, w : pcl
13 14 15	0.0 5.0 2.3	9·0 8·9 8·8	W:SW:WSW $WSW:W:N$ $SSW:S:SSE$	WSW : W N : SW WSW : SW : Var.	4.6		589 344 336	pcl	: 10, w : 10, s, n, r, w : pcl : 6, cicu,cu : 9, ocsn, r, w: 8, cus, n, r, w		pcl pcl, h,hofr 9, r
16 17 18	2·7 5·1 3·9	8·8 8·8 8·7	ENE: NE: NNE N: NNW N: NNE: Calm	N N NNE : N : Calm	1.3	0·77 0·18 0·03	238	ı, hofr	: pcl, r, w: 8, cu, cus, w : o, hofr : o : 1, hofr : 1, cu, sltf	2, cu : 1, cu :	o, hofr f, hofr
19 20 21	0·0 4·1 0·6	8·6 8·6 8·5	SW E:Calm:ESE NE:ENE:E	WSW : N : E E : ENE : NE ENE : NE : E	I · 2	0.03	228	pcl	: f, hofr : 10, s,sltf,sl : pcl : pcl, cus : pel : 7, cu, cus	pcl, cu, cus: 9	: 10, sltsn, ocmr
22 23 24	1·5 0·0 2·4	8·5 8·4 8·4	$\begin{array}{c} \mathbf{ENE} : \mathbf{NE} \\ \mathbf{NE} : \mathbf{NNE} \\ \mathbf{Calm} : \mathbf{SW} \end{array}$	NE NNE : NNW WSW : SW : SSW	2.7	0·72 0·31 0·03	461 334 230	9	: 9 : 9, cu, cus, n, w : 10, s : 10, s : 9 : 3, cu, sltf	10, s, n : 10	: 10 : 10, r
25 26 27	2·6 0·0 2·1	8·4 8·3 8·3	SSW: W: SW SW WSW: SW	WSW:SW:SSW SW:WSW WSW:SW	4.9	0·12 0·66 0·38	472	10, r 10 pel, r	: pcl, m : 3,cicu, cu, sltf : IO : IO, S, mr : I : 8,cicu, cu, soha,r	10, sc, s, w : 10, ocmr, w	: 10, ocmr : 10, r, w : pcl
28 29 30	0.0	8·3 8·2 8·2	SSW:SW SW SSW	SSW: SW: WSW SW: SSW SSW: SW	5.7	0·76 0·80 1·80	507 537 745	pcl 2 10, stw	: pcl, sltr: 10, sc, s, w : pcl : 10, s, n, w : 10, sltr, stw: 10, sc, s, cr, g	10, s, n, w : 10, w	: 2 : 10, stw : 10, r, w
Means	2.1	8.9				0.42	346				
Number of Column for Reference.	19	20	2 I	22	23	24	25		26	27	

The mean Temperature of Evaporation for the month was 43°-4, being 1°-5 higher than

The mean Temperature of the Dew Point for the month was 41°00, being 1°00 higher than

The mean Degree of Humidity for the month was 85.2, being 2.1 less than

The mean Elastic Force of Vapour for the month was oin-257, being oin-010 greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs.9, being ogr.1 greater than

The mean Weight of a Cubic Foot of Air for the month was 545 grains, being 3 grains less than

The mean amount of Cloud for the month (a clear sky being represented by \circ and an overcast sky by $1\circ$) was $6\cdot6$.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.241. The maximum daily amount of Sunshine was 7.0 hours on November 5. The highest reading of the Solar Radiation Thermometer was 99°0 on November 3; and the lowest reading of the Terrestrial Radiation Thermometer was 24°1 on November 18. The Proportions of Wind referred to the cardinal points were N. 5, E. 5, S. 8, W. 10. Two days were calm.

the average for the 65 years, 1841-1905.

The Greatest Pressure of the Wind in the month was 14.5 lbs. on the square foot on November 13. The mean daily Horizontal Movement of the Air for the month was 346 miles; the greatest daily value was 745 miles on November 30; and the least daily value was 146 miles on November 18.

Rain (0ⁱⁿ·005 or over) fell on 18 days in the month, amounting to 2ⁱⁿ·616, as measured by gauge No. 6 partly sunk below the ground; being 0ⁱⁿ·396 greater than the average fall for the 65 years, 1841-1905.

		Baro- Meter.			Ti	EMPERAT	URE.				rence bet ir Tempe		b .	Ti	EMPERATU	RE.	e No. ace is ound.	
моитн	Phases	Iourly rected to 32°			Of the A	ir.		Of Evapo- ration.	Of the Dew Point.	an	d Dew Po emperatu	int	Humidit;	Of Rad	liation.	Of the Earth 3 ft. 2 in.	in Gaug iving surf ve the Gr	Electricity.
and DAY, 1914.	of the Moon.	Mean of 24 Hourly Values (corrected and reduced to 32° Fabrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.	Mean of 24 Hourly Values.	De- duced Mean Daily Value.	Mean.	Greatest.	Least.	Degree of Humidity (Saturation=100).	Highest in Sun's Rays.	Lowest on the Grass.	below the Surface of the Soil.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	
Dec. I	Full	in. 29·576 29·678 29·614	53.0 55.1 50.2	45.6 45.6 42.5	7·4 9·5 7·7	6 49.7 50.2 47.6	+ 9.3	46·3 47·0 43·6	42·7 43·6 39·2	° 7.0 6.6 8.4	11.9 10.8 13.4	° 2·5 3·2 3·1	77 79 74	74·7 72·2 71·0	38·0 38·6 38·3	48·21 48·51 48·59	0.020	wwP: wP: wP, wN wP: wP: wP, wN wP, vN: wP: wP
3 4 5 6	Greatest Dec. N.	29·389 29·325 29·458	51·2 43·2 56·0	41.5	9·7 7·9 22·8	46·9 39·4 40·3	+ 5.6 - 2.1	43·5 36·3 38·2	39·7 32·2 35·5	7·2 7·2 4·8	9·9 9·6 9·2	2·4 3·2 0·8	77 76 84	56·1 68·9 49·6	35·0 28·4 26·9	48.63 48.53 48.16	0.015	$ \begin{array}{c} wP: vP, vvN: vP, ssN \\ vP, ssN: mP: mP \\ mP: mP: wP \end{array} $
7 8 9		29·20I 29·428 29·368	56·2 50·7 46·0	47.1	9·1 3·9	51·5 47·1	+10.2	48·9 44·1 43·1	46·2 40·7 41·9	5·3 6·4 2·2	8·8 11·1 4·3	2·5 3·7 0·9	82 79 92	58·4 62·8 51·0	40·6 36·5 35·3	47·78 47·72 47·76	0.009	wwP : wP : wP wP : wP, sN : wP wP : wP : vP, vN
10 11 12	Last Quarter In Equator	29·399 29·353 29·145	45.0 43.4 46.8	38·9 35·1 41·3	6·1 8·3 5·5		+ 2·2 - 0·4	41·4 38·6 42·4	40·0 37·0 41·8	2·6 2·8 I·I	5·8 4·2 2·6	0·9 0·8 0·4	90 90 96	52·5 50·8 62·0	29·4 26·6 37·3	47·37 47·33 46·98	0.228	vN, wP : wP : wP wP : wP, wN : vN, wwP vP, vN : wP : wP, wN
13 14 15	 Perigee	28·777 28·666 28·965	49·0 50·9 44·3	43·2 44·3 38·6	5·8 6·6 5·7	45·8 46·6 41·2	+ 5·3 + 5·9 + o·4	44·7 45·2 40·2	43·5 43·7 38·9	2·3 2·9 2·3	3·4 7·0 3·8	1·1 0·6 0·7	92 90 92	58·5 70·7 45·1	33.0 38.1 36.1	46·86 46·71 46·80	0.319	wN, wwP : wwP, wN wwP, wN : wP : wP, wN vN, vP : wP, mN : wP
16 17 18	New: Greatest Dec. S.	29·599 29·908 29·468	44·8 49·0 50·7	35·3 35·1 42·3	9·5 13·9 8·4	40·8 43·6 47·5	+ 0·1 + 3·2 + 7·5	38.6 41.4 46.3	35·8 38·8 45·0	5·0 4·8 2·5	9·1 7·3 3·6	1·9 3·3	83 83 92	57·9 59·9 54·9	29·1 29·0 35·0	46·92 46·68 46·49	0.006	wP:mP:mP wP:wP, wN:wP, wwN wwP, wwN:wwP, wwN:wP, wI
19 20 21		29·294 29·265 29·272	46·2 43·8 43·3	38·I 32·I 34·2	8·1 11·7 9·1		+ 2·0 - I·3	39·9 36·0 37·3	37·9 33·7 35·0	3·6 4·0 4·1	4·9 8·4 7·6	1·6 1·4 1·2	88 85 86	49·0 59·9 64·7	30·4 25·1 29·7	46·49 46·38 46·05	0.000	wN, wP : vvP, vvN : wP wP : mP : mP wP, wN : wP : mP, wN
22 23 24	In Equator First Quarter	29·546 29·588	39·8 37·5 39·2	34·2 30·4 27·0	5·6 7·1 12·2	37·0 35·2 34·9	- 1·4 - 3·0 - 3·3	36·2 34·6 34·1	35·I 33·7 32·8	1·9 1·5 2·1	3·5 2·4 3·3	o·8 o·7 o·o	93 94 92	45·8 39·9 46·9	28·6 26·0 26·4	45·78 45·45 45·16	0.005	$\begin{array}{c} wP \\ wP: wP, mN: wP \\ wP, wwN: mP: vP \end{array}$
25 26 27	 Apogee	30·094 29·937 29·544	39·0 44·3 53·0	26·9 30·3 42·8	12·1 14·0 10·2	38∙0	- 6·3 - 0·6 + 7·5	31·2 37·3 45·2	29·1 36·3 44·0	3·0 1·7 2·3	6·5 4·7 7·4	0·0 0·0	88 94 92	51·0 43·0 64·0	22·5 22·7 39·7	44·76 44·49 44·25	0.273	sP: mP wP: vN, wP: wP wwP, wwN: wwP: wwP, wwN
28 29 30		28·925 29·466 29·694	51·9 43·9 45·6	33·I 32·5 30·3	18·8 11·4 15·3		+ 8·2 - 1·4 + 0·4	46·3 36·2 37·9	45.4 34.3 36.0	1·7 3·3 3·3	3·9 6·9 5·5	1.8 0.0	94 88 89	53·3 51·8 55·6	30·6 25·2 22·2	44·18 44·32 44·47	0.044	$\left\{ \begin{array}{l} wwP: wwP, wwN: vP, v\dot{N} \\ wP, wN: wP: mP \\ mP: wP: wP \end{array} \right.$
31	Greatest Dec. N.	29.319	44.0	32.8	I I · 2		+ 2.0	39.3	37.6	3.1	6.1	0.0	89	52.5	25.4	44.29	 	wP, wN : wN, wP : wP
Means		29.427	47.0	37.3	9.7	42.4	+ 2.5	40.7	38.6	3.8	6.7	1.4	87.1	56.6	31.2	46.52	8um 6.018	
Tumber of Column for Reference.	I	2	3	4	5	6	7	8	9	10	II	I 2	13	14	15	16	17	18

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 65 years' observations, 1841–1905. The temperature of the Dew Point (Column 9) and the Degree of Humidity (Column 13) are deduced from the corresponding temperatures of the Air and Evaporation by means of Glaisher's Hygrometrical Tables. The mean difference between the Air and Dew Point Temperatures (Column 10) is the difference between the numbers in Columns 6 and 9, and the Greatest and Least Differences (Columns 11 and 12) are deduced from the 24 hourly photographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 16 are taken daily at noon.

The values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29^{ln}·427, being 0^{ln}·358 lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was $56^{\circ} \cdot 2$ on December 7; the lowest in the month was $26^{\circ} \cdot 9$ on December 25; and the range was $29^{\circ} \cdot 3$. The highest in the month was 56° 2 on December 7; the lowest in the month was 20° 9 on December 25; and the range was 29° 3. The mean of all the highest daily readings in the month was 47° 0, being 2° 8 higher than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 37° 3, being 2° 3 higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was 9° 7, being 0° 5 greater than the average for the 65 years, 1841-1905. The mean for the month was 42° 4, being 2° 5 higher than the average for the 65 years, 1841-1905.

	ne.		WIND AS DEDUCED	FROM SELF-REGISTERING AN	EMOMET	ERS.			
	Sunshi	rizon.		OSLER'S.			Robin- son's	CLOUI	DS AND WEATHER.
MONTH and DAY, 1914.	ation of	Sun above Horizon.	General D	rirection.	on	sure the Foot.	Move- ne Air.		
	Daily Duration of Sunshine.	Sun al	A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.	Horizontal Movement of the Air.	А.М.	Р.М.
Dec. 1	3.0 1.7 6.2	hours. 8·2 8·1 8·1	SSW:SW SSW:S	SW:SSW S:SSW SW:SSW	15.5		605		7, cu, cus: 6 : pcl, luha pcl, stw: 9, luha, stw: 9, ocsltr, g r,cis, stw: 0, w : pcl, stw
4 5 6	0·0 5·4 0·0	8·0 8·0	SSW SW S:SSW:S	S:SSW:SW SW $SSE:S:SW$	9.7	2·62 0·99 0·45	565	9, stw: 9, g: 10, sltsh, g pcl,stw: pcl,shr,w: 8, cis, cicu, w o, hofr: thcl, hofr: 10, s	10, sc,s,r,hl,g: pcl,shsr,hl,l,t,w: pcl, luha, w 4, cis, w: I: o, hofr 10, s: 10,0cshs,w: 10, fqr, w
7 8 9	0·0 3·0 0·0	8·0 7·9 7·9	SW:SSW SSW:SW S:SSE:SE	$\begin{array}{c} SSW:SW \\ SSW:S \\ Calm:E:NE \end{array}$	5.2	1·13 0·54 0·12	443		10, sc, s, r : pcl, w : 1, w pcl, shr, w : v, lishs : thcl 1a, s, n : 10, cr : 10, cr, w
10 11 12	0.0	7.9	N: NNW E E: Calm: ENE	$egin{array}{c} \mathbf{N}\mathbf{W}:\mathbf{N}:\mathbf{NE} \\ \mathbf{E} \\ \mathbf{E} \end{array}$	4.8	0.66 0.36 0.00	300	$\begin{array}{llllllllllllllllllllllllllllllllllll$	10, cu, s : 10 : pcl 10, s, r, w : 10, s, r, w : 10, r 6 : pcl, r : 10, r
13 14 15	0·0 4·3 0·0	7.8	E:SE:S $ESE:SSW$ $SW:Calm:Var.$	S:SE:ESE SW:SE:SSW SW	3.9	0·53 0·10	233		9, r, w : 10, s, n, r, w : 10, r 5, cicu, cu : 9, r : 10, cr 10, r : pcl : 1
16 17 18	0.0 I.0	7.8	SW:W SW:SSW SSW	NW: WNW: SW SW: SSW SSW: S: SW	7.6	0·48 0·57 1·03	437	pcl : pcl : 9, cu, s, w pcl : 9 : 8, cus 10, sltr,w: 10,fqr,w: 10, sc, s, r, w	pcl, cu, w : 0 : 0 9, sltsh : 9, sltsh, w: 9, sltr, w 9, sc, s, r, w : pcl : 9, r
19 .20 21	3·0 5·0	7.8	SW:SSW SW:SSW E:SW	SW:SSW S:SE:E SW:WSW	0.9	0.61 0.05 0.11	222	o, hofr : h, hofr : 4, ci, s	10, s, n, l,t,hyr: pcl, r : 0 5, ci, s : pcl : pcl 5, ci, cu : pcl : pcl,sltr,sn
22 23 24	0.0	7.8	WSW: NNW Calm: NNW N: NNW	NNW: N NNW: N: NNE N: Calm: SW	0.3	0.04 0.00 0.00	142	pcl : 10, f : 10, s, n, sn, sltf	9, s, n : 9 : pcl 10 : 10 7,cus,sltf: f, hofr : tkf, hofr
25 26 27	1·4 0·0 2·5	l '	Calm Calm: SSE: S SSE: S: SSW	$\begin{array}{c} Calm:S:SE\\ S:Calm:SSE\\ S:SSE \end{array}$	3.3	0·00 0·24 0·57	308	tkf, hofr: f, hofr: 10, cu, f pcl, hofr: pcl : 10, s, n, r, hl 10, r : 10, w : 8, sc, s, r, w	
28 29 30	0·0 1·5 0·0	7·8 7·8 7·8	$\begin{array}{c} \mathrm{SSE}:\mathrm{SW}:\mathrm{SSW} \\ \mathrm{SW}:\mathrm{WNW}:\mathrm{WSW} \\ \mathrm{SW}:\mathrm{Calm}:\mathrm{SSE} \end{array}$	$\begin{array}{c} \operatorname{Calm}: E: \operatorname{SW} \\ \operatorname{WSW}: \operatorname{SW} \\ \operatorname{S}: \operatorname{SSE} \end{array}$	8.2	0·93 0·55 0·47	464	IO, fqr : IO : IO,sc,s,sltr IO, r,sn,w : IO, w : 9, s, soha I, hofr : licl : 10,sc,s,sltsh, soha	5, cicu, cu : 2 : 1, hofr
31	0.1	7.8	SSE : S	SW : Calm	4.0	0.27	305	10, r, w : 10, fqr : 10, sltr	pcl, cu : 2, sltf, luha :thcl,sltf,luha,hofi
Means	1.3	7.9		••		0.56	377		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27

The mean Temperature of Evaporation for the month was $40^{\circ} \cdot 7$, being $2^{\circ} \cdot 2$ higher than

The mean Temperature of the Dew Point for the month was 38°-6, being 1°-9 higher than

The mean Degree of Humidity for the month was 87.1, being 1.5 less than

The mean Elastic Force of Vapour for the month was oin-234, being oin-016 greater than

The mean Weight of Vapour in a Cubic Foot of Air for the month was 2grs.7, being cgr.1 greater than

The mean Weight of a Cubic Foot of Air for the month was 543 grains, being 9 grains less than

The mean amount of Cloud for the month (a clear sky being represented by o and an overcast sky by 10) was 7.4.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0·165. The maximum daily amount of Sunshine was 6·2 hours on December 3. The highest reading of the Solar Radiation Thermometer was 74°·7 on December 1; and the lowest reading of the Terrestial Radiation Thermometer was 22°·2 on December 30. The Proportions of Wind referred to the cardinal points were N. 2, E. 4, S. 15, W. 7. Three days were calm.

the average for the 65 years, 1841-1905.

The Greatest Pressure of the Wind in the month was 26.3 lbs. on the square foot on December 28. The mean daily Horizontal Movement of the Air for the month was 377 miles; the greatest daily value was 791 miles on December 4; and the least daily value was 103 miles on December 24.

Rain (0^{in.005} or over) fell on 27 days in the month, amounting to 6^{in.018}, as measured by gauge No. 6 partly sunk below the ground; being 4^{in.191} greater than the average fall for the 65 years, 1841-1905.

0. 0

30.192

30.405

24. 17. 30

30. 5. 15

The highest reading in the year was 30in.412 on November 18.

30.055

29.759

MAXIM	·A.	MINIM	Α.	MAXIM	Α.	MINIM	A.	MAXIM	Α.	MINIM	A.
Greenwich Civil Time, 1914.	Reading.	Greenwich Civil Time, 1914.	Reading.	Greenwich Civil Time, 1914.	Reading.	Greenwich Civil Time, 1914.	Reading.	Greenwich Civil Time, 1914.	Reading.	Greenwich Civil Time, 1914.	Reading.
January		January		May		May		September		September	
d h m	in.	d h m	in.	d h m	in.	d h m	in.	d h m	in.	d h m	in.
		2. 21. 0	30.220	2. 8. 45	30.206	5. 17. 0	29.408	18. 8. 45	29.666	19. 3. 0	29.570
3. 10. 30	30.320	6. 4. 30	29.326	6. 7. 50	29.540	7. 20. 50	29.279	23. 9. 30	30.236	26. 15. 20	30.025
7. 19. 15	30.095	9. 6. 15	29.814	10. 8. 5	29.930	10. 19. 45	29.745	27. 10. 0	30.220	28. 16. 15	29.88
12. 18. 15	30.362	17. 13. 45	29.613	11. 8. o	29.816	11. 19. 0	29.736	30. 9. 15	30.267		
18. 22. 20	29.908	20. 5. 30	29.791	13. 0.30	30.082	13. 17. 30	29.986				
25. 9. 50	30.120	26. 5. 20	29.870	19. 23. 50	30.228	23. 8. 0	29.632	0.4.1		0.41	
28. 10. 0	30.034	30. 5. 5	29.748	25. 8. o	30.115	26. 15. 0	29.954	October		October	
31. 0. 3	29.880	31. 18. 0	29.784	27. 22. 15	30.040	29. 17. 55	29.825		,	1 16 15	20.086
				31. 1. 5	29.928	31. 17. 0	29.804	2. 21. 15	30.149	1. 16. 15 3. 15. 0	29·980 30·038
February		February		$_{ m June}$		June		4. 22. 30	30.263	6. 5. 0	30.037
rebruary		robradiy	1	5 dine		. Suno		7. 9. 30	30.178	13. 12. 40	29.513
2. O. IO	30.005	3. 5. 20	29.890	I. II. O	29.962	2. 6. 0	29.860	19. 10. 30	30.123	22. 14. 15	29.507
5. 0. 0	29.975	8. 6. 5	29.319	3 . 8. 5	30.081	4. 14. 30	29.890	25. 8. 30	29.780	25. 21. 30	29.472
10. 11. 10	29.733	12. 0. 0	29.320	4. 21. 25	29.970	5. 10. 45	29.799	26. 22. 40	29.766	29. 4. 0	29.240
12. 12. 15	29.483	12. 20. 45	29.278	6. 11. 10	29.869	9. 4. 45	29.394	29. 17. 40	29.315	30. 3. 5	29.130
13. 11. 5	29.793	14. 3. 0	29.548	10. 23. 30	29.803	11. 19. 5	29.698	30. 11. 45	29.329	31. 5. 5	29.152
14. 16. 10	29.748	15. 6. 50	29.514	12. 22. 5	29.814	13. 15. 5	29.736	NT 1) T	
17. 11. 0	29.931	19. 17. 10	29.197	16. 23. 0	29.919	21, 17. 0	29.646	November		November	
20. 9. 5	29.480	21. 1. 5	29.005	26. 7. 30	30.514	27. 17. 30	30.050	4 0 15	20.610		
21. 9. 10	29.090	22. 6. 10	28.420	28. 9. 0 July	30.160	July		4. 9. 15 8. 20. 40	29·618 30·072	5. 4. 30 10. 6. 25	29.435
27. 22. 0	30.077	į		July		ətily		10. 19. 10	30.060	11. 16. 50	29·980 29·480
		ĺ				2. 9. 45	29.468	12. 22. 50	29.840	14. 4. 0	29 400
March		March		4. 7. 45	29.908	6. 5. 45	29.526	14. 20. 30	29.640	15. 21. 45	28.850
1.201011			-	10. 8. 5	30.038	12. 6. 15	29.851	18. 9. 50	30.412	19. 19. 5	29.894
		1. 3. 30	29.796	13. 10. 30	29.926	15. 15. 15	29.675	20. 10. 35	30·166	23. 5. 30	29.585
1. 21. 15	29.878	6. 15. 5	29.203	17. 23. 0	29.876	20. 2. 40	29.338	24. 9. 10	29.741	25. 1.50	29.539
7. 21. 50	29.465	9. 17. 0	29.201	21. 22. 30	29.604	22. 20. 20	29.475	25. 18. 55	29.710	26. 20. 45	29.496
11. 20. 30	29.837	12. 8. 0	29.475	23. 11. 30	29.551	27. 4. 0	29.399	27. 22. 0	29.868	28. 14. 30	29.592
13. 2. 10	29.857	14. 17. 10	29.121	31. 8. 20	29.895			29. 19. 0	29.758		
15. 8. 45	29.669	16. 9. 55	29.064	A		Amount)	
17. 5. 50	29.807	18. 8. 0	29·066 28·498	August		August		December		December	
18. 20. 55 23. 10. 5	29·177 29·430	20. II. 55 25. 21. 0	28.809			2. 11. 30	29:349	December		December	
28. 10. 5	29.430	29. 7. 30	29.784	3. 8. 0	29.628	5. 15. 25	29·474			1. 1. 10	29.368
31. 13. 0	30.077	- 3. 1. 3.	-) / ~ T	12. 0. 0	30.120	15. 5. 45	29.713	2. 6. 45	29.836	2. 22. 30	29.380
3 3 1	3 //			18. 8. 15	30.010	26. 15. 30	29.497	3. 16. 40	29.774	4. 14. 25	29.135
April		April	l	29. 9. 0	30.157	30. 16. 50	30.039	6. 10. 15	29.645	6. 23. 30	29.141
-								7. 11. 50	29.245	7. 17. 50	29.158
		2. 16. 45	29.699					8. 22. 10	29.520	10. 3. 0	29.168
3. 11. 55	29.816	6. 1. 25	29.235	September		September		10. 19. 50	29.589	14. 4. 0	28.540
6. 15. o	29.407	7. 17. 45	29.161				20 0	17. 6. 0	29.980	19. 0. 0	29.226
9. 2. 30	29.590	9. 18. 5	29.451	1. 10. 30	30.194	4. 14. 40	29.891	19. 8. 30	29.402	19. 23. 0	29.218
12. 10. 0	30.025	13. 15. 15	29.828	6. 6. 50	30.019	8. 5. 55	29·655	20. 10. 30	29.300	21. 5. 0 26. 13. 55	29.137
15. 11. 0	30.365	17. 19. 0	29.967	10. 12. 25	29.755	11. 12. 45	29·496	25. IO. 5	30.116		29·872 28·515
21. 7. 0	30.163	22. 18. 0	30.009	12. 10. 15	29.765	12. 20. 45	29.250	26. 21. 5	29.951	28. 20. 20	2

The readings in the above table are accurate, but the times are occasionally liable to uncertainty, as the barometer will sometimes remain at its extreme reading without sensible change for a considerable interval of time. In such cases the times given is the middle of the stationary period.

The time is expressed in civil reckoning, commencing at midnight and counting from ch to 24h.

14. 15. 30

17. 13. 25

The lowest reading in the year was 28in.420 on February 22.

29.374

29.267

29.699

29.794

30. 2. 15

31. 19. 20

29.833

29.347

29.261

31. 9. 55

The range of reading in the year was 1 in 992.

13. 19. 15

16. 12. 40

HIGHEST and LOWEST READINGS of the BAROMETER in each Month for the YEAR 1914. June. September. February. July. August. October. March. April. May. November. January. December. in. 30.228 30.214 30.170 Highest ... 30.077 30.077 30.405 30.038 30.267 30.263 30.362 30.412 30.116 Lowest 29.326 28.420 28.498 29.161 29.279 29.394 29.338 29.349 29.250 29.130 28.850 28.515 1.657 0.820 0.700 0.821 1.017 Range 1.036 1.579 1.244 0.949 1.133 1.562 1.601

The time is expressed in civil reckoming, commencing at midingite and counteng from 5-2 to 24.

The height of the barometer distern above mean sea level is 159 feet: no correction has been applied to the readings to reduce to sea level.

			Mon	THLY RE	SULTS	of Mer	FEOR	OLOGICA	ь Еі	LEME	NTS	for	the	YEAR	1914	•			
	Mean Reading					ТЕМР	ERATUR	RE OF THE	AIR.										Mean
MONTH, 1914.	of the Barometer.	High	ıest.	Lowest.	Range in the Month.	th	ne	Mean of al the Lowest.	the	Iean of ne Daily Ranges.	y	Month Mean		Excess Mean ab Average 65 Yea	ove e of	Mea Tempers of Evapors	ature	Mean Tempera- ture of the Dew Point.	Degree of Humidity. (Saturation = 100.)
	in.	İ	0	0			0	0	1	0		0		0	,	0		0	
January	29.969	5!	5.4	19.9	35.5	42	2.5	34.3		8.3		38.4	-	- o·	2	36.	6	33.4	82.4
February	29.577	50	9.0	29.2	29.8	51	1.7	38.2		13.5		44.4	-	+ 4.	9	42.	I	39.5	83.3
March	29.454	6!	5.3	27.8	37.5	51	0.1	37.4		13.6		43.8		+ 1.	1	41.	I	37.9	80∙6
April	29.907	7	3.6	31.7	41.9	61	I · I	40.0	;	21.1		49.8	- 1	+ 2.	5	45.	4	40.9	72.2
May	29.906	8:	3.4	37.6	45.8	63	3.7	43.8		19.9		53.0	İ	- o·	ı	48.	3	43.7	71.3
June	29.851	81	8-1	40.3	47.8	71	1.5	49.2		22.3		59.1		- o·	3	54.	2	49.8	71.9
July	29.698	9:	2.1	45.2	46.9	74	1.5	53.9		20.6		62.5	:	- o·	2	57.	5	53.2	72.2
August	29.851	8:	3.7	46.3	37.4		i	53.6		20.8		62.5	:	+ 0.	9	58.	2	54.5	75.7
September	29.894	8:	2.0	33.8	48.2		ļ	47.6		21.3		57.2		- o·	I	52.	6	48.3	72.7
October	29.825	65	8.6	34.7	33.9	59	9.4	44.7		14.6		51.6	5	+ 1.	6	49	I	46.8	83.6
November .	29.699	6:	1.5	28.9	32.6		1.1	40.0		11.1		45.4	-	+ I·	9	43.	4	41.0	85.2
December .	29.427	56	6.2	26.9	29.3	47	7.0	37.3		9.7		42.4	+	+ 2.	5	40.	7	38.6	87.1
Means	29.755		ghest 2·I	Lowest 19.9	Annual Rar 72.2		9.7	43.3		16.4		50.8	3	+ 1.	3	47	4	44.0	78.2
Монтн, 1914.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean Weigh of a Cubic Foot o Air.	Temperature at Noon of the Earth 3 ft. 2 in. below	Mean Amount of Cloud (0-10.)	Number of Rainy Days (0.005 or over).	Amou collect in Gar No. whos receiv Surfac 5 inc above Groun	eted tuge 6, se ring ce is ches the	r	referred	l to di	rs of Pı	revalen	Veler's Anece of each s of Azim	h Wind nuth.	N.W.	Number of Calm or nearly Calm Hours.	Mean Daily Pressure on the Square Foot.	Mean Daily Horizontal Horizontal Movement of the Alir.
January	in. 0·191	grs. 2·3	grs. 558	42.68	7.8	13	in.		3 h		h 30	h 44	h 5	h I44	h 209	h 43	h 43	lbs. 0.37	miles. 346
February	0.242	2.8	544	1 ' 1	5.8	14	2.4	'	3 I	13	4	8	79	380	120	I 2	48	0.49	366
March	0.228	2.6	542	1 1	1 1	26	3.9				I 2	I 2	32	184	306	93	40	0.41	377
April	0.256	2.9	544		1	I 2	1.1	10 41	ı 1	29 1	08	97	15	123	167	32	108	0.28	291
May	0.285	3.2	540	1 1	6.2	10	1.6	531 129) 10	06	66	52	15	87	131	41	117	0.28	279
June	0.358	4.0	532		5.1	9	1.3		[I.	76	36	22	24	132	61	39	109	0.10	227
July	0.406	4.5	526	1 1	7.0	17	1.4	i	5 1	22	43	32	78	202	160	60	072	0.14	246
August	0.425	4.7	528	62.06	5.9	II	1.1	1	- 1	- }	76	27	58	216	112	I 2	133	0.13	230
September	0.339	3.8	535	60.67	4.6	6	0.7			!	84	52	49	109	106	53	145	0.25	270
October	0.318	3.6	540	1 '	7.4	10	0.9		5 1:	73	63	58	38	73	95	43	126	0.11	2 2 I
November.	0.257	2.9	545		6.6	18	1 .	616 6:	- (ļ	54	44	84	210	119	27	47	0.42	346
December.	0.234	2.7	543			27	6.0	i			59	62	188	264	27	27	72		377
Sums						173	23.8					510	665	2124	1613	482	1060		
Means	0.295	3.3	540	52.00	6.3						•••							0.30	298

The greatest recorded pressure of the wind on the square foot in the year was 26·3 lbs. on December 28. The greatest recorded daily horizontal movement of the air in the year was 791 miles on December 4. The least recorded daily horizontal movement of the air in the year was 82 miles on August 20.

Hour,						193	14.						Yearl
Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Means
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
${f Midnight}$	29.983	29.575	29.477	29.921	29.913	29.860	29.709	29.855	29.896	29.842	29.706	29.422	29.7
1 h	29.976	29.569	29.476	29.915	29.910	29.859	29.703	29.854	29.895	29.837	29.702	29.414	29.7
2	29.974	29.565	29.469	29.910	29·906	29.853	29.697	29.850	29.891	29.833	29.698	29.415	29.
3	29.970	29.560	29.459	29.905	29.903	29.851	29.691	29.847	29.887	29.825	29.696	29.413	29.7
4	29.964	29.555	29.449	29.900	29.902	29.850	29.692	29.843	29.886	29.822	29.690	29.415	29.7
5	29.959	29.559	29.443	29.900	29.905	29.853	29.695	29.845	29.888	29.823	29.690	29.417	29.7
6	29.958	29.562	29.439	29.907	29.912	29.858	29.697	29.851	29.895	29.826	29.69I	29.422	29.
7	29.960	29.570	29.442	29.912	29.918	29.863	29.701	29.855	29.905	29.832	29.698	29.429	29.7
8	29.968	29.584	29.445	29.918	29.921	29.866	29.702	29.856	29.909	29.838	29.705	29.435	29.
9	29.977	29.593	29.446	29.921	29.921	29.864	29.702	29.857	29.913	29.841	29.707	29.444	29.
10	29.985	29.599	29.448	29.923	29.919	29.862	29.701	29.857	29.912	29.841	29.709	29.454	29.7
ΙΙ	29.986	29.603	29.448	29.919	29.915	29.860	29.702	29.853	29.907	29.837	29.706	29.451	29
Noon	29.978	29.597	29.450	29.913	29.911	29.857	29.699	29.849	29.903	29.832	29.697	29.441	29.
13 ^h	29.966	29.590	29.448	29.907	29.906	29.851	29.697	29.846	29.896	29.825	29.686	29.433	29.7
14	29.958	29.583	29.443	29.898	29.901	29.843	29.695	29.844	29.890	29.817	29.683	29.425	29.7
15	29.958	29.576	29.443	29.890	29.894	29.836	29.691	29.841	29.883	29.811	29.683	29.427	29.
16	29.961	29.574	29.441	29.886	29.891	29.832	29.687	29.839	29.879	29.811	29.686	29.431	29.
17	29.962	29.574	29.440	29.886	29.888	29.830	29.685	29.837	29.879	29.815	29.692	29.428	29.
18	29.965	29.577	29.449	29.888	29.888	29.832	29.688	29.839	29.883	29.816	29.699	29.426	29.
19	29.967	29.578	29.458	29.897	29.893	29.835	29.691	29.844	29.887	29.817	29.705	29.420	29.
20	29.968	29.578	29.465	29.906	29.901	29.843	29.698	29.854	29.894	29.817	29.707	29.416	29.
2 I	29.967	29.577	29.472	29.913	29.909	29.855	29.707	29.862	29.896	29.815	29.710	29.419	29.
22	29.967	29.579	29.478	29.917	29.914	29.860	29.710	29.868	29.896	29.815	29.712	29.420	29.
23	29.967	29.578	29.479	29.918	29.915	29.861	29.710	29.869	29.896	29.813	29.714	29.420	29.
24	29.963	29.576	29.481	29.917	29.911	29.860	29.706	29.868	29.897	29.810	29.713	29.419	29.
oh23h.	29.969	29.577	29.454	29.907	29.906	29.851	29.698	29.851	29.894	29.825	29.699	29.427	29.
} Ih24h.	29.968	29.577	29.455	29.907	29.906	29.851	29.698	29.851	29.894	29.824	29.699	29.426	29.
mber of Days	31	28	31	30	3 I	30	31	3 I	30	3 I	30	31	

Hour,						19	14.						Yearl
Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean
Midnight	0.5	0		0	18.0	52.2	-7.7	56.8	52.7	48°·5	43.5	° 41.4	47 [.]
Ip In	37.5	42.9	41.7	44.8	48.2	53.2	57.7	56.0	51.9	48.0	43.0	41.2	46.
	37·2 36·9	42.6	41.3	44· I	47.4	52·1 51·4	57·0 56·3	55.5	51.0	47.6	42.8	41.1	46
2	36.9	42.0	41.1	43.2	46.5	50.6	55.8	55.2	50.3	47.3	42.7	40.9	45
3	36.8	41.5	40.6	42.3	45.8	50.0		54.8	49.9	47.1	42.7	40.7	45
4	1 .	41.2	40.2	41.6	45.3	-	22.1	54.9	49.6	47.3	42.7	40.8	45
5 6	36·7 36·7	40·9 40·8	39.9	41.3	45.3	50.0	56.7	56.3	49.7	47·6	42.8	40.8	45
0 5	36.9	1	39.8	41.6	46.7	51.4	59.1	58.8	51.3	48.3	43.3	41.1	47
8	1 2	41.1	40.4	44.0	49.4	54.2	62.0	61.8	54.5	49.8	44.1	41.4	49
	37.1	41.9	41.8	48.4	52.8	57·7 61·1	64.8	64.4	58.6	52.2	45.1	42·I	51
9 10	37·3	43.7	44.3	52.6	55.7	63.6	66.3	66.8	61.4	53.9	46.2	42.9	53
11	1	45.6	45.7	54.7	57·5 58·8	65.1	68.3	68.3	63.4	55.6	47.9	43.9	55
Noon	39.0	47.4	46.9	56.1		66.5	69.4	69.7	64.9	56.8	49.0	44.8	56
	39.9	49.1	47.5	57.2	59·9 60·1	67.3	69.6	70.6	66.1	57:3	49.5	45.1	56
13 ^h	40.5	49.5	47.9	57.7		67.8	69.6	71.1	66.4	57·4	49.5	45.2	57
14	40.6	49.6	48.3	58.6	60.4	,	68.9	70.7	66.1	57·2	49.0	44.6	56
15 16	40.4	48.9	48.1	58.3	59.9	67·7 66·7	68.6	69.3	64.8	55·8	48.1	43.9	55
	40.0	47.8	47.2	57.3	59.0	,	67.6	68.0	62.8	54·5	47.2	43.4	54
17	39.5	46.4	46.3	55.9	58.1	65.7	66·o	66.5	60.3	54 5 53·I	46.5	43.0	53
18	39.3	45.4	45.4	54.1	56.5	64.5		1	58.0	52.0	46.1	43 0	52
19	39.1	44.6	44.6	51.7	54.2	62.6	64.4	64.5		51.1			
20	38.9	43.9	43.8	49.8	52.4	60.1	62.5	60.6	56.3	50.3	45.4	42.3	50
2 I	38.7	43.6	43.3	48.0	51.2	58·0	60.9		53.8		44.8	41·7 41·4	49 48
22	38.6	43.4	42.7	46.7	50·I	56.4	59.3	59.2		49.6	44.3		48
23	38.3	43.0	42.2	45.6	49·I	55.0	58.3	58.0	52.9	48·9	43.9	41.3	•
24	38.1	42.8	41.8	44.7	48.3	53.8	57.5	56.9	52.1	48·6 ———	43.4	41.0	47
$\int o^h23^h.$	38.4	44.2	43.8	49.8	52.9	59.1	62.5	62.5	57.2	51.6	45.4	42.4	50
lh24h.	38.4	44.4	43.8	49.8	52.9	59.1	62.5	62.5	57.1	51.6	45.4	42.4	50
aber of Days }	31	28	31	30	31	30	31	31	30	3 I	30	31	

MONTHLY MEAN TEMPERATURE of EVAPORATION at every Hour of the Day, as deduced from the Photographic Records. Hour, 1914. Yearly Means. Greenwich Civil Time. December. January. February. March. April. May. June. July. August. September. October. November. 35.8 Midnight 39.8 45·6 45.6 47.2 41.3 42.0 42.7 51.3 55.3 50.7 39.9 55.3 35.6 42.2 45.1 54·8 46.8 41.0 39.5 50.8 50.1 41.9 39.7 45.2 54.9 39.6 41.6 44.8 35.4 40.6 44.6 46.5 41.7 2 39.3 50.2 54.4 54.5 49.3 35.3 40.2 40.8 48.8 46.5 41.5 39.5 3 39.0 44· I 49.6 44.4 53.9 54·I 35.2 39.8 38.6 48.5 46.3 40.3 41.5 49·I 44· I 4 43.7 53.4 53.9 39.3 5 6 35.3 39.5 38.3 40.0 49·I 53.6 48.2 46.4 41.4 39.4 44· I 43.7 53.9 38.3 40.3 44.6 46.6 50.0 48.2 39.5 39.3 41.4 35.4 54.5 55.1 44.4 47·I 56.8 41.8 38.9 46.5 7 35.2 39.4 42·I 51.7 55.9 49.4 39.7 45.4 8 57.8 35.7 40.2 40.0 45.1 48.6 58.8 51.6 48.2 42.5 39.9 46.8 53.7 40.6 48.4 42.0 41.7 50·I 50·I 9 47.6 55.6 60·1 35.9 59.2 54.3 43.4 ΙO 36.6 42.5 48.7 51.2 56.9 60.0 61.0 51.0 41.2 49.4 43.4 55.4 44.3 51.8 ΙI 37.2 49.4 60.7 61.4 56.2 45.2 41.9 50.0 43.3 51.7 57.4 44.3 Noon 37.6 45.2 49.8 52.1 57.8 60.7 61.8 56.5 52.2 45.7 42.4 50.4 43.5 37.9 58.1 46.0 42.6 50.6 13h 49.9 52.0 60.6 61.8 57.0 52.2 45.3 43.7 38.0 58.3 45.8 50.7 I 4 45.3 43.7 50.4 52.4 60.3 62.1 57.0 52.4 42.7 37.9 44.8 50.1 52.1 58·0 56.6 52.0 50.4 15 43.7 60.0 61.5 45.5 42.4 16 51.6 51.5 42·I 60.9 50.0 37.7 44.2 57.7 55.9 45.1 43.2 49.5 60.1 17 37.4 42.8 48.7 51.1 57.3 59.6 60.7 55.0 50.8 44.7 41.7 49.4 43.5 42.2 47.9 18 59.1 50.2 41.4 48.9 37.3 43.0 50.4 57.0 60·1 53.9 44.4 48.3 19 37.2 42.4 41.9 46.8 49.4 56.0 58.4 59.5 53.0 49.6 44·I 41.3 20 37·I 42.0 41.4 45.7 48.5 57.7 58.7 52.3 49.1 40.7 47.6 54.9 43.2 48.6 47.0 40.8 51.8 37.0 44.6 2 I 41.7 47.8 54.0 57.0 57.7 43.5 40.3 43.8 56.4 22 36.9 41.6 40.4 47.0 53.2 56.8 51.1 48.2 42.8 39.9 46.5 46.0 36.5 40.1 46.4 56.2 42.6 47.5 39.7 23 41.4 43.5 52.5 55.7 50.6 47.2 24 36.4 41.1 39.9 42.6 45.8 51.8 55.2 55.5 50.1 42.2 39.5 45.6 oh.-23h. 36.6 42·I 41.1 45.5 48.3 54.2 58.2 52.6 49·I 43.4 40.7 47.4 57.5 Ih.-24h. 36.6 48.4 42·I 41.1 45.5 54.2 57.5 58.2 52.5 49·I 43.4 40.7 47.4 Number of Days employed. 3 I 28 30 3 I 30 3 I 30 3 I 3 I 30 3 I 3 I . .

Monthly Mean Temperature of the Dew Point at every Hour of the Day, as deduced by Glaisher's Tables from the corresponding Air and Evaporation Temperatures.

Hour,						19	I 4. *						Yearl
Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Means
Midnight	33.4	39.4	37.5	40.2	42.8	° 49.4	53.2	54.0	48.7	45.8	40.6	38.0	43.
I _h	33.3	39.1	37.2	39.9	42.6	49.5	52.8	53.9	48.3	45.5	40.6	37.8	43.
2	33.3	38.9	37·I	39.7	42.4	49.0	52.6	53.5	47.5	45.3	40.4	37.7	43
3	33.1	38.6	37.0	39.0	42·I	48.6	52·I	53.0	47.2	45.6	40·I	37.8	42
4.	33.0	38.1	36.6	38.7	41.9	48·1	51.8	53.0	47·I	45.4	40.1	37.6	42
5	33.4	37.8	36.2	38.3	41.9	48·1	52·I	52.9	46.7	45.4	39.8	37.7	42
6	33.6	37.4	36.4	38.7	42.2	48.6	52.5	54.0	46.6	45.6	39.7	37.9	42
7	33.6	37.3	37.0	39.8	43.4	49.2	53.0	55.0	47.4	45.8	40.0	37.9	43
8	33.8	38.1	37.7	41.5	44.4	50.0	54.5	56.3	48.7	46.5	40.6	38.0	44
9	34.0	40.0	38.7	42.6	44.8	50.8	54.6	56.6	50.5	48.0	41.4	38.8	45
10	34.6	40.8	38.8	42.9	45.2	51.3	54.9	56.4	50.3	48.2	42.1	39.2	45
II	34.9	40.9	39.2	43.1	45.4	5 I · I	54.8	56.0	50.2	48.2	42.2	39.6	45
Noon	34.6	41·ó	39.1	43.1	45.3	50.7	54.0	55.7	49.6	48·o	42.2	39.6	45
13 ^h	34.6	40.8	39.1	42.9	44.9	50.8	53.7	55.0	49.6	47.5	42.3	39.7	45
14	34.7	40.7	38.7	43.1	45.4	50.7	53.1	55.3	49.4	47.8	41.9	39.8	45
15	34.8	40.4	38.9	42.8	45.3	50.3	53.1	54.4	48.9	47.2	41.8	39.8	44
16	34.7	40.2	38.7	42.4	45.0	50.5	53.5	54.4	48.6	47.4	41.8	39.9	44
17	34.6	40.3	38.9	41.9	44.8	50.5	53.3	54.9	48.4	47.3	41.9	39.7	44
18	34.7	40.3	38.5	41.8	44.8	50.8	53.5	54.9	48.3	47.3	42.0	39.5	44
19	34.8	39.8	38.7	41.8	44.4	50.3	53.4	55.4	48.5	47.2	41.8	39.6	44
20	34.6	39.7	38.6	41.4	44.2	50.3	53.6	55.6	48.6	47.0	4.1.3	38.8	44
2 I	34.7	39.4	37.9	40.9	44.3	50.4	53.7	55.1	48.6	46.8	41.4	38.3	44
22	34.6	39.5	37.6	40.5	43.7	50.2	53.9	54.6	48.5	46.7	41.0	38∙0	44
23	34.1	39.5	37.5	40.4	43.5	50· I	53.3	54.6	48.3	46.0	41.0	37.7	43
24	34.1	39.1	37.5	40· i	43.1	49.9	53.1	54.2	48.1	45.7	40.8	37.6	43
∫ o ^h 23 ^h .	34.1	39.5	38.0	41.1	44.0	50.0	53.4	54.8	48.5	46.7	41.2	38.7	44
{ ₁ h24 ^h .	34.5	39.5	38.0	41.1	44.0	50.0	53.4	54.8	48.5	46.7	41.5	38.7	44

Monthly Mean Degree of Humidity (Saturation = 100) at every Hour of the Day, as deduced by Glaisher's Tables from the corresponding Air and Evaporation Temperatures.

Hour, Greenwich						IĢ	914.						Year
Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September,	October.	November.	December.	Mean
Midnight	85	87	86	85	82	87	85	90	87	91	90	89	87
Ih	87	87	86	85	85	91	86	92	88	92	91	88	88
2	88	89	85	88	86	91	87	94	88	92	91	88	89
3	87	90	87	89	87	93	88	93	90	94	90	89	90
4	87	89	88	90	88	94	88	93	91	94	90	89	90
5	88	89	87	90	88	94	90	93	90	94	90	89	90
6	89	88	88	90	85	90	86	92	89	93	89	90	8
7	89	86	88	85	81	83	80	87	87	92	88	89	86
8	88	88	86	78	74	75	76	83	81	89	87	89	8
9	89	86	80	69	67	70	70	76	75	85	87	88	79
IO	87	84	78	65	64	65	67	70	67	8 I	87	86	7.
ΙΙ	86	79	76	62	62	61	62	65	62	77	82	85	7
${f Noon}$	82	73	73	59	58	57	58	60	57	72	77	82	6
13 ^h	80	72	72	58	58	55	56	58	56	70	76	82	6
14	80	72	69	57	58	54	55	57	55	70	75	82	6
15	81	73	70	56	58	53	56	57	54	69	76	84	6
16	82	75	73	58	59	57	58	58	57	74	79	86	68
17	83	81	76	60	61	57	60	63	59	76	83	87	7
18	84	83	77	64	65	61	64	67	65	81	85	87	7
19	85	83	79	69	68	65	67	73	71	84	86	89	7
20	86	85	81	73	75	71	73	79	75	86	86	88	8
2 I	86	86	81	77	78	76	77	83	79	88	88	89	8:
22	86	86	83	81	79	80	82	86	82	90	88	89	8.
23	85	87	85	82	81	84	83	88	85	90	90	88	86
24	86	86	86	85	83	87	85	91	86	90	90	88	8′
∫ oh23h.	85	83	81	74	73	74	73	77	75	84	85	87	79
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	85	83	81	74	73	74	73	77	75	84	85	87	79

Total Amount of Sunshine registered in each Hour of the Day in each Month, as derived from the Records of the Campbell-Stokes Self-Registering Instrument for the Year 1914.

Month,						Registe	ered Dura	ation of S	Sunshine i	in the Ho	our endin	3					istered of Sun- n each	on ding Period aich the bove the	of Sun-	Altitude of Sun at Noon.
1914.	5h.	6ћ.	7h.	Sh.	9 h .	10р.	11h.	Noon.	13ћ.	14h.	15 ^h ·	16 ^h ·	174.		т9н.	20р.	Total regis Duration o shine in Month.	Corresponding aggregate Period during which the Sun was above the Horizon.	Proportion shine.	Mean Alti the Sun a
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h		
January						1.1	2.6	3.2	5.3	4.9	1.8	0.7					19.9	258.6	0.077	18
February				3.4	10.3	12.5	12.6	14.7	15.6	13.2	13.5	8.2	1.9	٠.			105.6	276.8	0.382	26
March			2.9	8.0	9.3	10.4	10.4	9.6	9.0	9.5	8.2	5.8	3.9	0.6			87.6	365.7	0.240	37
April		1.0	14.2	19.5	22.2	21.3	20.3	20.2	18.1	20.4	19.3	17.5	18.2	15.9	3.4		231.5	413.3	0.560	48
May	$\mathbf{I} \cdot \mathbf{I}$	9.9	14.7	16.2	18.5	16.2	17.9	17.7	16.6	14.6	14.2	13.0	13.5	15.1	8.8	0.8	208.8	481.4	0.434	57
June	3.4	14.1	15.9	17.8	18.6	20.8	20.6	19.8	19.1	20.4	19.3	18.3	18.1	19.3	15.6	5.4	266.5	494.5	0.539	62
July	2.4	8.9	11.1	12.9	13.7	12.9	14.0	13.7	11.4	12.0	12.5	13.6	14.9	12.8	9.2	3.0	179.0	497.9	0.360	60
August	0·1	2.5	7.7	12.0	14.9	16.8	17.0	16.1	16.9	17.1	16.4	12.8	13.4	13.7	6.8		184.2	450.8	0.409	52
September			5.2	13.6	17.8	20.3	20·I	20.0	21.5	19.5	19.1	19.8	17.5	8.9	0.3		203.6	379.1	0.537	42
October				1.9	7.6	7.7	8.4	10.1	8.7	8.6	6.9	6.0	1.1				67.0	330.5	0.203	30
November				0.3	2.7	5.4	8.8	10.7	11.0	9.8	9.6	5.6	0.2				64.1	265.8	0.241	20
December					o·6	4.7	5.2	7.2	9.0	7.5	5.1	0.7		• • •			40.3	244.0	o·165	16
For the year	7.0	36.4	71.7	105.6	136.2	150.1	158.2	163.3	162.2	157.5	145.6	122.0	102.7	86.3	44· I	9.2	1658-1	4458.4	0.372	•••

The hours are reckoned from apparent midnight.

Days			Bulb The above th						nermomet the Grou		Days			Bulb The above th					t-Bulb Ti t. above		
of the Ionth.	Maxi- mum.	Mini- mum.	9 h	Noon.	15h	21h	9ъ	Noon.	15h	21h	of the Month.	Maxi- mum.	Mini- mum.	9 h	Noon.	15h	21h	9 h	Noon.	15h	21
				JA	NUARY	•									M	ARCH.					
d		0	0	0	0	0	0		0	0	d	0	0	0	0		0	0	٥	0	
I 2	36.5	27.3	28.2	31.5	36.5	35.2	26.9	38.3	33.9	33.6	I 2	52·5 46·8	41.9	46.0	49·8 42·6	51·4 44·8	42.6	43.8	42·8 38·0	43.9	40 38
3	45·2 44·3	34·0 37·2	34.9	42.6	43.6	42.6	33.9	40.4	41.8	40.4	3	47.5	33·6 36·2	37.2	45.7	46.8	43.5	35.0	41.6	38·3 41·8	40
4	49.0	36.1	43.1	47.3	48.5	45.6	41.7	44.6	45.8	43.3	4	53.4	43.1	49.1	51.6	52.7	50.6	47.0	49.0	49.8	49
5	49.8	36.7	44.3	41.5	40.6	37.2	42.9	39.4	38.0	35.2	5	52.9	49.0	50.6	51.6	49.7	50.9	48.1	48.4	47.7	49
6	40.1	33.9	36.6	38.7	38.7	35.4	34.5	36.1	35.8	32.7	6	57.0	46.6	51.6	55.8	54.9	46.8	46.9	44.8	48.3	41
7 8	38.2	29.1	29.8	35.5	38.2	36.9	28.2	32.3	34.8	34.6	7 8	47·I	40.1	42.8	42.6	44.8	45.5	40.8	41.4	43.6	44
9	50·2 55·4	36·9 50·0	41·7 54·0	47·3	47.4	50.0	52.6	44·7 53·1	46·0 53·0	49·2 50·0	9	53·0 49·7	44·7 34·1	51·6 39·7	52·7 40·1	51·3	49·4 36·6	49·5	39.8	49·8 36·4	48 36
10	54.0	50.3	5 I · I	52.7	52.7	51.8	50.8	51.3	50.8	50.9	10	46·0	34.5	38.6	42.4	43.5	34.5	35.8	38.2	37.9	32
11	52.7	32.7	33.3	34.5	33.3	32.7	31.3	31.4	30.8	2 9.8	11	46·1	29.3	34.6	41.2	44.3	36.9	32.4	36.8	37.3	34
12	34.0	29.3	31.3	29.6	30.2	32.1	28.3	28.5	28.3	29.5	12	57.5	37.0	48.8	53.4	55.6	47.7	47.4	50.7	49.3	44
13	36.0	32.1	34·I	34.7	35.1	34.4	32.8	32.8	31.9	31.7	13	55.0	41.2	47.6	51.6	54.1	50.7	47.0	50.7	50.8	47
14	35.2	32.1	34.3	33.6	33.6	34.6	31.8	29.8	29.8	32.1	14	53.9	44.7	47.8	48·4 48·6	50.4	47.0	45.7	44.4	44·I	43
15	37·8 40·8	31.2	34·6	36·3 38·5	37·4 39·7	37·3 37·6	32.3	35·1 36·7	36.0	35·6 36·1	15 16	51·0 50·0	44.4 41.1	48.3	43.6	46.7	49.9	39.9	43.2	45·8 40·0	47 37
17	41.5	34·I	37.1	39.0	40.6	34.6	36.1	37.3	37.8	33.4	17	50.7	35.2	41.6	48.6	48.5	40.7	37.8	41.9	41.5	30
18	37.8	31.8	35.0	35.9	35.3	35.2	33.2	33.3	32.4	33.4	18	49·1	35.1	39.8	42.8	46.3	35.1	38.3	38.5	38.7	3:
19	35.8	31.3	32.6	32.8	32.7	32.6	30.5	31.0	30.0	31.6	19	46.3	32.0	37.1	40.8	44.8	37.8	36.3	39.1	41.8	30
20	34.6	31.8	31.8	32.8	32.9	33.5	29.4	29.3	29.2	31.2	20	39.2	32.9	36.4	37.0	34.7	38.8	35.9	36.6	34.3	30
21	35.1	31.4	31.8	34·8	33.7	33.2	29.9	30.3	31.1	32.0	2 I 2 2	45.7	31·9	37.8	40.4	42.6	39·7 37·8	36.2	38.0	40.6	30
23	36.8	31.1	32·4	34.0	34.6	32.5	30.5	32.0	31.5	30·1 23·9	23	50·2 50·2	32.6	42·1 41·8	47·4 48·6	45.6	44.8	39·6	40.4	41·9 43·6	4
24	38.1	19.9	26.6	35.5	35.8	33.9	26.5	32.8	33.8	32.9	24	53.1	35.4	47.8	47.4	48.2	41.3	44.0	44.0	44.4	3
25	41.2	33.8	38.8	38.4	37.1	41.1	38.1	37.8	36.1	38·9	25	53.9	34.7	43.7	49.4	49.4	41.1	40.3	42.8	43.6	3
26	45.0	37.8	42.8	43.9	44.2	37.8	42.7	42.6	41.8	36.7	26	51.7	39.9	43·I	46.8	50.2	42.6	41.1	42.6	42.9	3
27	43.0	33.0	34.7	40.4	41.0	37.6	33.8	37.5	38.4	36.8	27	47.5	37.1	42·I	45.2	45.2	37.6	39.8	40.2	41.5	3.
28	49.0	37.3	42.4	46.3	47.9	44·1 46·8	41.8	44.5	45.0	43.0	28	56.8	27.8	46.7	53.0	51.6	42.3	42.7	46.8	45.0	3
30	52.5	44·0 45·9	47·1 48·1	51·2 50·6	50·4 49·8	47.0	45.0	48.9	46·9 48·7	45·4 45·3	29 30	51·2 54·0	42·I 39·9	48.3	49·6 51·5	47·2 52·4	48·7 52·7	43.8	43.5	46·5 50·5	50
31	50.3	43.2	45.0	49.9	48·I	48.9	42.9	46.0	45.8	47.5	3 I	65.3	49.0	56.7	63.4	64.3	49.7	50.7	53.6	23.1	4:
eans	42.8				40.4	38.7	25.0	27.6			Means	51.1		1412	45.5	48.1					_
cans	420	34.6	37:3	39.9 F EBI	40.4 RUARY.		35.91	37.6	37.9	37.0	Means	311	37.9	44.3	47.5 A1	PRIL	43.3	41.7	43.5	43.7	40
d]	0	0	0	0	0	00	0	0	0	0	d	0	0	0	0	0	0,	0	0	0	
I	55.1	47.0	49.5	53.3	52.8	48.5	47.4	49.4	48.9	45.4	I	66.8	42.9	57.9	61.8	63.7	51.6	51.4	52.4	53.0	4
2	51.5	37.5	44.6	50·5 49·8	50·8 54·6	41.2	41.9	46.1	46·7 48·8	40.0	2	62.6	44·2 38·2	51.8	60·0 56·1	55·2 56·7	44.2	49.8	54·I	50.8	4
3	53.0	39.9	44.4	47.3	52.5	42.6	43.5	47·0 44·6	48.4	41·0	3 4	59·8 55·9	43.0	50·4	49.6	48·I	46·5 43·7	46.8	49.1	49.9	4
5	55.0	37.2	42.8	52.6	53.5	40.7	41.3	47.7	47.9	39.3	5	56.8	41.2	53.8	51.6	54.1	49.6	49.9	48.6	48.9	4
$\stackrel{\circ}{6}$	52.5	36.6	40.8	49.6	49.6	46.7	39.7	45.8	45.4	43.9	6	58.0	45.3	50.2	54.4	54.8	46.4	44.6	47.0	45.6	4
7	51.5	43.7	46·1	51.3	45.9	46.6	43.9	46.5	43.4	44.9	7	52.1	40.2	47.4	49.8	45.6	41.3	42.0	43.0	43.0	3
8	50.0	45.2	48.4	48.8	49.8	46.6	46.9	47.8	48.8	44.6	8	56.2	36.0	46.8	53.7	53.7	44.8	43.2	45.9	46.8	4
9	54.5	44.1	47.1	52·0 51·6	51.5	46.6	49.4 46.0	46.6	47.8	44.3	9	53.5	37.0	51.2	51.6	50.3	49.6	46.4	47·1	48.7	4
10 11	56·0 48·0	43.3	47.7	45.4	52·2 45·6	45.7 46.8	43.0	48·9 44·3	48·9 44·7	44·4 46·7	11	60·1	45.6	54·3	55·9 54·6	57·1 56·5	47·6 48·5	48·4 50·1	49.5	49.5	4
2	50.3	41.1	44·7 44·8	49.8	49.5	49.3	42.0	45.1	45.7	43.8	12	61.8	39.1	52.1	57·8	60.3	46.6	47.0	49.8	50.4	4
13	52.1	38.6	42.0	50.3	49.5	47.7	38.6	44.8	45.7	46.8	13	66.3	36.1	52.2	61.2	63.2	54.1	47.4	54.4	54.8	4
4	59.0	47.2	52.5	55.3	54.9	52.1	50.8	50.0	49.9	50.8	14	58.1	43.2	48.6	53.6	57.7	47.2	42.7	46.0	48.3	4
15	55.6	44·I	53.1	54.8	51.2	44.5	51.3	49.5	46.0	40.7	15	57.2	35.6	49.8	52.7	54.1	41.9	43.8	44.8	47.6	3
16	48.3	40.6	43·I	47·7 46·8	45.7	44.7	35.8	44·I 41·8	43.0	40.8	16	55·9	33.9	48·2 53·8	53·3 57·6	54·0	42.8	43·8 48·0	47.0	47.8	4
17	49.3	33·I	37·6 41·8	42.6	47.4 44.7	44·3 36·6	40.3	40.8	41·9 39·3	41·5	17 18	58·5 60·2	39.3	56.4	57.5	57·6 59·5	47·6 47·6	45.4	49.2	49·8 48·3	4
19	48.2	33.1	41.6	45.3	46.0	45.6	39.3	43.0	44.8	44.8	19	66.1	39.2	58.1	62.8	64.5	51.2	49.8	49.1	50.6	2
20	51.0	35.1	41.6	47.8	47.3	47.5	40.4	44.9	42.9	46.8	20	72.3	38.2	58.6	69.6	70.2	53.2	51.5	55.0	52.5	2
21	50.6	35.6	43.0	44.9	36.8	38.8	40.8	42.3	36·1	37.9	2 I	73.6	37.1	60.8	69.8	72.6	54.2	51.0	54.8	57.8	4
22	51.2	38.1	45.3	49.8	47.6	39.1	43.3	45.5	43.0	37.3	22	65.5	45.1	55.2	59.6	61.6	52.4	51.4	53.6	54.3	4
23	52.0	35.1	43.5	50·I	47.5	40.4	41.0	43.9	42.7	39·2	23	61·0 62·1	44.3	52.7	52.3	59·6	50.4	50.1	48.2	50.0	
24	50.1	33.7	42·1 35·6	47·1 41·6	48·8 40·5	40·2 37·8	34.9	39·6	43·8 38·9	38·5	24 25	58.8	41.5	53.8	57.7	55.3	56·6 43·8	47·9 48·0	51·8 46·9	54.3	
25	43.0	33.9	38.4	44.1	46.7	35.3	36.9	40.8	40.8	33.9	26 26	61.0	31.7	49.7	56.3	58.7	44.7	43.7	46.7	45·3 48·6	
27	53.4	29.2	37.2	51.1	52.5	39.1	36.9	44.2	45.0	37.0	27	65.4	35.9	55.3	63.0	63.0	47.1	48.9	53.0	53.0	- 1
28	55.7	31.0	42.6	52.6	54.4	44.6	40.4	45.3	45.5	41.4	28	64·1	40.5	57.6	61.7	61.1	47.8	52.9	53.2	52.0	- 1
	'						1				29	69.6	44.3	49.5	63.8	68.7	52.8	49.2	56.7	58.1	
	ļ	l l	Į.			l l	, ,					1	l.	1 12	1	1 -	1 -		1 - '		
											30	53.1	44.3	46.7	50.2	50.6	45.0	45.8	48.2	47.8	

			Bulb Ther above the					t-Bulb Th			Davs			Bulb The above th					t-Bulb T		
Days of the Ionth.	Maxi- mum.	Mini- mum.	9 h	Noon.	15h	2 I h	9 h	Noon.	15h	21h	of the Month.	Maxi- mum.	Mini- mum.	9 h	Noon.	15h	2 I h	9 h	Noon.	15h	21h
			1	N	IAY.										Ju	LY.					
d	0	0	.00	.00-		0_				م م	d	0	0 0	78.2	87.8	89.4	73.8	67.8	72.2	70·8	65.
I	52·3 55·8	38.9	46.6	48.1	50·1 52·3	42.7	42.0	40·8 44·8	41.4	37·5 41·7	I 2	92·1 79·9	58·1 64·0	78·3 69·0	73.4	73.7	64.5	64.8	65.8	66.8	61.
3	66.9	39·I	47·9 53·8	53·4 60·6	60.7	44·5 53·6	48.2	53.7	54·I	50.0	3	76·I	54.0	64.7	59.5	55.2	56.6	62.9	57.1	53.9	52
3 4	66.0	53.0	58.6	63.5	62.0	51.9	54.5	54.6	54.2	49.6	4	76.8	54.0	63.2	71.7	74.8	57.4	56.4	60.4	59.4	50.
5	61.8	49.3	55.5	60.6	55.2	52.5	50.9	54.5	50.6	48.6	5	70.9	45.2	66.5	65.7	63.9	55.7	58.3	60.1	57.6	55
6	59.2	49.3	55.8	55.5	55·I	49.6	50.0	49.9	50.0	46.6	6	70.0	53.0	55·I	63.4	62.4	55.4	53.8	56·6 57·6	56·2 58·6	52.
7	65.2	48.0	56.9	59.4	53.8	54.0	50.3	52.8	52.7	51.2	7 8	72.7	49·5 51·9	61.4	65·8 66·4	67·9 69·6	57.2	55·0 61·4	63.2	63.9	53
8	58·1 48·1	44·4 44·3	49·4 46·6	53·0 46·7	53·2 46·7	44·8 44·5	43.8	46·9 42·6	45·I	41·4 40·9	9	73·1 75·9	56.6	63.5	69.8	74.2	63.1	56.1	59.8	63.1	59
9 10	53·I	39.4	46.7	46.8	48.8	52.9	41.6	44.4	48.0	50.6	IÓ	78.4	51.6	70.4	76·3	76.4	62.0	63.9	65.4	63.3	58
ΙΙ	55.9	43.9	51.6	52.7	53.6	47.8	45.2	45.4	46.0	43.7	ΙI	81.8	57.2	67.4	79.6	79.5	66.0	64.6	69.4	67.3	63
I 2	56.0	42.0	47.5	51.4	53.7	46.3	43.8	44.6	45.1	43.0	I 2	78.1	58.2	72.3	74.6	65.7	65.8	65.9	66.1	64·I	64
13	55.0	41.7	50.2	51.7	54.4	52.6	45.9	46.8	49.7	50.6	13	81.5	58.3	66.2	77 · 9 80·2	80.0	66·0	63.0	66·4 67·3	66·1	61
14	70.2	45·I	58·8	67·4 64·6	65·6	51.6	54·4 56·5	59·6 57·2	58·8 55·6	51·2 48·0	14 15	83·8 72·8	56·1	74.0 61.5	69.2	75·4 69·2	58.7	58.0	59.6	58.9	56
15 16	64·8 66·0	47·7 44·5	57.0	63.4	63.7	49·9 52·4	53.0	51.8	51.5	46.4	16	72.3	53·I	63.8	69.0	66.1	61.8	57.8	59.6	58.6	57
17	70.7	44.5	56.2	65.7	70.2	52.1	51.4	56.4	57.8	46.4	17	78.2	55.0	65.0	70.9	73.6	63.4	58.3	61.2	63.4	58
18	74.2	42.5	63.2	69.8	72.2	54.8	52.9	56.2	57.0	48.7	18	80.0	53.0	68.4	75.0	73.0	64.7	62.7	65.0	64.0	60
19	75.2	42.3	65.4	72.6	72.2	53.7	55.7	58.4	59.6	51.9	19	77.2	60.2	71.8	73.8	71.4	65.6	63.8	66.1	63.4	58
20	73.8	44.2	62.7	67.5	71.3	60.0	58.1	63.8	62.4	57.3	20 2 I	78·0 76·1	62·6 58·4	67·1	74·6 74·4	72·6 70·8	64·1 63·2	64.4	65·3 63·6	65·4 62·8	60
2 I	80.6	48·2 48·5	71·3 68·3	77·6 75·8	79·0 80·9	63·5	62.9	62.8	65.9	57·9 6o·o	21	74.9	54.9	72.8	67.1	59.2	58.1	64.8	61.8	56.6	54
22	83·4 70·7	56.1	63.4	66.4	59.6	51.0	60.1	61.3	57.8	50.0	23	66.4	51·I	57.7	61.8	62.7	58.6	52.6	53.8	55.2	56
24	56.3	45.2	53.0	54.6	52.8	45.3	47.6	46.8	47.1	42·I	24	66.9	56.3	61.5	62.1	62.3	57.6	56.2	54.4	55.8	52
25	54.9	39.0	48.6	51.1	52.4	43.8	42.9	42.8	44.0	39.2	25	67.0	52.4	58.8	60.6	62.0	55.8	52.7	51.0	51.0	49
26	56∙1	39. I	47.2	48.2	52.2	45.7	42.7	44.4	44.4	41.1	26	65.0	50.8	54.8	60.2	59.3	53.3	48.6	51.3	52.2	53
27	60.6	37.6	51.6	57.7	58.0	49.8	44.9	49.5	49.3	43.2	27 28	66 ·2 69 ·1	50·1	55·5 62·8	58·9	62·4	59.8	51.6	52·7 56·6	54·4 56·8	54
28	62·1	37·9 46·1	52·3 56·7	58.4	55.4 61.4	49·0 52·1	46·6 51·8	52·8 53·1	50.6	47·2	20	63.1	48.6	59.0	59.6	60.7	56.5	54.1	54.5	54.8	53
29 30	66.3	46.3	60.6	63.4	64.7	58.5	56.0	56.6	57.3	55.8	30	71.3	49.8	59.5	65.9	67.0	54.3	52.8	56.8	56.6	51
3 I	71.0	51.2	61.6	67.6	65.1	51.4	55.3	58.2	57.3	50.0	31	72.7	48.1	67.9	70.3	68·o	60.4	60.1	61.6	58.6	_56
Ieans	63.7	44.2	55.7	59.9	59.0	5 I · 2	50.1	5 2 · I	52.1	47.8	Means	74.5	54.3	64.8	69.4	68.9	60.9	59.2	60:7	60.0	57
				.J	UNE.										Au	GUST.		1	1		
d	600	0	54.0	-6.7	60.0		47.5	47.8	· .	47.0	d T	81.6	58°·3	71.3	76°8	77.6	66°4	63.0	67·0	66 ° 0	62
I	62·3 68·0	44·7 46·2	54·9 58·7	56·7 66·6	63.2	51·7 56·8	47·5 52·4	47·8 58·6	50·1 57·8	47·0 53·0	2	73.2	57.9	65.9	70·I	64.3	57.9	63.2	65.0	61.1	55
3	68·o	46.9	56.7	62.7	66.4	54.0	49.6	52.7	54.6	51.0	3	71.8	53.3	64.6	67.8	66.8	57.8	58.2	59.8	60·1	55
4	73.3	45.6	62.2	69.8	67.7	51.8	56.3	61.4	58.6	48.2	4	71.3	50.7	61.8	67.3	66.6	57.4	57.7	60.6	59.0	52
5	59.6	47.3	55.0	53.9	50.4	53.2	50·I	50.0	49.4	50.4	5	68.6	51.6	59.9	63.6	59.3	57.6	58.6	60.8	57.9	56
6	59.5	48.1	52.5	53.4	57.6	55.3	49.9	51.5	54.6	53.4	6	70.9	50.1	58.2	64.4	62·6 70·2	58·0	55.8	58·1	57·1 58·3	58
7	58.0	46.1	52.4	48.6	52.5	46.4	46.9	47·I	49.4	43.9	7 8	72·2 67·2	52·4 46·3	58·5 59·8	64.2	64.1	63.6	55.1	58.8	62.0	62
8	57·0	40.3	51·8 54·6	51·4 58·4	53·4 63·4	47·7	46·9 50·0	46·9 51·6	48·4 53·4	46·8 48·5	9	71.0	61.7	65.6	68.6	67.4	61.8	62.9	63.8	63.2	60
9	65·6 65·8	43·0 47·1	58.5	65.3	63.9	55.2	52.1	56.0	54.6	50.8	10	73.3	59.8	65.3	69.8	67.0	61.6	62.6	64.5	62.0	55
ΙΙ	69.8	50.1	62.8	66.6	63.7	52.8	54.9	55.0	52.4	52.4	11	75.5	48.8	63.9	69.9	74.5	60.1	58.3	59.8	61·1	57
I 2	7Í·1	52.2	56.0	61.1	68.9	61.0	55.2	57.7	62.1	59.4	I 2	74.7	49.4	68.5	72.8	72.9	60.3	62.1	61.3	59.2	57
I 3	77.6	55.3	60.7	74.4	73.8	62.7	58.4	61.3	60.8	55.6	13	79.4	55.4	70·3 69·9	76·6	77·0	62.0	64·7 64·7	63·3 64·9	64·0 61·4	59
14	74.5	53.1	66.6	71·6 72·8	66.4	62.9	61·8 58·1	64·8 62·7	64.3	60·I	14 15	78∙8 68∙o	57·4 57·5	64.6	75·5 66·2	62.3	59.0	61.6	61.0	57.6	56
15 16	76·3 64·8	50·8 49·2	55·4	59.9	71·7 58·6	60·3 56·7	51.5	54.8	59·7 55·0	53·9 53·7	16	75.9	55·2	68.3	74·I	72.9	60.8	60.1	60.0	59.0	5
17	72.6	45.5	61.9	67.8	71.6	59.3	56.6	60.6	62.6	57·I	17	74.4	55.0	63.3	68·o	70.8	59.4	57.8	57.0	58.6	53
18	81.5	48·6	68.6	74.6	76.7	61.0	62.0	64.0	64.8	58.4	18	71.6	47.1	62.0	66.7	68.8	56.7	56.0	58.1	57.1	53
19	83.4	52.4	69.9	77.0	78.6	59.8	62.8	65.8	65.8	59.2	19	70.9	51.1	60.2	66.6	68.3	55.3	56.2	58.8	58.7	5
20	75.8	54·1	6o·8	69.8	74.5	59.7	59.0	63.0	64.8	54.9	20	72.2	51.2	66.6 66.0	68·7 70·0	74.0	59·3 58·6	59.6	58·7 60·4	59·7 61·4	50
2 I	70.2	54.2	57.9	64·1 69·6	65·5 68·8	55.6	57.4	58·3 56·9	55·2 56·7	53·0	2 I 2 2	77.4 77.8	51·5 51·2	65.4	73.2	74.0	62.5	59.8	62.8	61.8	5
22	72·8 65·3	48.3	61·7 52·6	62.3	61.2	57·1 56·6	55.0	56.5	53.2	50.6	23	79.2	58.3	65.0	69.6	75.8	64.2	63.0	65.8	68.2	6
23 24	72.9	45.7	60.6	68.2	67.5	65.3	54.6	57.3	58.3	59.8	24	83.7	56.0	72.6	77.0	79.8	63.4	64.6	64.2	64.2	6
24 25	77.2	53.0	64.3	66.8	74.8	61.1	59.8	61.1	62.0	54.0	25	81.3	56.2	63.4	77.4	79.8	59.6	61.0	67.6	66.5	5
26	72.2	47.2	65.8	70.6	69.4	56.5	58.3	58.8	57.6	51.7	26	65.8	55.2	57.9	62.5	63.9	63.1	56.9	60.8	62.7	5
27	8o·8	45.8	66.6	75.3	79.6	64.0	58.3	61.0	62.8	56.8	27	69.4	53.8	61.8	60.8	65.0	63.6	57.8	59.6	58.6	6
28	80.3	56.1	68.6	74.0	78.1	66.0	58.8	57.6	58.3	57.0	28 20	76·2 81·9	54·6 52·1	62·1 64·1	69·8 75·3	71·6 80·8	60.7	59.2	62.9	63.0	5 5
		54.4	73.3	78·1	77.6	67.6	65.6	67.4	67·I	64.4	29		1		'			1 51 1			1 -
_	81.9			80.8	86.0	70.0	67.5	65.2	67.0	62.0	20	70.1	54.4	63.4	70.7	77·I	62.5	62.5	05.4	66.8	6
29 30	88.1	56.5	78.6	83.8	86.0	70.0	67.5	65.2	67.0	62.9	30 31	79·I	54·4 58·0	63.4	70·7 69·7	77·1	62·5 63·7	62.5	65.4	63.6	6

Days of the Month.	Maxi- mum.	4 ft.	Bulb The above th		·>,					On											
d I 2 3				e Ground	l			t-Bulb Tl t. above t			Days of the		4 ft.	Bulb Ther above th	e Ground	s,			t-Bulb Th		
1 2 3		Mini- mum.	9 ^h	Noon.	15h	21 ^{lı}	9 h	Noon.	15 ^h	21 ^h	Month.	Maxi- mum.	Mini- mum.	9 h	Noon.	15 ^h	21h	9 h	Noon.	15h	21h
1 2 3				SEP	TEMBE	R.					d				Nov	EMBER				1	
3.	74.2	58°3	69.3	72·4	73.0	58.4	61.3	62.4	。 59·0	56°1	I	59.0	44· I	49.8	55°0	56·6	47.6	48°1	51.5	50°8	46.8
	75.9	49.1	68.6	73.4	73.6	59.4	60.0	62.2	62.7	57.3	2	55.7	46.9	50.6	50.6	55.5	53.9	49.1	49.6	51.6	51.1
4 1	82.0	45.9	58·4 68·1	75·6 73·5	79·7	59.3	58·2 60·3	65·7 65·6	66.5	57·7 56·0	3 4	53.6	46·2 41·1	55·1 46·5	59·8 49·4	57.6	46·8 53·6	52·8 46·5	55·0 49·5	53.2	46·8 53·5
5	75·0 70·0	50·4	63.2	66.4	67.4	56.6	57.8	58.6	58.9	53.3	5	61.2	51.1	55.4	59.6	59.3	51.8	54.0	55.7	54.7	51.1
6	75.9	47.0	67.6	71.7	72.9	58.7	60.8	59·0 66·9	59·0 67·3	56·6 60·9	6	61.5	48·0 41·2	52.2	59.5	58·5 52·6	51·8 46·8	52·0 41·9	54·2 48·7	53·6 48·9	51·3
7	86·0 80·9	48·3 59·0	62·5	77·6 79·4	77·I	63.6	59·9 65·4	67.8	66.4	57.6	8	53.4 56.0	39.6	41.9	53.5	54.6	50.6	43.7	49.7	50.4	48.9
9	81.0	53.9	66.7	74.4	76.5	60.7	62.3	63.5	61.8	60.0	9	58.2	49.1	52.6	56.5	55.5	49.7	49.7	51.6	51.8	48.6
10	74·6 66·2	58.2	66·4 57·8	71·2 58·0	71.3	55.4	62·9 56·9	63·8 56·8	63·4 57·1	58·2 49·8	10	58·0 59·0	49·1 46·8	55.3	56·7 53·5	53.3	52·3 46·8	50·8 47·8	52·0 50·4	52·8 52·5	51·2
12	62.0	55·1 48·5	58.7	59.7	56.4	57.2	51.8	51.5	53.3	56.9	I 2	48.8	40.9	44·I	48.6	46.6	42.9	41.1	44.0	43.1	40.6
13	65.6	49.3	55.6	59.7	61.3	55.7	49.3	52.4	52.2	51.6	13	55.7	40.2	52.6	53.1	55.0	47.4	49·9 38·8	51.1	49.5	43.5
14 15	72·5	53·6 48·8	63·3 56·9	68·5	71.2	58·2 54·5	50.6	63·2	53.1	52·7 51·8	14	48·1 53·7	32·7 30·0	41.0	52.8	40·9	32·7 42·6	43.8	34·8 48·8	34·0 45·9	30.
16	68.5	48.6	58.7	65.2	63.6	56.6	53.9	55.4	54.8	53.8	16	48.1	39.0	43.9	47.5	45.3	39.4	41.7	43.1	41.2	37.4
17	71.1	54.0	57.6	62.1	65.4	55.6	56.0	59.5	55.9	50.4	17 18	43·0 46·0	32·2 32·0	36·8 36·6	42.3	42.0	35·5 36·4	35·6 35·6	39.5	39·2 39·5	34.
18	63.5	52·0 47·6	56·3 54·5	57·6	59·6 57·2	54·0 50·5	51·0 49·1	51·0 48·4	50·3 48·5	49·0 45·7	19	41.3	28.9	33.0	34.8	35.8	41.3	32.8	34.1	35.4	35° 40°
20	55.7	45.3	47.8	51.6	55.3	47.9	44.6	47.9	49.8	44.0	20	39.0	33·ó	35.2	38.3	37.4	35.0	33.8	33.7	32.8	32.
2 I 2 2	59·6 61·5	44·2 37·0	51.3	56·6 58·4	59·0	49.6	47·0 46·3	48·5 48·8	49·0 50·8	44·8 42·4	21	38.5	32·I	33·9 36·6	38.3	38.0	37·9 38·6	32·8 33·9	34·8 36·8	34·5 35·8	35·
23	67.1	35.3	54.5	62.3	62.8	47.7	49.7	53.8	54.7	46.8	23	38.4	35.9	36.9	38.3	38.3	37.7	34.8	35.5	35.9	36.
24	70.0	41.7	50.2	65.4	65.4	52.6	50.2	55.9	55.9	50.1	24	44.0	33.6	33.6	41.8	42.6	40.6	33·0 37·8	38.8	37.9	38.
25	73.9	41·6 40·1	57·6 54·9	66·1	67·9	48·4 60·2	55.0	53·8 56·5	54·9 57·9	46·6 55·4	25 26	46·5 52·0	37·3 44·8	50.5	44·3 51·6	45.7	39·5 49·6	49.1	41.4	42·5 48·5	38· 48·
27	66.4	50.2	56.1	62.4	65.0	54.8	51.7	53.2	56.0	51.7	27	49.0	42.4	46.3	48.3	48.5	43.1	42.8	45.2	44.2	41.
28	63.7	49·3 46·2	55.6	62.2	61.4	57·8 46·6	52·4 45·4	56·2 48·0	56.5	51·1 42·8	28 29	51·8 53·9	42·0 44·1	50.7	51.6	50.6	46·8 52·5	48·8 47·8	50·2 49·8	49·5 '	45.
30	59·0 55·8	33.8	51·2 47·6	57·1 52·6	57·1	46·I	44.8	47.8	47·8 47·9	43.8	30	55.7	51.3	52.9	53.9	54.4	51.8	51.5	52.8	53.4	51.
Ieans	68.9	48.3	58.6	64.9	66.1	55.1	54.3	56.5	56.6	51.8	Means	51.0	40.7	45.1	49.0	49.0	44.8	43.4	45.7	45.5	43.
				Oca	rober.		1 1				d			1	DECE	MBER.	· · ·				ŀ
d	68°3	39.9	52.0	64.8	66.8	55·8	49.7	54·8	56°1	51.7	I	53.0	45.6	49.3	52.9	50.5	46°4	45.5	47°I	45.9	43.
2	59.8	48·1	56.1	57.6	59.0	48·1	53.4	55.4	56.0	48.1	2	54.1	45.6	49.8	52.0	51.2	53.9	46.8	47.9	47.8	49.
3	68.6	48·0 50·5	58·5 56·8	64·9 59·4	64·9 60·6	58·4 52·5	55.3	56·8 51·3	58·3 52·3	57·4 48·5	3 4	50·2 51·2	42·5 52·3	45.5	48·4 50·6	47·9 43·8	48.4	46.3	42.3	42·1 42·6	39
4	63.0	41.0	49.4	58.3	59.6	56.3	47.6	52.9	52.8	52.4	5	43.9	36·1	39.4	42.9	42.0	36.3	36.0	38.8	37.8	34
6	59.6	52.4	56.6	56.0	57.0	52.6	53.5	51.4	52.0	49.6	6	51·6 56·2	33.2	35·4 50·8	39·7 51·6	43·6 50·9	51.6	33·7 46·6	36·5 48·0	39.6	50
7 8	62.0	43·3 36·0	54.3	57·1	59·5 62·0	44·4 44·9	49·0 47·9	49·8 52·3	48·8 52·0	41·1 44·0	7 8	50.7	49·I	48.1	50.2	49.8	49·3 45·6	44.3	46.1	49·6 46·0	45
9	63.1	43.0	51.6	60.9	60.4	54.9	49.1	52.6	52.8	51.7	9	46.0	42.1	44.2	45.7	44.7	43.8	44·1	44.2	43.4	43
10	60.4	50.2	53.6	57·7 56·4	59.0	54.6	50.8	53·8 51·8	54.0	52·0 40·8	10	45.0	40·8	42.9	44.0	44·5 42·6	40.8	41·8 39·2	42.3	42·9 40·7	40
11	59·1	40·9	54·4 45·4	57.3	56·4 57·9	40·9 44·6	52·4 44·5	52.1	50·9 51·8	44.0	I 2	43.4 45.8	40.6	42.6	44.7	43.5	43.6	42.6	44.0	42.8	43
13	54.0	40.2	51.5	53.5	52.5	52.0	49.7	51.8	51.3	49.8	13	49.0	43.2	46.2	48.6	48.0	44.1	45.8	46.9	47.0	42
14	52·9 60·6	49.4 50.2	51.4	52·6 59·8	51·8 58·1	51·8 54·7	50·5 52·8	51·9	51·6 55·9	51·7 53·6	14	50·9 46·6	44·5 39·4	45.7	50·0 40·8	47.5 42.9	45·9 39·6	44.8	47.1	45·2 41·2	45 38
15	60.2	51.4	54.1	57.8	58.1	52.8	25.1	54.7	23.2	51.1	16	14 ·8	37·I	42.8	44.6	44.6	38.6	40.5	40.7	41.3	36
17	56.1	50.4	52.6	55.2	55.6	50.8	49.4	51.3	50.9	48.8	17	49.0	35·I	44.3	47.6	47.8	47·6 45·6	41.8	44.8	44.9	45
18	57·8 58·3	46·7 44·4	51.4	56·8 55·7	56·0 55·8	47·6 51·6	49·4 47·6	50·2	50·0 49·9	44·6 48·1	18	50·7 46·3	45·6 38·1	48.5	48·6 43·0	50.3	39.6	47·2 39·6	47.8	49.3	45
20	55.6	48.0	50.8	53.6	54.9	48.0	49.4	50.8	50.5	47.0	20	43.8	32.1	34.6	43.6	40.8	39.0	33.7	39.8	38.9	37
2 I	57.9	43.0	47.5	54·9 56·0	53·3 57·6	45.9	46.5	51·6 52·8	50.4	45.9	2 I 2 2	43.3	35.2	38.6	38·8	40·5 39·6	36·0 35·8	37·7	38.7	37·8 38·5	34
22 23	58.1	42·2	53·2 54·6	56.0	57.4	50.9	51.0 52.8	53.8	52·3 54·6	49·4 49·8	23	39·8 37·5	34·2	34.6	35.6	37.5	36.9	33.9	34.9	36.4	35
24	62.7	48.2	53.8	58.8	61.4	52.1	53.4	56.9	57.8	52.1	24	39.2	29.9	34.3	38.8	38.3	29.9	33.8	37.5	37.3	29
25	62.1	51·0 49·8	57·3 53·6	58·6	58·3 58·0	55.9	56.4	57·8 51·9	56·6 50·8	55·6 49·8	25 26	39·0	26·9 30·1	27·6 36·1	35.4	37.1	33.4	27·6 35·3	33.4	34·8 42·6	32
26 27	57.1	43.1	51.6	54.4	55.1	47.6	50.6	49.4	47.5	44.5	27	53.0	39.1	47.6	49.1	48.6	47.4	46.8	47.6	45.9	46
28	54.1	34.7	45.6	50.6	52.3	43.8	43.1	46.5	47·1	42.9	28	51.9	33.6	50.9	50.6	48.6	33.6	49.8	49·6 38·6	48.4	33
29	55.0	40·I	47.5	51.7	49·4 51·8	47·6 50·2	46·2 47·8	47·1 48·9	46.5	46·4 50·2	29 30	43·9 45·6	30.3	37.0	43.3	45.3	35.3	35·8 36·0	41.6	37.8	33
30	54.3	44.3	49.9	51.4	51.5	44.2	48.3	48.3	47.8	43.7	31	45.4	34.6	41.7	43.6	42.5	34.6	41.1	41.8	40.8	

	Number			Monthly Ar	mount of Rain colle	cted in each Gauge	.		
MONTH,	of Rainy	Self- registering	Second Gauge	On the roof	On the roof of the	On the roof of the	Gauges p	partly sunk in the	ground.
1914.	Days (o ⁱⁿ ·oo5	Gauge of Osler's Anemometer.	at Osler's Anemometer	of the Octagon Room.	Magnetic Observatory.	Photographic Thermometer Shed.	In Magnetic Pavilion Enclosure.	In Observatory Grounds	In Magnetic Pavilion Enclosure.
	or over).	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
T		in.	in.	in.	in.	in	in.	in.	in.
January	13	0.202	0.135	0.324	0.318	0.414	0.204	0.433	o ·467
February	14	1 .256	1.132	1.635	1 ∙967	2 · 340	2 .440	2 · 296	2 • 45 5
March	26	1 ·806	1 .829	2 · 862	3 · 339	3 .779	3 . 928	3 .779	3 •902
April	I 2	o·556	0 .477	0.771	0 •950	1 .098	1.110	1 .125	1 .120
May	10	0.921	0.971	1 .343	ı ·499	1.590	1.631	1.616	1 .642
June	9	o ·809	0.917	1 · 139	1 ·366	1 .398	1 .338	1 .418	1.323
July	17	0 • 901	0.853	1 . 291	1 .385	1 .452	1 ·409	I ·440	1.354
August	ΙΙ	o·787	0.788	1.085	1 · 161	1 .218	1 · 174	I .22 I	1.131
September	6	0.388	0.364	0.575	o ·685	0.712	0.732	0.725	o ·695
October	10	0.456	0.530	0.745	0.884	0.946	0.957	0.930	0 .945
November	18	1 · 396	1 .412	1.977	2 · 163	2 . 483	2.616	2.514	2.582
December	27	3 · 349	3 .434	4 . 288	4 .933	5 .693	6.018	5 · 5 2 6	5 ·891
Sums	173	12.830	12.842	18 .035	20.650	23.123	23.857	23.023	23 · 507
Height of ground	}	ft. in. 50. 8	ft. in. 50. 8	ft. in. 38. 4	ft. in. 21. 6	ft. in.	ft. in. 0. 5	ft. in. 0. 5	ft. in.
receiving Surface above mean sea level	}	ft. in. 205. 6	ft. in. 205. 6	ft. in. 193. 2	ft. in. 176. 4	ft. in. 164. 10	ft, in. 149. 6	ft. in. 155. 31	ft. in.

MEAN HOURLY MEASURES of the HORIZONTAL MOVEMENT of the AIR in each Month, and Greatest Hourly Measures, as derived from the Record's of Robinson's Anemometer.

Hour ending.						191	4.				-	****	Mean fo
_	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
h	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
I	13.6	16.4	13.8	8.8	9.6	8.4	8.4	7.8	9.2	8·1	11.7	16.7	11.0
2	13.6	15.6	14.4	8.7	9.8	8.1	8.3	7.5	9.1	7.8	12.4	15.9	10.0
3	14.0	16.5	13.7	9.2	9.0	7.5	8.1	7.4	9.0	7.8	12.8	16.4	10.0
4	14.0	15.5	14.1	8.7	9.0	7.8	7.5	7.4	9.5	7.9	13.3	15.1	10.8
5	14.1	15.7	14.2	9.3	8.9	7.6	7.4	7.1	9.3	8·1	14.0	15.4	10.0
6	13.8	15.0	14.3	9.1	9.4	7.7	7.6	7.3	8.8	8·o	13.8	15.1	10.8
7	13.4	15.2	14.2	9.4	10.0	7.6	8.7	7.5	8.7	8.3	14.4	15.1	11.0
8	13.9	15.0	14.7	<u>9</u> ٠9	11.1	8∙o	8.8	8.8	9.6	8.2	14.5	15.4	11.
9	13.2	13.8	14.9	12.0	11.8	8.8	9.8	9.3	10.4	8.4	15.1	15.7	11.0
ıó	13.9	14.3	16.3	13.3	12.9	9.5	10·8	9.7	11.8	9.5	15.6	15.6	12.
11	14.0	15.1	17.3	14.1	13.8	10.5	11.1	10.7	13.0	10.7	16.7	15.7	13.
Noon.	14.5	15.7	17.3	15.1	14.2	11.7	11.1	11.9	13.3	11.1	17.7	15.6	14.
I 3	15.3	16.4	18.4	15.6	14.6	11.2	12.7	11.9	13.4	I I • 7	17.9	15.9	14.0
14	16.4	16.3	18.7	16.2	15.3	11.1	13.5	12.6	13.9	10.8	17.8	16·ó	14.
15	16.3	15.4	18.0	17.2	14.9	10.8	13.5	12.5	14.0	10.5	16.7	16.3	14.
16	15.3	15.2	18.6	16.8	14·I	11.7	12.6	12.2	14.2	10.3	16.1	15.0	14.
17	14.7	14.6	18.7	16.1	13.8	11.0	12.5	11.7	14.0	9·8	15.1	14.8	13.
18	14.7	14.1	17.1	15.2	13.7	10.8	12.6	11.3	13.1	9·5	13.9	15.2	13.
19	14.7	14.2	15.5	12.5	12.8	10.7	11.4	10.5	12.0	9.1	13.9	15.3	12.
20	15.3	14.3	15.5	11.8	11.5	10.9	11.2	9.6	11.8	10.0	13.4	15.7	12.0
2 I	14.4	14.9	15.1	11.3	10.7	9.3	10.3	9.6	11.3	9.6	12.6	16.7	12.
22	14.3	15.1		11.0		8.7	9.4	9.0	10.7	8.6	12.3	15.8	11.0
23	14.3	15.6	14.2		9.9	9.1	9.6	8.7	10.1	8.8	12.0	16.4	11.
Midnight.	14.4	16.1	13.9	9·7 9·9	9·o	8.7	8.9	8.2	9.9	8.5	12.4	16.5	11.
Means	14.4	15.3	15.7	I 2·I	11.6	9.5	10.5	9.5	11.3	9.2	14.4	15.6	12.
$ \frac{\text{Greatest}}{\text{Hourly}} \begin{cases} (1) \\ \end{cases} $	37	42	44	44	35	26	31	25	37	25	40	55	
Measures (2)	29	32	33	33	27	2 I	25	2 I	29	2 I	3 I	4 I	

^(1.) Deduced from the motion of the cups by the formula V = 3 v;

where v is the hourly motion of the cups in miles. See Introduction.

^{(2.) ,, ,, ,,} V = 2 v + 4;

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

 \mathbf{OF}

LUMINOUS METEORS.

1914.

Month and 1914.		Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
March	17	h m s 21. 21. ±	ss	1 <	White	s 4.0	Faint	25	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
${f A}$ pril	20	20. I5. I	D	2	\mathbf{White}	0.4	None	14	258 + 47 to 238 + 49
три	,,	20. 25. 14	$\tilde{\mathrm{D}}$	2	Yellow	0.4	None	14	258 + 47 to $238 + 49225 + 72$ to $204 + 62$
	,,	20. 32. 30	Ð	I	Blue	1.5	2 secs.	31	213 + 52 to 163 + 52
	,,	21. 50. 30	D	I	White	0.3	None	II	262 + 33 to 254 + 41
	,,	22. 25. 44	M	I	Blue	1.0	\mathbf{None}	28	219 + 88 to 203 + 60
	,,	22. 46. 41	$\overline{\mathbf{D}}$	I	White	0.5	\mathbf{None}	19	279 + 39 to 301 + 47
	,,	22. 56. 13	D N & D	2	White	0.3	None	10	262 + 46 to 267 + 56
	,,	22. 58. 37	N & D N,D & AB	I	Bluish-white White	1.0	$egin{array}{c} \mathbf{None} \\ \mathbf{Faint} \end{array}$	22	213 + 47 to 183 + 63
	"	22. 59. 13	N,D & AB N & D	I <	White	2.0	rame	15	281 + 39 to 300 + 45
	,,	23. 5. 31 23. 24. 23	NæD	3	White	3.0	Faint	56	213 + 37 to 153 + 16 219 + 27 to 225 + 55
	,,	23. 28. 22	$\tilde{\mathbf{D}}$	2	White	0.3	None	15	177 + 54 to 202 + 54
	,,	23. 33. 33	\mathbf{D}	2	\mathbf{White}	0.3	None	24	245 + 46 to 210 + 46
	,,	23. 35. 44	\mathbf{D}	2	\mathbf{White}	0.3	${f None}$	22	198 + 54 to 215 + 36
	,,	23. 41. 44	$\mathbf{\bar{D}}$	2	Bluish-white	0.3	None	16	210 + 17 to 203 + 0
	,,	23. 42. 24	D	2	Yellow	0.3	None `	29	207 + 19 to 177 + 15
April	2 I	0. 10. 30	D & M	3	. Yellow	0.3	None	3	225 + 38 to 222 + 37
-	,,	0. 40. 26	D & M	3	Bluish-white	0.3	${f None}$	11	264 + .57 to 248 + .65
	,,	0. 54. 14	M	2	White	0.5	\mathbf{None}	16	210 + 18 to 194 + 12
	,,	1. 28. 52	D & M	3	Bluish-white	0.3	None	14	252 + 49 to 231 + 55
	,,	1. 39. 14	D & M	2	White	0.3	None	13	243 + 32 to 228 + 27
	,,	1. 42. 55	M D	3	$\begin{array}{c} \textbf{White} \\ \textbf{White} \end{array}$	0.4	$egin{array}{c} \mathbf{None} \\ \mathbf{None} \end{array}$	20 16	279 + 38 to 255 + 33 261 + 47 to 258 + 31
	,,	1. 49. 44 2. 24. 55	D	3 2	Blue	0.3	None	16	17
	,,	2. 41. 48	D	2	Blue	0.3	Faint	16	202 + 52 to 175 + 51 231 + 26 to 216 + 18
	"	2. 47. 30	\mathbf{p}	2	Bluish-white	0.2	None	12	231 + 20 to 210 + 18 222 + 35 to 210 + 28
	,,	2. 47. 59	$\overline{ m D}$	I	White	0.2	\mathbf{Faint}	24	246 + 52 to 206 + 53
	,,	3. 3. 37	D	I	${ m White}$	0.3	${f None}$	0	Stationary at 284 + 11
	,,	3. 7. 39	D	3	\mathbf{White}	0.2	\mathbf{None}	12	286 + 35 to 299 + 39
•	,,	3. 11. 39	D	2	Blue	0.7	$\mathbf{F}_{\mathbf{aint}}$	18	286 + 31 to 295 + 15
	,,	3. 15. 34	D & M	2	Blue	2.0	\mathbf{None}	57	208 + 32 to 262 + 6
	;;	3. 25. 12	\mathbf{D}	3	Yellow	0.2	None	10	291 + 27 to 281 + 33
	,,	3. 36. 29	D D & M	2	White Bluish-white	0.3	None None	II	265 + 27 to 254 + 31
	,,	3. 50. 10 20. 15. 1	S	I 2	Bluish-white	0.2	None	14 11	224 + 62 to 192 + 64 264 + 56 to 250 + 67
	,,	20. 26. 13	$\ddot{\mathbf{D}}$	3	White	0.4	None	12	175 + 15 to 175 + 3
	,,	20. 31. 33	AB	2	White	0.7	Slight	22	200 + 57 to 183 + 78
	,,	20. 40. 8	\mathbf{s}	2	Bluish-white	0.5	None	II	248 + 65 to 258 + 74
	,,	20. 48. 52	\mathbf{S}	2	\mathbf{Y} ellow	0.4	$\underline{\mathbf{None}}$	9	230 + 57 to 215 + 64
	,,	21. 28. 47	S	2	Yellow	0.5	\mathbf{None}	23	220 + 37 to 198 + 55
	,,	21. 36. 52	S & AB	I	White	0.8	None	22	153 + 63 to 108 + 58
	,,	22. 29. 37	S	2	Blue	0.6	None None	22	248 + 58 to 203 + 63
	"	22. 33. 33 22. 45. 16	$rac{ ext{AB}}{ ext{S}}$	2	$egin{array}{c} White \ White \end{array}$	0.6	None None	29 11	210 + 65 to 153 + 55 275 + 57 to 269 + 68
4			ز	_	1171.*/		N		
A pril	22	0. 48. 19	$rac{\mathbf{s}}{\mathbf{s}}$	2	$egin{array}{c} ext{White} \ ext{Reddish} \end{array}$	0.8	$egin{array}{c} ext{None} \ ext{Slight} \end{array}$	10	231 + 44 to 216 + 46
	,,	1. 7. 7 20. 46. 59	\mathbf{S}	I 2	Reddish White	0.8	\mathbf{None}	15	201 + 52 to 168 + 68 168 + 35 to 173 + 50
	,,	20. 49. 35	$\overset{\circ}{\mathbf{D}}$	2	Yellow	0.7	Faint	17	251 + 36 to 234 + 27
	"	20. 59. 46	s	2	White	0.3	None	7	$\frac{231}{170} + \frac{30}{22} \text{ to } \frac{234}{168} + \frac{27}{16}$
	,,	21. 6. 14	D	2	Blue	0.5	Slight	12	$\frac{1}{0}$ + $\frac{22}{22}$ to $\frac{108}{108}$ + $\frac{10}{108}$
	,,	21. 11. 20	D	3	White	0.3	None	15	179 + 38 to 175 + 23
	,,	21. 18. 6	D & S	2	White	0.5	None	13	218 + 30 to 230 + 38
	,,	21. 38. 47	\mathbf{s}	2	White	0.6	\mathbf{None}	18	171 + 23 to 153 + 33
				<u> </u>				<u> </u>	

Month and	Day,	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
April	22	h m s 21. 38. 56 21. 48. 35 22. 4. 33 22. 7. 7 22. 22. 52 22. 41. 15 22. 53. 31 23. 26. 20 23. 37. 29 23. 38. 10 23. 44. 54	S D S M D D D D D D D D S S	I 2 2 1 2 3 3 3 2 2 3 3 3 2 2	Bluish-white White Yellow Bluish-white White Bluish-white White White White White	8 1·5 0·3 0·4 1·0 1·2 0·3 0·3 0·3 0·5 0·5	Slight None None Faint None None Faint None Faint None None	0 14 8 23 32 18 8 8 7 12 16 23	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
April	23	0. 4. 38 0. 36. 6 0. 40. 26 0. 46. 35 1. 15. 6 1. 30. 19 2. 2. 48 2. 25. 25 2. 28. 26 2. 33. 23 2. 39. 52 2. 42. 58 2. 46. 8 2. 48. 15 2. 51. 20 2. 55. 4 2. 57. 57 2. 58. 14 3. 3. 52 3. 5. 27 3. 13. 46 3. 25. 10	S	I I I 3 I 2 2 2 2 I I I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 2 2 3 I I 2 3 I I 2 3 I I 2 3 I I 2 3 I I 2 3 I I	Yellow White Yellow White White White Blue Yellow Bluish-white Bluish-white White Yellow White Yellow White Blue Bluish-white Blue Bluish-white Blue Bluish-white Blue Bluish-white White	1·2 0·7 0·4 0·4 0·4 0·5 0·5 0·5 0·5 0·4 0·3 1·0 0•5 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3	Slight Slight None None None None None Slight Faint None None Faint None Slight: 0.3 secs. Bright: 0.5 secs. Bright: 0.5 none None None None None None	26 62 15 25 11 10 17 12 16 9 29 2 21 18 21 28 44 18 18 17 24 20 13 12	248 + 32 to 222 + 22 210 + 19 to 278 + 44 156 + 55 to 131 + 63 162 + 57 to 125 + 45 252 + 6 to 245 - 3 281 + 26 to 281 + 16 297 + 57 to 264 + 56 155 + 63 to 131 + 58 321 + 63 to 333 + 48 239 + 13 to 234 + 6 250 + 38 to 218 + 30 221 + 26 to 221 + 24 254 + 31 to 254 + 10 254 + 10 to 243 - 5 255 + 20 to 273 + 33 264 + 50 to 219 + 68 228 + 33 to 281 + 34 248 + 22 to 231 + 30 242 + 41 to 218 + 39 240 + 63 to 203 + 65 230 - 9 to 243 + 12 252 + 64 to 210 + 79 219 + 14 to 213 + 3 251 + 19 to 243 + 10
August	10 ", ", ", ", ", ", ", ", ", ", ", ", ",	21. 12. 14 21. 23. 5 21. 28. 28 21. 31. 11 21. 34. 38 21. 36. 14 21. 40. 45 22. 4. 52 22. 9. 22 22. 12. 12 22. 20. 5 22. 23. 24 22. 34. 54 22. 40. 34 22. 56. 59 23. 25. 58 23. 38. 30 23. 48. 46 23. 54. 56	S & M S & M S & M M M S & M S & N N M N & S M N & S M N & S M S & M	2 2 1 2 2 2 2 3 2 2 3 2 2 2 1 2 2 1 2 2 1 1 2 1 1 1 1	White Bluish-white Blue Bluish-white White Blue Yellow Blue Bluish-white White Yellow Yellow Yellow White Bluish-white Bluish-white White Bluish-white White Bluish-white Bluish-white Yellow Bluish-white	0.6 0.4 0.7 0.6 0.5 1.0 0.4 1.5 0.6 0.5 0.6 0.7 0.5 0.5 0.6 0.7 0.5 0.6	None None Slight None None Slight None Slight None None None None None None Bright: 0.2 secs. None None None Faint Faint	8 11 16 23 12 29 21 66 21 16 24 23 18 24 32 36 12 18	324 + 63 to 342 + 66 104 + 62 to 87 + 71 205 + 17 to 219 + 27 308 + 43 to 325 + 64 87 + 68 to 51 + 73 267 + 7 to 297 + 8 275 + 8 to 297 + 8 200 + 42 to 300 + 47 273 + 43 to 245 + 52 301 + 39 to 315 + 59 313 + 48 to 333 + 42 33 + 66 to 323 + 78 215 + 22 to 230 + 34 259 + 42 to 290 + 54 318 + 48 to 273 + 43 263 + 58 to 175 + 72 198 + 55 to 183 + 62 191 + 67 to 193 + 85

Month and D	Day,	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
	1	h m s				s		0	0 0 0 0
August	11	0. 9. 56	S	I	Green	0.8	Bright: 0.5 secs.	31	336 + 47 to 27 + 62
	,,	0. 14. 44	M	2	\mathbf{Y} ellow	0.5	None	17	45 + 77 to 53 + 61
	,,	0. 23. 11	S & M	3	White	0.4	None	14	246 + 64 to 270 + 56
	,,	o. 53. 45	\mathbf{S}	I	Bluish-white	1.0	Faint	56	8 + 58 to 290 + 38
	,,	0. 58. 38	S	I	Reddish	0.2	Slight	23	351 + 59 to 318 + 46
	,,	1. 17. 6	S	2	White	0.6	None	14	2 + 59 to 21 + 49
	,,	I. 25. 2	M	3	White	0.4	None	8	264 + 68 to 270 + 60
	,,	1. 53. 55	S	2	White	0.2	None	20	345 + 87 to 205 + 73
	,,	2. 7. 13	S	I	Bluish-white	0.9	Faint	25	211 + 78 to 186 + 55
	,,	2. 15. 27	M G	3	Blue	0.2	None	18	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	2. 22. 52	S	2	White	0.9	None None	40	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	2. 28. 57	S M	2	White Yellow	0·7 0·6	None	16	$\begin{vmatrix} 344 - 12 & 0 & 334 + 1 \\ 279 + 18 & to & 293 + 25 \end{vmatrix}$
	,,	2. 29. 19	S & M	2	Reddish	1	Faint	15 16	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	2. 56. 24 3. 12. 23	S & M M	I 2	Bluish-white	0.4	None	17	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	3. 12. 23 3. 21. 51	S	3	White	0.4	None	21	300 + 40 to 326 + 37
	,,	21. 28. 45	AB	3	Yellow	1.5	Bright: 6 secs.	43	299 + 7 to 261 - 14
	,,	21. 44. 19	D	2	White	0.5	None	17	164 + 86 to 165 + 69
	,,	21. 54. 27	$\overline{\mathrm{D}}$	2	\mathbf{W} hite	0.3	None	14	332 + 56 to 359 + 59
	,,	21. 54. 45	D	2	White	0.3	None	24	332 + 56 to 311 + 37
	.,	21. 55. 4	D	I	Yellow	0.5	2 secs.	27	312 + 54 to 279 + 39
	,,	21. 59. 36	$\mathbf{A}\mathbf{B}$	I	\mathbf{Y} ellow	0.5	o·3 sec.	33	309 + 8 to 278 - 5
	,,	22. 7. 54	D	2	White	0.5	None	I 2	311 + 87 to 230 + 77
	,,	22. 9. 0	D	3	Bluish-white	0.4	None	23	245 + 59 to $278 + 49$
	,,	22. 21. 49	D	2	White	0.4	None	24	270 + 30 to 249 + 15
	,,	22. 52. 17	AB	2	White	0.3	None Faint	28	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	22. 57. 24	D D	2	· White Bluish-white	0.7	None	14 16	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	"	22. 58. 35 23. 5. 29	AB	2 I	Reddish	0.8	Faint	28	$\begin{vmatrix} 34 & 4 & 40 & 60 & 77 & 43 \\ 278 & + & 37 & to & 254 & + & 20 \end{vmatrix}$
	"	23. 5. 29 23. 8. 28	D	2	White	0.5	None	15	32 + 41 to 41 + 28
	,,	23. I3. 54	D & AB	I	White	0.5	Slight	25	354 + 56 to 317 + 46
	"	23. 17. 51	AB	2	White	0.4	Slight	24	203 + 48 to 213 + 25
	,,	23. 23. 19	$\overline{\mathrm{AB}}$	2	White	0.3	None	2 1	269 + 28 to 251 + 15
	,,	23. 24. 27	D	2	Bluish-white	0.7	Bright : 1 sec.	2 I	314 + 41 to 293 + 25
	,,	23. 25. 3	D	I	\mathbf{White}	0.5	None	23	296 + 8 to 279 - 9
	,,	23. 25. 36	D	3	\mathbf{White}	0.2	None	8	2 + 58 to 17 + 61
	,,	23. 33. 28	D	3	White	0.3	None	16	0 + 58 to 332 + 57
	,,	23. 41. 14	AB	I	White	0.3	None	18	282 + 5 to 266 - 3
	,,	23. +4. +3	AB	2	White	0.5	None.	27	243 + 70 to 209 + 48
August :	12	0. 8. 34	D	3	White	0.2	None	18	233 + 26 to 219 + 15
	,,	0. 23. 9	AB	3	White	0.2	None	13	272 + 27 to 285 + 33
	,,	0. 26. 11	D	I	Yellow	I·2	Faint	27	348 + 64 to 323 + 45 8 + 64 to 338 + 79
	,,	0. 28. 8	D	2	White	0.3	Bright: 0.7 sec. None	17	323 + 80 to 282 + 80
	,,	0. 28. 28	D A D	3	White White	0.3	Slight	7 26	353 + 86 to 212 + 68
	,,	0. 37. 46	$^{\rm AB}_{\rm AB}$	I	White	0·5 0·3	None	31	281 + 42 to 243 + 66
	,,	0. 41. 38	AB	3	White	0.5	Faint	18	200 + 77 to 173 + 61
	,,	0. 48. 52	D AB		Reddish	0.5	None	24	269 + 23 to 258 + 1
	"	o. 54. 13 o. 56. 18	$^{ m AB}$	I	White	0.3	None	23	8 + 55 to $327 + 55$
	"	1. 3. 58	D D	3	White	0.3	None	18	353 + 58 to 324 + 51
	"	1. 25. 43	$\tilde{ ext{D}}$	2	White	0.3	None	15	296 + 46 to 278 + 39
	",	1. 27. 33	$\widetilde{ ext{D}}$	2	White	0.3	None	17	332 + 58 to 335 + 41
	,,	1. 27. 55	D	3	White	0.3	None	15	345 + 89 to 225 + 77
	,,	1. 29. 4	D & AB	2	Bluish-white	0.3	None	23	308 + 36 to 282 + 29
	,,	1. 33. 32	\mathbf{D}	3	White	0.3	None	8	261 + 65 to 246 + 61
	,,	1. 36. 4	$_{\mathbf{A}\mathbf{B}}$	3	$\mathbf{W}_{\mathbf{hite}}$	0.3	None	2 I	8 + 55 to 332 + 53
	,,	1. 38. 16	D	I	Yellow	0.7	None	13	321 - 6 to $311 - 14$
	,,	I. 42. 5	D	2	White	0.3	None None	18	8 + 55 to 341 + 49
			AB	1 2	\mathbf{White}	0.2	None	44	332 + 54 to 267 + 43
	,,	1. 43. 17 1. 51. 11) D	3 3	Yellow	0.3	None	15	345 + 89 to $225 + 77$

Month and	Day,	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
		h m s				s		. 0	0 0 0 0
August	I 2	1. 52. 38	D	2	\mathbf{White}	0.2	None	11	233 + 73 to $233 + 62$
	,,	1. 56. 53	\mathbf{D}	2	\mathbf{White}	0.3	None	16	0 + 85 to 255 + 76
	,,	2. I. 20	\mathbf{D}	3	Bluish-white	0.4	None	19	299 + 62 to 303 + 43
	,,	2. 10. 10	\mathbf{AB}	1	${f Yellow}$	0.5	Slight	ΙΙ	18 + 58 to 36 + 54
	,,	2. 19. 21	\mathbf{AB}	3	White	0.2	None	17	299 + 46 to 309 + 31
	,,	2. 33. 24	\mathbf{AB}	3	White	0.3	None	23	333 + 64 to 20 + 57
	,,	2. 51. 26	$\bar{\mathbf{p}}$	3	Bluish-white	0.3	None	13	325 + 42 to 308 + 37
	,,	2. 54. 25	D	I	\mathbf{W} hite	0.3	Bright: 1.0 sec.	20	2 + 62 to 2 + 82
	,,	2. 58. 32	AB	I	White	0.7	Slight	35	2 + 59 to 308 + 46
	,,	3. 5. 58	\mathbf{AB} .	3	White	0.4	None	15	29 + 62 to 47 + 54
	,,	20. 44. 58	$\frac{\mathbf{s}}{2}$.	2	White	0.2	None	35	2 + 58 to 312 + 43
	,,	21. 8. 36	S	I	White	0.5	None	26	282 + 37 to 314 + 46
	,,	21. 15. 37	S & AB	2	White	0.3	None	32	267 + 51 to 282 + 22
	,,	21. 22. 57	S	I	Bluish-white	0.5	None	24	318 + 62 to 293 + 45
	,,	21. 23. 0	AB S & AB	I	$egin{array}{c} ext{Yellow} \ ext{White} \end{array}$	0.4	None Slight	40	303 + 13 to 261 + 19
	,,	21. 34. 53.	S & AB	I	White	0.6	Slight None	26 20	279 + 38 to 267 + 15
	,,	21. 46. 5	AB	I	Yellow	0.6	Faint	29	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	21. 49. 14	S AB	1 2	White	1	None None	17	
	,,	21. 49. 56 21. 55. 17	S & AB	I	Bluish-white	0.4	Bright: 0.7 sec.	17	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	21. 55. 1/	AB	I	White		Bright: 0 / sec.	34	1 27 7
	,,	22. 6. 55	AB	1	White	1.5	None None	29	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
	,,		S	3 2	White	0.3	None	13	$\begin{vmatrix} 293 & + & 41 & 60 & 291 & + & 28 \\ 2 & + & 58 & to & 333 & + & 58 \end{vmatrix}$
	,,	22. 9. 7 22. 9. 46	Š	> I	White	0.7	Faint	15 16	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
	,,	22. 9. 40	$\ddot{ ext{s}}$	I	White	0.6	Bright: 0.3 sec.	20	183 + 72 to 192 + 86
	,,	22. IO. 7	$\overrightarrow{\mathbf{A}}\overrightarrow{\mathbf{B}}$	2	White	0.4	None None		$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
	"	22. 29. 44	$\overline{\mathbf{AB}}$	2	White	0.5	None	34 18	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	22. 30. 18	AB	I	Yellow	0.8	Bright: 5 secs.	36	$\frac{1}{257} + \frac{3}{83} \text{ to } \frac{1}{219} + \frac{1}{40}$
	,,	22. 31. 7	S	3	Bluish-white	0.3	None	15	$\begin{vmatrix} 237 + 63 & 63 & 219 + 4 \\ 27 + 63 & 63 & 357 + 5 \end{vmatrix}$
	,,	22. 36. 4	$\overset{\circ}{\mathbf{s}}$	3 2	Bluish-white	0.5	Faint	2 6	311 + 47 to 290 + 28
	,,	22. 36. 4	$\widetilde{\mathbf{s}}$	2	Bluish-white	0.5	Faint	24	308 + 45 to 288 + 27
	,,	22. 37. 54	$\widetilde{\mathbf{s}}$	3	White	0.3	None	-+ 14	303 + 52 to 327 + 5
	,,	22. 38. 40	ŝ	2	Blue	0.6	None	15	263 + 13 to 266 + 29
	,,	22. 48. 26	N & S] [White	0.4	Slight	2 I	165 + 75 to 198 - 59
	,,	22. 51. 49	\mathbf{AB}	r	\mathbf{Yellow}	0.8	Bright: 0.5 sec.	68	183 + 63 to 308 - 40
	,,	23. 4. 33	AB	I	\mathbf{Yellow}	1.5	Bright: 1.5 sec.	22	344 + 28 to 318 - 28
	,,	23. 11. 36	\mathbf{s}	2	\mathbf{White}	0.9	None	22	$\frac{311}{344} - 28 \text{ to } \frac{3}{357} - 49$
	,,	23. 17. 18	\mathbf{s}	1	\mathbf{W} hite	0.3	None	9	3 + 28 to 8 - 3
	,,	23. 23. 11	S & AB	3	\mathbf{White}	0.5	None	19	303 + 40 to 282 - 5
	,,	23. 37. 12	\mathbf{s}	3	\mathbf{White}	0.2	None	8	39 + 48 to 50 + 4
	,,	23. 46. 42	AB	2	White	0.3	None	2 I	245 + 33 to 269 + 28
	,,	23. 48. 59	\mathbf{s}	2	\mathbf{White}	0.3	None	16	315 + 38 to 296 + 46
	,,	23. 56. 53	S	> 1	White	2.5	Bright: 1.5 sec.	25	281 + 38 to 258 + 23
Lugust	12	0 2 20	S		White	0.0	None	10	42 + 52 to 29 + 48
ugusi	13	o. 3. 39 o. 13. 51	$\overset{\circ}{\mathbf{s}}$	3 2	Bluish-white	0.4	None None		$\begin{vmatrix} +2 & + & 52 & to & 29 & + & 46 \\ 348 & + & 86 & to & 224 & + & 73 \end{vmatrix}$
	"	0. 54. 28	$\overrightarrow{\mathbf{A}}\overrightarrow{\mathbf{B}}$	I	White	0·4 0·8	Slight	24 28	$\begin{vmatrix} 348 + 80 & to & 224 + 7 \\ 237 + 74 & to & 282 + 5 \end{vmatrix}$
	"	1. 0. 35	S & AB	I	White	0.4	None	18	$\begin{vmatrix} 237 + 74 & to & 262 + 5 \\ 236 + 72 & to & 249 + 5 \end{vmatrix}$
	,,	I. 0. 38	SWAD	I	White	0.4	None	16	$\begin{vmatrix} 230 + 72 & to & 249 + 3 \\ 318 + 35 & to & 300 + 4 \end{vmatrix}$
	"	1. 20. 41	S & AB	> I	White	1.2	Bright: 1 sec.	47	$\begin{vmatrix} 318 + 35 & 10 & 300 + 4 \\ 333 + 58 & 10 & 272 + 3 \end{vmatrix}$
	"	1. 28. 30	AB	2	White	0.3	None None	13	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
	"	1. 28. 45	AB	2	$\mathbf{Y}_{ ext{ellow}}$	0.6	None	35	$\begin{vmatrix} 316 & + & 32 & to & 326 & + & 2 \\ 266 & + & 64 & to & 227 & + & 3 \end{vmatrix}$
	"	1. 38. 59	S	I	White	1.0	Slight	25	$\begin{vmatrix} 200 & + & 04 & to & 227 & + & 3 \\ 296 & + & 8 & to & 312 & + & 2 \end{vmatrix}$
	"	1. 49. 44	$\widetilde{\mathbf{s}}$	2	Bluish-white	0.5	None	9	$\begin{vmatrix} 250 & + & 6 & 65 & 12 & + & 2 \\ 353 & + & 85 & 10 & 18 & + & 7 \end{vmatrix}$
	"	1. 49. 46	\mathbf{AB}	3	White	0.3	None	13	314 + 27 to 311 + 1
	"	1. 55. 31	S	2	\mathbf{Y} ellow	0.6	None	22	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	,,	2. 7. 10	$\widetilde{\mathbf{s}}$	I	White	1.0	None	25	50 + 46 to $15 + 5$
	"	2. 13. 15	$\ddot{\mathbf{s}}$	2	White	0.4	None	19	236 + 72 to 245 + 5
	",	2. 19. 22	S & AB	3	White	0.3	None	14	$\begin{vmatrix} 320 + 32 & to & 332 + 4 \end{vmatrix}$
		2. 31. 19	AB	3	Bluish-white	0.7	None	19	14 + 39 to 32 + 5
	,,	· J-· - 7		1 ,		· · ·	1	- /	1 1 1 37 5 35 1 3

Month and Day, 1914.	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
August 13 "" "" "" "" "" "" "" "" "" "" "" "" "	h m s 2. 37. 43 21. 0. 0 21. 13. 36 21. 13. 38 21. 17. 31 21. 30. 48 21. 36. 22 21. 38. 6 21. 40. 14 21. 47. 30 21. 52. 54 21. 55. 13 21. 58. 13 22. 7. 10 22. 9. 13 22. 11. 42 22. 13. 27 22. 13. 30 22. 11. 42 22. 13. 27 22. 13. 30 22. 18. 51 22. 22. 36 22. 26. 16 23. 6. 30 23. 12. 9 23. 27. 38 23. 40. 3 23. 44. 8 23. 46. 27	S & AB D D D M D & M D M D M D M D D M D D M D D M D D D D	2 3 2 1 1 3 2 2 2 2 1 3 2 1 1 2 2 1 1 2 2 1 1 2 2 2 2	White White White White White White Bluish-white Yellow White Yellow White Yellow White Bluish-white Bluish-white White Yellow White Bluish-white White Yellow Yellow Yellow Bluish-white White White White White White Bluish-white White White Bluish-white White White Bluish-white White White White White White	s 0·2 0·3 0·4 0·9 0·3 0·5 0·6 0·5 0·4 0·3 0·4 0·2 0·3 0·7 0·5 0·3 0·4 0·2 0·3 0·7 0·5 0·3 0·4 0·2	None None None Slight None None None None None None None None	18 19 25 27 35 16 17 35 14 25 18 14 18 12 23 1 15 22 25 11 25 17 28 22 14 15 12	32 + 21 to 51 + 22 300 + 46 to 327 + 46 273 + 60 to 318 + 56 278 + 37 to 263 + 14 8 + 53 to 57 + 40 20 + 60 to 36 + 47 318 + 30 to 309 + 15 210 + 65 to 339 + 85 2 + 28 to 3 + 14 219 + 72 to 213 + 47 338 + 47 to 357 + 35 8 + 58 to 2 + 45 26 + 63 to 353 + 70 306 + 44 to 278 + 49 45 + 50 to 32 + 44 315 + 29 to 299 + 12 38 + 52 to 39 + 51 295 + 44 to 282 + 35 342 + 29 to 332 + 9 210 + 65 to 209 + 40 333 + 57 to 338 + 47 308 + 75 to 331 + 9 210 + 65 to 209 + 40 333 + 57 to 338 + 47 308 + 75 to 351 + 58 330 + 12 to 323 - 4 320 + 62 to 15 + 88 344 + 26 to 326 + 10 344 + 13 to 338
August 14 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	0. 13. 22 0. 18. 30 0. 20. 14 0. 26. 41 0. 28. 16 0. 48. 9 0. 54. 23 1. 26. 59 1. 35. 47 1. 41. 56 1. 48. 24 1. 53. 30 2. 1. 0 2. 3. 15 2. 27. 30	M D M D M D M D M D M D M D M D M D M D	2 2 2 2 2 1 1 1 2 1 2 3 1 2 2 2 2	Yellow Yellow Bluish-white White Bluish-white Yellow White White White White White White White White White White White White	0·4 0·3 0·3 0·2 1·0 0·4 0·3 0·2 0·3 0·4 0·2 0·3 0·2 0·3	None None None None o.3 sec. None Bright: 0.3 sec. None None None None None None	26 14 21 15 34 22 26 9 20 21 13 17 20 11 15	210 + 65 to 141 + 70 295 + 1 to 294 - 3 278 + 38 to 263 + 55 348 + 2 to 341 - 10 267 + 57 to 15 + 88 330 - 1 to 338 - 22 284 + 42 to 272 + 18 314 + 58 to 308 + 50 315 + 62 to 284 + 52 27 + 64 to 50 + 49 332 + 57 to 323 + 70 309 + 34 to 294 + 23 282 + 44 to 309 + 50 257 + 65 to 254 + 54 296 + 43 to 284 + 32
November 13	22. 58. 46 23. 38. 25 23. 52. 7 23. 58. 56	D D W D	3 3 2 3	White Yellow Yellow White	0·2 0·4 0·7 0·2	None None None None	14 15 22 12	128 + 25 to 113 + 28 119 + 23 to 105 + 16 330 + 62 to 308 + 45 68 + 16 to 65 + 4
November14	o. o. 7 o. 3. 25 o. 4. 42 o. 9. 35	D W W D	1 3 2 3	Yellow Yellow White White	0·3 0·3 0·2 0·2	None None None None	25 18 28 13	39 + 3 to 21 - 15 11 + 57 to 29 + 42 299 + 76 to 180 + 70 165 + 61 to 186 + 71

Month and Day,	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Path of Meteor in the Sky.
November14 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	h m s 0. 16. 35 0. 19. 19 0. 23. 15 0. 30. 11 1. 37. 40 1. 30. 41 1. 50. 57 2. 14. 53 3. 9. 55 3. 22. 30 3. 35. 8	W D D D W D D W D W D W W D W W W W W W	1 1 1 3 3 2 3 2	Yellow White White White Yellow White White White White White White White White White	8 0·4 0·5 0·4 0·5 0·3 0·2 0·2 0·2 0·2 0·3 0·3 0·3	None None None Slight None None None None None None	° 28 10 21 23 18 25 10 13 36 13	8 + 33 to 29 + 12 14 + 62 to 9 + 53 348 + 12 to 2 + 27 350 + 39 to 9 + 58 98 + 15 to 114 + 26 47 + 49 to 9 + 55 93 o to 84 - 5 108 + 10 to 95 + 5 111 + 16 to 99 + 61 78 + 12 to 68 + 3 68 + 16 to 59 + 5 80 + 29 to 70 + 39
;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;;	3. 39. 27 3. 41. 48 3. 47. 34 3. 49. 35 3. 51. 34 3. 55. 54 4. 1. 55 4. 4. 27 4. 8. 43 4. 8. 52 4. 16. 5 4. 40. 47 4. 48. 5 5. 1. 51	D & W D W W W D D D D W D D W D D W D W D W	3 1 2 1 3 1 2 3 1 1 2 2 2 2 2	Bluish-white Bluish-white White Bluish-white Yellow White Yellow White Bluish-white Bluish-white Bluish-white Bluish-white	0·2 0·2 0·2 0·2 0·4 0·3 0·3 0·3 0·3 0·3 0·3 0·3	None None None None None None None None	11 14 11 13 24 12 7 9 18 14 15 20 18	80 + 29 to 70 + 39 110 + 30 to 107 + 9 158 + 19 to 164 + 6 116 + 26 to 123 + 17 224 + 72 to 266 + 72 174 + 35 to 203 + 45 197 + 57 to 191 + 67 116 + 19 to 108 + 16 90 + 43 to 77 + 46 113 + 29 to 113 + 11 177 + 58 to 200 + 54 182 + 62 to 212 + 68 72 + 34 to 96 + 42 114 + 19 to 99 + 9

The time is expressed in civil reckoning, commencing at midnight and counting from \circ^h to 24^h .

