# RESULTS

OF THE

# MAGNETICAL AND METEOROLOGICAL OBSERVATIONS

MADE AT

## THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

## 1913

UNDER THE DIRECTION OF

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ASTRONOMER ROYAL.

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# INDEX.

INDEX.

RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS IN TABULAR ARRANGEMENT:—

RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS—*continued.*

# GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS, 1913.

## Introduction.

In the present volume a sufficient 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 1913 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 five Computers. The Computers employed during the year were:—William H. Timbury, Sydney T. Divers, Frederick Brown, Harold George Showell, and Harry Joseph Mitchell.

Mr. Bryant controls and superintends the whole of the work of the Department. The routine magnetical and meteorological observations are in general made by the Computers.

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

The buildings and instruments remained substantially unchanged throughout the year 1913. For a detailed historical account of them, 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 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 the same room there are two mean solar clocks, one being of peculiar construction in order to interrupt the photographic traces at each hour. All these instruments are mounted on or suspended from supports carried by piers built from the ground.

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, on what is known as the Magnet Ground, 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, the 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).

During 1913 a new Magnetograph House has been under construction in the Magnetic Enclosure, having its centre 50 feet North-West of that of the Magnetic Pavilion. This building is to replace the present Magnet House, which is old and in need of renewal. The construction of modern magnetographs with which the new building will be equipped has also been in progress.

## § 3. *Subjects of Observation in the year* 1913.

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.

## § 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 $100^{r}·280$ until November 15, when it became necessary to insert a new wire, for which the adopted reading was $100^{r}·300$.

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

During 1913 experiments have been in progress with a view to the substitution of some other form of suspension of the magnet for the silk fibres previously used. In order to eliminate the difficulties arising from the variable torsion of the silk, quartz fibres were first tried, but their torsion was too great in proportion to their tensile strength. Successful results have been obtained, however, with tungsten wire of 0·02 mm. diameter; with a fibre about 9 inches in length, the effect of 90° of torsion is to turn the magnet through 4′. The torsion is found to change little or not at all.

Since 1913 September 2, tungsten wire has been adopted for the magnet suspension. The torsion is determined monthly; usually its effect is quite negligible, but a correction on this account is made when necessary. The change in the method of suspending the magnet has made it possible to reduce the number of observations of its collimation error from one each week to one per month. 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. In the reduction of the observations of declination the determinations of collimation error and azimuth zero reading are combined into half-yearly means.

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 thrice weekly since the tungsten suspension was mounted.

DIP INSTRUMENT.—The standard dip instrument in use during 1913 was the Airy dip circle, described in detail in the 1912 volume. Dip observations were made twelve times in each calendar month, at approximately equal intervals. Two needles, $D_1$ and $D_2$, were used, which gave results differing systematically by about 2′. The mean of the results from the two needles has been adopted.

The annual values of dip given in the volumes previous to 1910 have been corrected in succeeding volumes on account of non-coincidence of the mass centre of the needle with the pivots (see p. E v, 1912).

The dip inductor and galvanometer which was obtained in 1912 from the Cambridge Scientific Instrument Company has been used experimentally during 1913, but was not finally adopted as the standard dip instrument till the beginning of 1914.

ABSOLUTE HORIZONTAL FORCE INSTRUMENT.—This instrument is of the Kew pattern, and rests on a slate slab in the Magnetic Pavilion.

The deflected magnet, used only tó ascertain the ratio which the magnetic force due to the deflecting magnet at a given distance bears to the horizontal component of the terrestrial magnetic field is 3 inches long, and carries a small plane mirror, to which is directed a telescope fixed to, and rotating with, the frame that carries also the suspension piece of the deflected magnet: a scale fixed to the telescope is seen by reflexion at the plane mirror. The deflecting magnet is a hollow cylinder 4 inches long, containing in its internal tube a collimator, by means of which in another apparatus its time of vibration is observed. In observations of deflection the deflecting magnet is placed on the transverse deflection rod, carried by the rotating frame, at the distances 1·0 foot and 1·3 foot of the engraved scale from the deflected magnet, and with one end towards the deflected magnet. Observations are made at the two distances mentioned, with the deflecting magnet both east and west of the deflected magnet, and also with its poles in reversed positions. The fixed horizontal circle is 10 inches in diameter: it is graduated to 10′, and read by two verniers to 10″.

The instrumental constants, determined at Kew before the establishment of the instrument at Greenwich, and communicated by the late Professor Balfour Stewart, are as follow:—

The increase in the magnetic moment of the deflecting magnet produced by the inductive action of unit magnetic force in the English system of absolute measurement = $\mu$ = 0·00015587.

The correction for decrease of the magnetic moment of the deflecting magnet required in order to reduce to the temperature 35° Fahrenheit $= c = 0{\cdot}00013126\ (t-35) + 0{\cdot}000000259\ (t-35)^2$; $t$ representing the temperature (in degrees Fahrenheit) at which the observation is made.

The distance on the deflection rod from $1^{\text{ft}}{\cdot}0$ east to $1^{\text{ft}}{\cdot}0$ west of the engraved scale, at temperature 62°, is too long by 0·0034 inch, and the distance from $1^{\text{ft}}{\cdot}3$ east to $1^{\text{ft}}{\cdot}3$ west is too long by 0·0053 inch. The coefficient of expansion of the scale for 1° is ·00001.

These distances have since been verified at the National Physical Laboratory in June 1914, the new measures agreeing completely with the former values.

The value of the moment of inertia ($K$), which was originally communicated and which has been used in the reductions up to and including the present volume, is given by log $K = 0{\cdot}66643$ at temperature 30°, and 0·66679 at temperature 90°. During 1913 a monthly determination of the moment of inertia has been made by taking observations of the time of vibration of the magnet with and without a brass inertia bar, of known dimensions, attached to it. These observations indicated that the adopted value of $K$ hitherto used was too small, thus agreeing with a former determination made in 1878 (but never used), which gave log $K$ at temperature 30° as 0·66727. It was found, however, that these observations were liable to be affected by a change of torsion of the silk, owing to the extra weight, and a new series was begun (in 1914 May), using a tungsten suspension, which is not subject to this drawback. The later observations being much more accurate than the earlier set, the latter were rejected. On p. E xiv corrected mean annual absolute values of horizontal force are given instead of those previously published; 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$\gamma$ in the horizontal force.

The following details of the computation may be mentioned: $m$ will denote the magnetic moment of the deflecting or vibrating magnet, $H$ the horizontal components of the Earth's magnetic force, $u_1$ and $u_2$ the observed angles of deflection at the distances $r_1$ and $r_2$ (approximately 1·0 and 1·3 foot) corrected for scale error and temperature. Let

$$A_1 = \tfrac{1}{2}\, r_1^3 \sin u_1\left(1 + \frac{2\mu}{r_1^3} + c\right) \qquad A_2 = \tfrac{1}{2}\, r_2^3 \sin u_2\left(1 + \frac{2\mu}{r_2^3} + c\right).$$

The first "distribution co-efficient" $P$, which is alone used in the reduction, is equal to

$$\left(A_1 - A_2\right) \Big/ \left(\frac{A_1}{r_1^2} - \frac{A_2}{r_2^2}\right),$$

but, for convenience in logarithmic computation, the sufficiently approximate formula

$$P = \frac{\text{Log. } A_1 - \text{Log. } A_2}{\text{modulus}} \cdot \frac{r_1^2,\ r_2^2}{r_2^2 - r_1^2} = (\text{Log. } A_1 - \text{Log. } A_2) \times 5{\cdot}64$$

has been used instead, since 1877. The annual mean value of $P$ is adopted for the reductions during the corresponding year, and substituted in the expressions $A_1\left(1-\frac{P}{r_1^2}\right)$ and $A_2\left(1-\frac{P}{r_2^2}\right)$, the mean of which is adopted as the true value of $m/H$.

In the vibration observation, $T_1$ the observed vibration time, corrected for chronometer rate and arc of vibration, is further corrected for temperature, induction, and torsion by the formula

$$T^2 = T_1^2\left(1 + \frac{H}{F} + \mu\frac{H}{m} - c\right)$$

where $H/F$, the ratio of the torsion couple to the magnetic couple, is equal to $\theta/(90° - \theta)$ where $\theta$ is the angle through which the magnet is deflected by a twist of 90° in the suspension wire. $T_1$ or $T$ is obtained from the mean of 100 vibrations observed immediately before, and of another 100 vibrations observed immediately after, the deflection observations. Since 1913 October 31, the accuracy of the determination of $T_1$ has been increased by making five observations of 100 vibrations (105 in all being used) before and after the deflection observation. The product $mH$ is given by $\pi^2 K/T^2$.

From the values of $mH$ and $m/H$ thus calculated, $m$ and $H$ are deduced. The actual computation is performed, as heretofore, in British (foot-grain-second) units, after which the derived value of $H$ is reduced to C.G.S. units, as given in the tables.

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.

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 1′. 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 1913 is 2·95 $\gamma$ per mm.

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 $-4{\cdot}26\ \gamma$ per 1° rise in temperature, at 65° Fahrenheit; this correction increases or diminishes numerically by 0·37 $\gamma$ 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. Formerly a copper damper encircled the magnet, but, as it was found to be unnecessary, it has not been used since 1902. 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 $\theta$ (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 53 observations made during the year gives the value $18^{s}\cdot785$.

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 $16^{s}\cdot484$. This value has been adopted for the year 1913.

Since the distance between the concave mirror of the magnet and the surface of the cylinder is 100·2 inches, the length on the cylinder, in inches, which corresponds to a change of 0·01 part of the whole vertical force $= 2 \times 100{\cdot}2 \times \tan \text{dip} \times \left(\frac{T}{T^1}\right)^2 \times 0{\cdot}01$. Taking $T = 18^{s}{\cdot}785$, $T^1 = 16^{s}{\cdot}484$, and dip $= 66^\circ\ 50'\ 27''$, this length is found to be 6·084 inches. The cardboard scale, which is used for measuring the curves for the year, is constructed with this as unit.

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 $-9{\cdot}20\ \gamma$ 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, there are no days in the year 1913 which are classed as days of great disturbance. Days of lesser disturbance are January 3, March 14, April 9–10, June 1–2. 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), 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 Tables XVII. and XVIII.

The results of the observations for Absolute Measure of Horizontal Force contained in Tables XIX. and XX. require no special remark, the method of reduction and all necessary explanation having been given with the description of the instrument employed. The observed result in each month has been also given as reduced to the mean value for the month, 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 complete observation of dip with each of the needles in ordinary use, is given in Table XXI.; and in Table XXII., the concluded monthly and yearly values for each needle.

Table XXIII. 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 order to facilitate the comparison of the diurnal inequalities of magnetism at the different British and other magnetic observatories, an arrangement was made with the Sub-Committee of the Kew Committee of the Royal Society, by which five quiet days were selected at Greenwich in each month of every year for adoption at all these observatories for determination of the monthly diurnal inequalities of declination, horizontal force, and vertical force, thus providing for further discussion results which should be strictly comparable. Beginning with 1911, the five days selected by the International Committee from a comparison of data from all contributing stations, have been adopted instead. The particular days selected and the results found for Greenwich are contained in Tables IV., VIII., and XII., which it is interesting to compare with the values found from the records of all days, as given in Tables II., VI., and X.

Reduced copies of the magnetograms for certain disturbed days (mentioned on p. E x) 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. It is now proposed to adopt as far as possible the list of days of greater disturbance selected by the International Committee as in the case of the quiet days.

The plates are followed by a brief description of *all* other significant magnetic motions (superposed on the ordinary diurnal movement) recorded throughout the year. These, in combination with the plates, give very complete information on magnetic disturbances during the year 1913, affording thereby, it is hoped, facilities for making comparison with solar phenomena.

With regard to the plates, on each day three distinct registers are usually given, viz.: declination, horizontal force, and vertical force; all necessary information for proper understanding of the plates being added in the notes on page (E 16).

An additional plate (III.) exhibits the registers of declination, horizontal force and vertical force on four quiet days, which may be taken as types of the ordinary diurnal movement at four seasons of the year. These are given for the civil day as exhibiting more clearly the character of the diurnal movement.

The indications of horizontal and vertical force are given as registered; they are therefore 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 being inserted on the plates, reference to the temperature-correction of the magnets, given at pages E viii and E x, will show the effect produced. Briefly, an increase of about $4\frac{1}{2}°$ of temperature throws the horizontal force curve upward by

0·001 of the whole horizontal force; an increase of about 5° of temperature throws the vertical force curve downward by 0·001 of the whole vertical force.

The original photographs have been reduced in the proportion of 20 to 11 on the plates, and the corresponding scale values are:—

| | | |
|---|---|---|
| 1°·0 of Declination is | 65·53 mm. | on the Plates. |
| 0·01 of Horizontal Force is | 34·24 | ,, ,, |
| 0·01 of Vertical Force is | 84·99 | ,, ,, |

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

Since the preceding scale values are not immediately comparable for the different elements, it therefore becomes desirable to refer them all to the same unit, say 0·01 of the horizontal force.

Now, the transverse force represented by a variation of 1° of Declination

$$= \cdot 0175 \text{ of Horizontal Force,}$$

$$\text{and Vertical Force} = \text{Horizontal Force} \times \tan \text{dip} \; [\text{adopted dip} = 66^\circ.50'.27'']$$
$$= \text{Horizontal Force} \times 2\cdot 3378\,;$$

whence we have the following equivalent scale values for the different elements:—

| | | | |
|---|---|---|---|
| 37·4 mm. | on the | Declination | Curve corresponds to 0·01 of Horizontal Force. |
| 34·2 | ,, | Horizontal Force | ,, ,, ,, ,, ,, |
| 36·4 | ,, | Vertical Force | ,, ,, ,, ,, ,, |

If we divide the last three numbers by 0·18514, we get $202^{\text{mm}}\cdot 3$, $184^{\text{mm}}\cdot 9$, $196^{\text{mm}}\cdot 4$, which represent the lengths on the respective three curves equivalent to 0·01 C.G.S. unit.

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

[Table

| Year. | Declination West. | Horizontal Force, † C.G.S. Unit. | Dip.‡ | Year. | Declination West. | Horizontal Force, † C.G.S. Unit. | Dip.‡ |
|---|---|---|---|---|---|---|---|
| | ° ′ | | ° ′ | | ° ′ | | ° ′ |
| 1841 | 23.16·2 | ... | ... | 1877 | 18.57·2 | 0·1800 | 67.39·7 |
| 1842 | 23.14·6 | ... | ... | 1878 | 18.49·3 | 0·1802 | 67.38·2 |
| 1843 | 23.11·7 | ... | 69. 0·6 | 1879 | 18.40·5 | 0·1805 | 67.37·0 |
| 1844 | 23.15·3 | ... | 69. 0·3 | 1880 | 18.32·6 | 0·1805 | 67.35·7 |
| 1845 | 22.56·7 | ... | 68.57·5 | 1881 | 18.27·1 | 0·1807 | 67.34·7 |
| 1846 | 22.49·6 | 0·1731 | 68.58·1 | 1882 | 18.22·3 | 0·1806 | 67.34·2 |
| 1847 | 22.51·3 | 0·1736 | 68.59·0 | 1883 | 18.15·0 | 0·1812 | 67.31·7 |
| 1848 | 22.51·8 | 0·1731 | 68.54·7 | 1884 | 18. 7·6 | 0·1814 | 67.29·7 |
| 1849 | 22.37·8 | 0·1733 | 68.51·3 | 1885 | 18. 1·7 | 0·1817 | 67.28·0 |
| 1850 | 22.23·5 | 0·1738 | 68.46·9 | 1886 | 17.54·5 | 0·1818 | 67.27·1 |
| 1851 | 22.18·3 | 0·1744 | 68.40·4 | 1887 | 17.49·1 | 0·1819 | 67.26·6 |
| 1852 | 22.17·9 | 0·1745 | 68.42·7 | 1888 | 17.40·4 | 0·1822 | 67.25·6 |
| 1853 | 22.10·1 | 0·1748 | 68.44·6 | 1889 | 17.34·9 | 0·1823 | 67.24·3 |
| 1854 | 22. 0·8 | 0·1749 | 68.47·7 | 1890 | 17.28·6 | 0·1825 | 67.23·0 |
| 1855 | 21.48·4 | 0·1756 | 68.44·6 | 1891 | 17.23·4 | 0·1827 | 67.21·5 |
| 1856 | 21.43·5 | 0·1759 | 68.43·5 | 1892 | 17.17·4 | 0·1829 | 67.20·0 |
| 1857 | 21.35·4 | 0·1769 | 68.31·1 | 1893 | 17.11·4 | 0·1831 | 67.17·9 |
| 1858 | 21.30·3 | 0·1762 | 68.28·3 | 1894 | 17. 4·6 | 0·1831 | 67.17·4 |
| 1859 | 21.23·5 | 0·1761 | 68.26·9 | 1895 | 16.57·4 | 0·1834 | 67.16·1* |
| 1860 | 21.14·3 | ... | 68.30·1 | 1896 | 16.51·7* | 0·1835* | 67.15·1* |
| 1861 | 21. 5·5 | 0·1773 | 68.24·6 | 1897 | 16.45·8* | 0·1838 | 67.13·5* |
| | | 0·1759 | 68.15·8 | 1898 | 16.39·2* | 0·1840 | 67.12·1 |
| 1862 | 20.52·6 | 0·1763 | 68. 9·6 | 1899 | 16.34·2 | 0·1843 | 67.10·5 |
| 1863 | 20.45·9 | 0·1764 | 68. 7·0 | 1900 | 16.29·0 | 0·1846 | 67. 8·8 |
| 1864 | ... | 0·1767 | 68. 4·1 | 1901 | 16.26·0 | 0·1850 | 67. 6·4 |
| 1865 | 20.33·9 | 0·1767 | 68. 2·7 | 1902 | 16.22·8 | 0·1852 | 67. 3·8 |
| 1866 | 20.28·0 | 0·1773 | 68. 1·3 | 1903 | 16.19·1 | 0·1852 | 67. 1·2 |
| 1867 | 20.20·5 | 0·1777 | 67.57·2 | 1904 | 16.15·0 | 0·1854 | 66.57·6 |
| 1868 | 20.13·1 | 0·1779 | 67.56·5 | 1905 | 16. 9·9 | 0·1854 | 66.56·3 |
| 1869 | 20. 4·1 | 0·1782 | 67.54·8 | 1906 | 16. 3·6 | 0·1854 | 66.55·6 |
| 1870 | 19.53·0 | 0·1784 | 67.52·5 | 1907 | 15.59·8 | 0·1855 | 66.56·2 |
| 1871 | 19.41·9 | 0·1786 | 67.50·3 | 1908 | 15.53·5 | 0·1854 | 66.56·3 |
| 1872 | 19.36·8 | 0·1789 | 67.47·8 | 1909 | 15.47·6 | 0·1854 | 66.54·1 |
| 1873 | 19.33·4 | 0·1793 | 67.45·8 | 1910 | 15.41·2 | 0·1855 | 66.52·8 |
| 1874 | 19.28·9 | 0·1797 | 67.43·6 | 1911 | 15.33·0 | 0·1855 | 66.52·1 |
| 1875 | 19.21·2 | 0·1797 | 67.42·4 | 1912 | 15.24·3 | 0·1855 | 66.51·8 |
| 1876 | 19. 8·3 | 0·1799 | 67.41·0 | 1913 | 15.15·2 | 0·1853 | 66.50·5 |

* 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 vi.

‡ 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.

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.

## § 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 $0^{in}\cdot565$ in diameter, and the depression of the mercury due to capillary action is $0^{in}\cdot002$, 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 $0^{in}\cdot05$, sub-divided by vernier to $0^{in}\cdot002$. 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 is determined by experimentally comparing the measured movement on the paper with the observed movement of the standard barometer; one inch of barometric movement is thus found = $4^{in}\cdot16$ on the paper. Ordinates measured for the times of observation of the standard barometer, combined with the corrected readings of the standard barometer, give apparent values of the base line, from which mean values for each day are formed; these are written on the sheets and new base lines drawn, from which the hourly ordinates (see page E x) are measured as for 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 $-0^{\circ}\cdot4$ 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 $-0^{\circ}\cdot2$ has been applied to the readings of this thermometer.

Similar readings were also taken of a set of thermometers in a Stevenson screen placed in the Magnetic Pavilion enclosure. The differences between the readings of these thermometers and those in the Ordinary Stand are summarised on p. E 58.

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 illumination 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 until August was Negretti and Zambra, No. 121588. This was stolen on August 1, and replaced by Negretti and Zambra, No. 157738. The thermometer for radiation to the sky until August was a self-registering spirit minimum thermometer, Negretti and Zambra, No. 137640. This was stolen on August 1, and replaced by 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'S ANEMOMETER.—This self-registering anemometer, devised by A. Follett 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 ($9^{ft.}$ $2^{in.}$ 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."

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 appears that the relation between V and $v$ is more correctly given by

$$V = 4{\cdot}0 + 2{\cdot}0\ v.$$

The instrument thus fails to record wind velocities less than 4 miles per hour; and values of the wind velocity given by the formula $V = 3\ v$ are 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 $V = 3\ v$ will continue to be used. In this volume, however, the greatest hourly measures (p. E 59) are given according to both formulæ, and the least hourly measures omitted.

The experiments by Mr. W. H. Dines, above referred to, are described in the Introduction to the volume for 1889.

RAIN GAUGES.—During the year 1913 eight rain gauges were employed, placed at different elevations above the ground, for which see page E 58 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 receiving surface is a rectangular opening $10 \times 20$ inches (200 square inches in area). The collected water passes into a vessel suspended by spiral springs, which lengthen as the water accumulates, until 0·25 inch is collected. The water then discharges itself by means of the following modification of the siphon. A vertical copper tube, open at both ends, is fixed in the receiver, with one end just projecting below the bottom. Over this tube a larger tube, closed at the top, is loosely placed. The accumulating water, having risen to the top of the inner tube, begins to flow off into a small tumbling bucket, fixed in a globe placed underneath, and carried by the receiver. When full, the bucket falls over, throwing the water into a small exit pipe at the lower part of the globe—the only outlet. This creates a partial vacuum in the globe sufficient to cause the longer leg of the siphon to act, and the whole remaining contents of the receiver then run off, through the globe, to a waste pipe. The spiral springs at the same time shorten, and raise the receiver. The gradual descent of the water vessel as the rain falls, and the immediate ascent on discharge of the water, act upon a pencil, and cause a corresponding trace to be made on the paper fixed to the moving board of the anemometer. The rain scale on the paper was determined experimentally by passing a known quantity of water through the receiver. The continuous record thus gives information on the rate of the fall of rain, but the record is liable to interruption when the staging is erected for experiments with the Osler Anemometer.

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 $9^h$ 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 north-west 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 8 are used as checks on the readings of No. 6. No. 6 is read daily, usually at $9^h$, $15^h$, and $21^h$ Greenwich civil time, and Nos. 7 and 8 at $9^h$ 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 Campbell-Stokes instrument, which has been in use since 1887, records the duration of bright sunshine by the length of blackened trace produced by the concentration of the sun's rays on a card. A spherical glass globe brings the rays to a focus. One straight card serves for the equinoctial periods of the year, and another, curved, for the solstitial periods, the only difference between the summer and winter cards being that the summer cards are the longer: grooves are provided so that the cards are placed in position in their holders with great readiness. The daily record is transferred to a sheet of paper specially ruled with equal vertical spaces to represent hours, each sheet containing the record for one calendar month. The daily sums, and sums for each hour (reckoning from *apparent* midnight) through the month, are thus readily formed. The recorded durations are to be understood as indicating the amount of *bright* sunshine, no register being obtained when the sun shines faintly through fog or cloud, or when the sun is very near the horizon. 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. A clear view of the sun is obtained in this position from sunrise to sunset, but some inconvenience is caused by the smoke from neighbouring chimneys.

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, and atmospheric electricity, 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 of the photographic traces for the elements mentioned are entered into a form having double argument, the horizontal argument ranging through the 24 hours of the civil day ($0^h$ to $23^h$), and the vertical argument through the days of a calendar month. Then for all the photographic elements, the means of the numbers standing in the vertical columns of the monthly forms, into which the values are entered, give the mean monthly photographic values for each hour of the day, the means of the numbers in the horizontal columns giving the mean daily value. It should be mentioned that before measuring out the electrometer ordinates, a pencil line was first drawn through the trace to represent the general form of the curve, in the way described for the magnetic registers (page E x), excepting that no day has been omitted on account of unusual electrical disturbance, as it has been found difficult to decide on any limit of disturbance beyond which it would seem proper, as regards determination of diurnal inequality, to reject the results. In measuring the electrometer ordinates a scale of inches is used, and the values given in the tables which follow are expressed in thousandths of an inch, positive and negative potential being denoted by positive and negative numbers respectively. The scale has not been determined in terms of any electrical unit.

To correct the photographic indications of barometer and dry and wet bulb thermometers for small instrumental error, the means of the photographic readings at $9^h$, $12^h$ (noon), $15^h$, and $21^h$ in each month are compared with the corresponding corrected mean readings of the standard barometer and standard dry and wet bulb thermometers, as given by eye observation. In the case of the standard thermometers the values deduced for midnight from comparison of the thermograph sheets with the eye-readings at night, and the minimum readings obtained at 9 a.m. are also regarded as eye-readings for the correction of the thermograph registers commencing 1912 January. A correction applicable to the photographic reading at each of these hours is thus obtained, and, by interpolation, corrections for the intermediate hours are found. The mean of the twenty-four hourly corrections in each month is adopted as the correction applicable to each mean daily value in the month. Thus mean hourly and mean daily values of the several elements are obtained for each month. The process of correction is equivalent to giving photographic indications in terms of corrected standard barometer, and in terms of the standard dry and wet bulb thermometers exposed on the free stand. 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 53 and E 54) have been calculated from the corresponding mean hourly values of air and evaporation temperatures (pages E 52 and E 53).

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 usually 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 51 and E 58, is formed from the records of this gauge. In this numeration only those days are counted on which the fall amounted to or exceeded $0^{in}\cdot005$.

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 27 to E 49, and in the abstract table, page E 51, is the mean found from observations made usually 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).

The notation employed for Clouds and Weather is as follows, it being understood that for clouds Howard's Nomenclature is used. The figure denotes the proportion of sky covered by cloud, an overcast sky being represented by 10.

| | | |
|---|---|---|
| a | denotes | *aurora borealis* |
| ci | ... | *cirrus* |
| ci-cu | ... | *cirro-cumulus* |
| ci-s | ... | *cirro-stratus* |
| cu | ... | *cumulus* |
| cu-s | ... | *cumulo-stratus* |
| d | ... | *dew* |
| hy-d | ... | *heavy dew* |
| f | ... | *fog* |
| slt-f | ... | *slight fog* |
| tk-f | ... | *thick fog* |
| fr | ... | *frost* |
| ho-fr | ... | *hoar frost* |
| g | ... | *gale* |
| hy-g | ... | *heavy gale* |
| glm | ... | *gloom* |
| gt-glm | ... | *great gloom* |
| h | ... | *haze* |
| slt-h | ... | *slight haze* |
| hl | ... | *hail* |
| l | ... | *lightning* |
| li-cl | ... | *light clouds* |
| lu-co | ... | *lunar corona* |
| lu-ha | ... | *lunar halo* |
| m | ... | *mist* |
| slt-m | ... | *slight mist* |
| n | ... | *nimbus* |
| p-cl | denotes | *partially cloudy* |
| prh | ... | *parhelion* |
| prs | ... | *paraselene* |
| r | ... | *rain* |
| c-r | ... | *continued rain* |
| fr-r | ... | *frozen rain* |
| fq-r | ... | *frequent rain* |
| hy-r | ... | *heavy rain* |
| c-hy-r | .. | *continued heavy rain* |
| m-r | .. | *misty rain* |
| fq-m-r | ... | *frequent misty rain* |
| oc-m-r | ... | *occasional misty rain* |
| oc-r | ... | *occasional rain* |
| sh-r | ... | *shower of rain* |
| shs-r | ... | *showers of rain* |
| slt-r | ... | *slight rain* |
| oc-slt-r | ... | *occasional slight rain* |
| th-r | ... | *thin rain* |
| fq-th-r | ... | *frequent thin rain* |
| oc-th-r | ... | *occasional thin rain* |
| hy-sh | ... | *heavy shower* |
| slt-sh | ... | *slight shower* |
| fq-shs | ... | *frequent showers* |
| hy-shs | ... | *heavy showers* |
| fq-hy-shs | ... | *frequent heavy showers* |
| oc-hy-shs | ... | *occasional heavy showers* |
| li-shs | ... | *light showers* |

| | | | |
|---|---|---|---|
| oc-shs denotes | *occasional showers* | fq-sqs denotes | *frequent squalls* |
| s ... | *stratus* | hy-sqs ... | *heavy squalls* |
| sc ... | *scud* | fq-hy-sqs ... | *frequent heavy squalls* |
| li-sc ... | *light scud* | oc-sqs ... | *occasional squalls* |
| sl ... | *sleet* | t ... | *thunder* |
| sn ... | *snow* | t-sm ... | *thunder storm* |
| oc-sn ... | *occasional snow* | th-cl ... | *thin clouds* |
| slt-sn ... | *slight snow* | v ... | *variable* |
| so-ha ... | *solar halo* | vv ... | *very variable* |
| sq ... | *squall* | w ... | *wind* |
| sqs ... | *squalls* | st-w ... | *strong wind* |

The following is the notation employed for Electricity:—

| | | | |
|---|---|---|---|
| N denotes | *negative* | w denotes | *weak* |
| P ... | *positive* | s ... | *strong* |
| m ... | *moderate* | v ... | *variable* |

The duplication of the letter denotes intensity of the modification described—thus, ss is very strong; vv, very variable. 0 indicates zero potential, and a dash, "—," accidental failure of the apparatus.

The remaining columns in the tables of "Daily Results" seem to require no special remark; all necessary explanation regarding the results therein contained will be found in the notes at the foot of the left-hand page, or in the descriptions of the several instruments given in § 6.

In regard to the comparisons of the extremes and means, &c., of meteorological elements with average values, contained in the footnotes, it may be mentioned that comparison is in all cases made with mean values determined from the observations for the sixty-five years 1841–1905.

The tables following the "Daily Results" require no lengthened explanation. They consist of tables giving the highest and lowest readings of the barometer through the year; monthly abstracts of the principal meteorological elements; hourly values in each month of barometer-reading, of temperature of air, evaporation, and dew-point, and of degree of humidity; sunshine results; rain results; observations of thermometers on the revolving stand, with mean differences from corresponding readings in a Stevenson screen in the Magnetic Pavilion Enclosure; hourly values in each month of the horizontal movement of the air derived from Robinson's

Anemometer; results derived from the Thomson Electrometer; and observations of parhelia, paraselenæ, and meteors.

In the tables of mean values of meteorological elements at each hour for the different months of the year, the mean values have, in previous years, been given for the hours $0^h$ to $23^h$ only. But since 1886 the mean for the 24th hour (the following midnight) has been added, thus indicating the amount of non-periodic variation. The monthly means have also been given since 1886 for the 24 hours, $1^h$ to $24^h$, as well as for the hours, $0^h$ (midnight) to $23^h$, which were given in former years.

It may be pointed out that the monthly means, $0^h$ to $23^h$, for barometer and temperature of the air and of evaporation contained in these tables, pages E 52 and E 53, do not in some cases agree with the monthly means given in the daily results pages E 26 to E 48, and in the table on page E 51, in consequence of occasional interruption of the photographic register, at which times daily values to complete the daily results could be supplied from the eye observations, as mentioned in the footnotes; but hourly values, for the diurnal inequality tables, could not be so supplied. In such cases, however, the means given with these tables are the proper means to be used in connexion with the numbers standing immediately above them, for formation of the actual diurnal inequality.

In regard to Electric Potential of the Atmosphere, in addition to giving the hourly values in each month, including all available days, the days in each month have been (since the year 1882) further divided into two groups, one containing all days on which the rainfall amounted to or exceeded $0^{in}\cdot020$, the other including only days on which no rainfall was recorded, the values of daily rainfall given in column 16 of the "Daily Results of the Meteorological Observations" being adopted in selecting the days. These additional tables are given on pages E 62 and E 63 respectively.

In regard to the observations of Luminous Meteors, it is simply necessary to say that, in general, only special meteor showers are watched for, such as those of April, August, and November. The observers of meteors in the year 1913 were Mr. Edney, Mr. Timbury, Mr. Divers, Mr. Brown, and Mr Showell. Their observations are distinguished by the initials E., T., D., F.B., and S. respectively. A few observations made by Mr. Crommelin, Mr. Bowyer, Mr. Melotte, and Mr. Berry are distinguished by the initials A.C., W.B., P.M., and A.B. respectively.

F. W. DYSON.

ROYAL OBSERVATORY, GREENWICH,
1914 *November* 5.

ROYAL OBSERVATORY, GREENWICH.

# RESULTS

OF

# MAGNETICAL OBSERVATIONS

(EXCLUDING DAYS OF GREAT MAGNETIC DISTURBANCE),

1913.

### TABLE I.—MEAN MAGNETIC DECLINATION WEST FOR EACH CIVIL DAY.

*(Each result is the mean of 24 hourly ordinates from the photographic register.)*

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° |
| d | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 1 | ... | 18·8 | 19·4 | 17·0 | 16·7 | 16·2 | 14·0 | 14·3 | 12·9 | 13·1 | 12·6 | 11·8 |
| 2 | 19·8 | 18·8 | 18·9 | 17·7 | 16·1 | 14·4 | 14·1 | 14·3 | 13·1 | 12·9 | 12·4 | 12·0 |
| 3 | 19·8 | 18·3 | 18·4 | 17·8 | 16·2 | 14·9 | 13·8 | 13·7 | 12·3 | 12·4 | 12·2 | 12·1 |
| 4 | 18·7 | 18·5 | 18·0 | 17·3 | 14·8 | 14·5 | 14·1 | 13·6 | 13·2 | 13·1 | 12·2 | 12·8 |
| 5 | 18·7 | 18·5 | 18·2 | 17·2 | 15·3 | 15·1 | 14·5 | 14·0 | 13·1 | 12·4 | 12·4 | 13·7 |
| 6 | 18·9 | 18·4 | 18·5 | 16·9 | 15·6 | 15·4 | 14·5 | 14·6 | 13·2 | 14·5 | 12·4 | 12·4 |
| 7 | 18·9 | 18·6 | 18·4 | 17·6 | 16·1 | 15·2 | 14·3 | 14·8 | 13·0 | 12·1 | 12·1 | 12·8 |
| 8 | 18·9 | 18·8 | 19·0 | 17·7 | 16·3 | 14·5 | 14·6 | 14·5 | 14·0 | 13·1 | 12·5 | 12·3 |
| 9 | 19·3 | 18·3 | 18·5 | 18·6 | 16·0 | 15·0 | 14·7 | 13·8 | 12·8 | 12·3 | 12·9 | 11·9 |
| 10 | 18·7 | 18·2 | 18·6 | 17·0 | 15·5 | 14·0 | 14·8 | 13·7 | 13·0 | 13·1 | 11·8 | 12·2 |
| 11 | 19·4 | 18·4 | 18·4 | 16·8 | 15·9 | 14·8 | 14·1 | 14·2 | 13·9 | 13·4 | 11·6 | 12·0 |
| 12 | 19·1 | 18·9 | 18·7 | 17·1 | 15·8 | 14·3 | 13·3 | 13·7 | 13·5 | 12·9 | 11·4 | 11·9 |
| 13 | 19·4 | 18·1 | 18·6 | 17·5 | 15·6 | 14·2 | 14·0 | 13·6 | 13·6 | 12·7 | 11·8 | 12·4 |
| 14 | 19·6 | 19·2 | 17·1 | 18·2 | 15·7 | 15·0 | 13·1 | 13·4 | 14·4 | 12·7 | 11·8 | 13·0 |
| 15 | 19·3 | 18·4 | 17·9 | 17·2 | 16·0 | 15·5 | 13·8 | 14·0 | 14·8 | 12·6 | 12·0 | 12·0 |
| 16 | 19·4 | 18·4 | 18·0 | 17·4 | 15·8 | 14·7 | 13·3 | 13·8 | 14·0 | 12·7 | 12·4 | 11·7 |
| 17 | 19·3 | 18·5 | 17·8 | 17·9 | 16·5 | 14·4 | 12·9 | 13·6 | 14·3 | 12·6 | 12·1 | 12·2 |
| 18 | 18·8 | 18·5 | 18·3 | 16·8 | 17·4 | 15·4 | 13·3 | 13·9 | 13·1 | 12·3 | 11·6 | 12·3 |
| 19 | 18·4 | 18·7 | 18·0 | 16·4 | 17·5 | 15·6 | 13·5 | 13·9 | 12·6 | 12·8 | 12·3 | 12·7 |
| 20 | 18·5 | 19·5 | 18·5 | 16·9 | 16·7 | 14·5 | 14·1 | 14·1 | 13·2 | 13·2 | 12·5 | 12·3 |
| 21 | 18·5 | 18·8 | 18·0 | 16·7 | 16·4 | 15·4 | 14·1 | 14·0 | 13·1 | 12·5 | 12·0 | 12·7 |
| 22 | 19·0 | 18·6 | 17·7 | 15·8 | 16·4 | 14·9 | 14·3 | 14·2 | 13·7 | 12·9 | 12·9 | 13·0 |
| 23 | 17·9 | 19·1 | 18·0 | 16·3 | 16·5 | 14·9 | 13·7 | 13·8 | 11·8 | 13·1 | 13·0 | 12·6 |
| 24 | 18·4 | 19·5 | 17·8 | 16·1 | 16·0 | 15·5 | 14·9 | 13·0 | 13·4 | 12·9 | 12·5 | 13·0 |
| 25 | 18·0 | 20·0 | 17·9 | 16·6 | 15·2 | 14·3 | 14·9 | 14·2 | 13·2 | 12·8 | 12·1 | 13·0 |
| 26 | 18·9 | 18·5 | 17·8 | 16·0 | 15·3 | 15·0 | 14·1 | 14·1 | 13·2 | 12·4 | 11·8 | 12·6 |
| 27 | 19·3 | 18·6 | 17·8 | 15·3 | 16·2 | 14·3 | 13·7 | 14·3 | 13·0 | 12·0 | 13·2 | 12·9 |
| 28 | 19·0 | 19·3 | 17·4 | 15·2 | 15·0 | 14·8 | 13·4 | 13·6 | 13·0 | 12·0 | 12·0 | 13·2 |
| 29 | 18·6 | | 16·9 | 15·6 | 14·8 | 13·4 | 13·6 | 13·1 | 13·4 | 12·4 | 12·3 | 13·2 |
| 30 | 19·3 | | 17·0 | 15·9 | 15·1 | 14·6 | 13·9 | 12·4 | 12·9 | 12·5 | 11·8 | 13·1 |
| 31 | 18·8 | | 17·7 | | 15·8 | | 13·5 | 12·2 | | 11·9 | | 13·3 |
| Means | 19′·0 | 18′·7 | 18′·1 | 16′·9 | 15′·9 | 14′·8 | 14′·0 | 13′·8 | 13′·3 | 12′·7 | 12′·2 | 12′·6 |

### TABLE II.—MONTHLY AND ANNUAL MEAN DIURNAL INEQUALITIES OF MAGNETIC DECLINATION WEST.

*(The results in each month are diminished by the smallest hourly value.)*

1913.

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| Midn. | 0·3 | 0·3 | 1·5 | 2·1 | 2·6 | 3·0 | 3·0 | 2·3 | 1·6 | 0·9 | 0·3 | 0·4 | 1·34 |
| $1^h$ | 0·7 | 0·5 | 1·7 | 2·4 | 2·6 | 2·9 | 2·9 | 2·3 | 1·6 | 1·1 | 0·5 | 0·6 | 1·46 |
| 2 | 1·0 | 0·8 | 1·9 | 2·6 | 2·7 | 2·7 | 2·8 | 2·1 | 1·4 | 1·1 | 0·7 | 0·7 | 1·52 |
| 3 | 1·3 | 0·9 | 1·7 | 2·5 | 2·5 | 2·4 | 2·5 | 2·1 | 1·5 | 1·1 | 0·9 | 0·9 | 1·50 |
| 4 | 1·3 | 0·9 | 1·6 | 2·3 | 2·0 | 2·0 | 2·2 | 1·8 | 1·3 | 1·2 | 1·2 | 0·9 | 1·37 |
| 5 | 1·2 | 0·8 | 1·4 | 1·9 | 0·9 | 0·8 | 1·2 | 1·0 | 1·1 | 1·4 | 1·1 | 0·8 | 0·94 |
| 6 | 1·1 | 0·7 | 1·3 | 1·7 | 0·3 | 0·0 | 0·3 | 0·6 | 0·8 | 1·4 | 1·0 | 0·6 | 0·63 |
| 7 | 1·0 | 0·5 | 0·8 | 1·0 | 0·0 | 0·0 | 0·0 | 0·0 | 0·4 | 0·9 | 0·8 | 0·6 | 0·31 |
| 8 | 0·6 | 0·2 | 0·1 | 0·0 | 0·1 | 0·3 | 0·0 | 0·1 | 0·0 | 0·0 | 0·3 | 0·6 | 0·00 |
| 9 | 0·7 | 0·0 | 0·0 | 0·1 | 1·2 | 1·4 | 1·0 | 1·4 | 0·8 | 0·2 | 0·3 | 0·8 | 0·47 |
| 10 | 1·5 | 0·5 | 1·4 | 2·0 | 3·2 | 3·2 | 2·9 | 3·6 | 2·8 | 1·9 | 1·1 | 1·3 | 1·93 |
| 11 | 2·3 | 1·8 | 3·8 | 4·4 | 5·6 | 5·5 | 5·0 | 5·9 | 5·3 | 4·1 | 2·5 | 1·9 | 3·82 |
| Noon | 3·3 | 3·3 | 6·0 | 7·0 | 7·5 | 7·7 | 7·2 | 7·9 | 7·2 | 5·5 | 3·6 | 2·3 | 5·52 |
| $13^h$ | 3·9 | 3·8 | 6·9 | 8·3 | 7·8 | 8·5 | 8·1 | 8·5 | 7·5 | 5·5 | 3·9 | 2·4 | 6·07 |
| 14 | 3·2 | 3·7 | 6·6 | 8·0 | 7·2 | 8·3 | 8·4 | 7·9 | 6·6 | 4·9 | 3·0 | 2·0 | 5·63 |
| 15 | 2·3 | 2·9 | 5·2 | 6·4 | 6·0 | 7·4 | 7·6 | 6·2 | 5·0 | 3·6 | 2·1 | 1·6 | 4·50 |
| 16 | 1·9 | 2·0 | 3·7 | 5·1 | 5·0 | 6·3 | 6·3 | 4·5 | 3·6 | 2·4 | 1·7 | 1·3 | 3·46 |
| 17 | 1·8 | 1·9 | 2·7 | 4·0 | 3·9 | 5·1 | 5·1 | 3·2 | 2·6 | 2·1 | 1·6 | 1·0 | 2·73 |
| 18 | 1·6 | 1·7 | 2·4 | 3·1 | 3·2 | 4·3 | 4·4 | 2·8 | 2·2 | 1·7 | 1·2 | 0·8 | 2·26 |
| 19 | 1·1 | 1·1 | 2·0 | 2·6 | 2·8 | 4·0 | 3·8 | 3·0 | 2·1 | 1·1 | 0·9 | 0·6 | 1·90 |
| 20 | 0·4 | 0·5 | 1·7 | 2·3 | 2·7 | 3·7 | 3·5 | 2·9 | 1·9 | 0·6 | 0·6 | 0·4 | 1·58 |
| 21 | 0·0 | 0·1 | 1·3 | 2·1 | 2·7 | 3·6 | 3·4 | 2·6 | 1·8 | 0·4 | 0·1 | 0·2 | 1·33 |
| 22 | 0·0 | 0·1 | 1·1 | 2·2 | 2·7 | 3·3 | 3·1 | 2·3 | 1·6 | 0·3 | 0·0 | 0·0 | 1·20 |
| 23 | 0·1 | 0·2 | 1·0 | 2·1 | 2·7 | 3·1 | 3·1 | 2·3 | 1·5 | 0·5 | 0·0 | 0·2 | 1·21 |
| 24 | 0·3 | 0·4 | 1·3 | 2·3 | 2·7 | 2·9 | 3·0 | 2·3 | 1·6 | 0·8 | 0·3 | 0·5 | 1·34 |
| Means $0^h$–$23^h$ | 1′·36 | 1′·22 | 2′·41 | 3′·18 | 3′·25 | 3′·73 | 3′·66 | 3′·22 | 2′·59 | 1′·83 | 1′·22 | 0′·95 | 2′·19 |
| Means $1^h$–$24^h$ | 1′·36 | 1′·22 | 2′·40 | 3′·18 | 3′·25 | 3′·73 | 3′·66 | 3′·22 | 2′·59 | 1′·83 | 1′·22 | 0′·96 | 2′·19 |

### TABLE III.—DIURNAL RANGE of DECLINATION, on each CIVIL DAY, as deduced from the TWENTY-FOUR HOURLY MEASURES of ORDINATES of the PHOTOGRAPHIC REGISTERS.

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 1 | ... | 2·8 | 5·2 | 10·9 | 7·3 | 11·0 | 9·8 | 11·1 | 10·7 | 8·9 | 6·0 | 3·0 |
| 2 | 3·0 | 3·2 | 5·0 | 9·4 | 9·3 | 9·4 | 8·2 | 11·0 | 10·8 | 9·4 | 10·1 | 4·4 |
| 3 | 8·9 | 2·8 | 5·5 | 10·5 | 8·1 | 8·8 | 9·2 | 8·5 | 10·3 | 6·6 | 8·3 | 3·0 |
| 4 | 3·9 | 2·9 | 6·1 | 10·0 | 9·4 | 10·7 | 10·3 | 7·0 | 10·5 | 7·1 | 4·6 | 3·6 |
| 5 | 4·6 | 4·0 | 5·9 | 8·9 | 8·9 | 9·9 | 9·2 | 8·7 | 9·5 | 12·0 | 5·2 | 5·2 |
| 6 | 3·6 | 3·4 | 7·0 | 10·4 | 12·5 | 9·6 | 10·8 | 9·0 | 10·5 | 8·7 | 4·5 | 4·6 |
| 7 | 3·8 | 4·0 | 7·8 | 10·5 | 8·3 | 10·7 | 9·5 | 10·0 | 7·6 | 9·5 | 6·3 | 3·1 |
| 8 | 3·1 | 3·4 | 10·4 | 10·9 | 7·7 | 8·6 | 9·1 | 9·4 | 11·7 | 9·8 | 3·7 | 2·5 |
| 9 | 4·4 | 4·1 | 7·0 | 15·5 | 6·1 | 7·9 | 10·6 | 9·8 | 11·2 | 7·9 | 4·8 | 2·4 |
| 10 | 6·6 | 3·5 | 7·0 | 8·9 | 9·1 | 7·6 | 10·5 | 8·3 | 7·0 | 6·4 | 4·4 | 3·2 |
| 11 | 3·2 | 3·6 | 5·1 | 8·0 | 8·0 | 7·6 | 6·1 | 8·4 | 6·7 | 7·8 | 4·4 | 1·7 |
| 12 | 3·6 | 7·8 | 6·6 | 10·6 | 7·9 | 9·9 | 9·4 | 7·6 | 9·6 | 8·0 | 4·3 | 2·5 |
| 13 | 4·3 | 7·0 | 6·3 | 9·2 | 6·9 | 8·0 | 8·2 | 7·5 | 5·7 | 5·9 | 3·9 | 2·8 |
| 14 | 4·4 | 5·4 | 13·9 | 9·3 | 5·9 | 10·7 | 7·2 | 8·6 | 6·0 | 5·1 | 4·3 | 3·9 |
| 15 | 4·7 | 5·9 | 8·8 | 8·1 | 9·1 | 10·2 | 9·9 | 10·2 | 7·4 | 6·8 | 4·8 | 3·1 |
| 16 | 3·2 | 8·9 | 7·0 | 10·3 | 5·9 | 9·6 | 11·2 | 9·4 | 6·0 | 7·2 | 4·9 | 1·9 |
| 17 | 5·2 | 5·7 | 10·6 | 9·2 | 8·4 | 9·0 | 9·0 | 8·0 | 8·3 | 6·5 | 4·0 | 2·7 |
| 18 | 11·5 | 6·5 | 7·4 | 7·2 | 8·8 | 10·9 | 10·3 | 10·7 | 7·6 | 13·3 | 4·2 | 4·0 |
| 19 | 8·2 | 6·1 | 6·7 | 9·0 | 6·9 | 9·9 | 6·9 | 11·8 | 10·2 | 12·7 | 2·7 | 6·0 |
| 20 | 7·8 | 6·3 | 9·4 | 9·0 | 9·2 | 9·1 | 11·3 | 9·3 | 9·5 | 4·8 | 4·9 | 2·8 |
| 21 | 3·8 | 4·8 | 9·7 | 7·9 | 9·1 | 10·4 | 7·4 | 10·1 | 8·7 | 6·1 | 4·6 | 1·9 |
| 22 | 4·7 | 4·9 | 8·0 | 10·0 | 9·4 | 9·5 | 9·8 | 11·4 | 12·6 | 6·0 | 3·3 | 1·8 |
| 23 | 3·3 | 6·3 | 8·9 | 7·7 | 11·1 | 8·1 | 7·9 | 10·3 | 11·3 | 5·7 | 4·0 | 1·5 |
| 24 | 4·1 | 4·8 | 8·8 | 7·1 | 8·7 | 10·2 | 7·2 | 10·4 | 6·5 | 4·3 | 3·6 | 2·2 |
| 25 | 6·1 | 8·4 | 8·3 | 6·1 | 9·8 | 6·8 | 9·7 | 8·2 | 6·0 | 8·1 | 3·9 | 5·8 |
| 26 | 3·8 | 5·3 | 8·5 | 6·1 | 7·4 | 9·9 | 8·9 | 8·0 | 4·8 | 6·0 | 4·5 | 3·8 |
| 27 | 3·1 | 3·2 | 9·3 | 7·6 | 10·9 | 8·1 | 8·2 | 6·8 | 5·8 | 5·0 | 6·9 | 4·0 |
| 28 | 4·7 | 4·1 | 8·8 | 6·5 | 8·1 | 10·4 | 5·9 | 5·9 | 5·1 | 6·4 | 6·6 | 2·5 |
| 29 | 3·6 | | 7·9 | 7·4 | 9·2 | 7·7 | 8·3 | 7·1 | 7·7 | 5·4 | 4·6 | 2·4 |
| 30 | 5·2 | | 8·5 | 8·0 | 9·5 | 8·1 | 10·8 | 8·7 | 6·3 | 8·7 | 4·4 | 2·2 |
| 31 | 4·8 | | 11·6 | | 6·4 | | 9·4 | 8·2 | | 10·4 | | 1·8 |
| Means | 4′·8 | 5′·0 | 8′·0 | 9′·0 | 8′·5 | 9′·3 | 9′·0 | 9′·0 | 8′·4 | 7′·6 | 4′·9 | 3′·1 |

The mean of the twelve monthly values is 7′·22.

### 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 at other Observatories. The results in each case are diminished by the smallest hourly value. The days included are (* January 6 substituted for January 1):—*

| | | | |
|---|---|---|---|
| January 6*, 7, 12, 16, 24. | April 6, 20, 21, 22, 26. | July 4, 9, 17, 19, 28. | October 2, 3, 23, 24, 28. |
| February 3, 4, 23, 24, 28. | May 14, 20, 21, 22, 23. | August 1, 5, 20, 29, 30. | November 4, 14, 15, 16, 25. |
| March 1, 2, 10, 26, 27. | June 7, 8, 11, 12, 27. | September 4, 14, 20, 27, 29. | December 10, 11, 13, 17, 23. |

1913.

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| Midn. | 0·4 | 0·2 | 2·3 | 3·3 | 3·7 | 4·0 | 3·0 | 2·1 | 1·6 | 2·5 | 0·0 | 0·2 | 1·82 |
| $1^h$ | 0·9 | 0·6 | 2·2 | 3·5 | 3·5 | 3·9 | 2·9 | 1·7 | 1·9 | 2·5 | 0·5 | 0·4 | 1·92 |
| 2 | 1·2 | 1·0 | 2·5 | 3·6 | 3·7 | 3·6 | 3·0 | 1·7 | 1·9 | 2·6 | 0·6 | 0·4 | 2·03 |
| 3 | 1·2 | 1·2 | 2·0 | 3·5 | 3·8 | 3·4 | 2·8 | 1·6 | 1·7 | 2·4 | 1·1 | 0·3 | 1·96 |
| 4 | 1·2 | 1·2 | 2·1 | 3·3 | 2·9 | 2·9 | 2·2 | 1·3 | 1·5 | 2·2 | 1·1 | 0·4 | 1·74 |
| 5 | 0·9 | 1·1 | 1·9 | 2·9 | 1·6 | 1·5 | 1·4 | 0·4 | 1·5 | 1·9 | 1·0 | 0·3 | 1·25 |
| 6 | 0·6 | 0·9 | 1·8 | 2·4 | 0·6 | 0·4 | 0·6 | 0·1 | 1·1 | 1·7 | 0·8 | 0·1 | 0·81 |
| 7 | 0·4 | 0·7 | 1·3 | 1·4 | 0·1 | 0·2 | 0·1 | 0·0 | 0·4 | 1·0 | 0·6 | 0·1 | 0·40 |
| 8 | 0·1 | 0·4 | 0·3 | 0·2 | 0·0 | 0·0 | 0·0 | 0·2 | 0·0 | 0·0 | 0·1 | 0·1 | 0·00 |
| 9 | 0·0 | 0·0 | 0·0 | 0·0 | 1·1 | 0·7 | 0·7 | 1·1 | 0·6 | 0·1 | 0·0 | 0·3 | 0·26 |
| 10 | 0·7 | 0·4 | 1·2 | 1·6 | 3·4 | 2·8 | 2·7 | 2·8 | 2·7 | 2·3 | 0·6 | 0·8 | 1·71 |
| 11 | 1·3 | 1·8 | 3·7 | 4·1 | 6·2 | 5·4 | 4·5 | 5·2 | 5·1 | 4·8 | 1·9 | 1·5 | 3·67 |
| Noon | 2·1 | 3·3 | 6·2 | 6·8 | 8·1 | 7·7 | 6·2 | 7·4 | 7·1 | 6·2 | 3·5 | 2·0 | 5·43 |
| $13^h$ | 3·3 | 3·8 | 6·7 | 8·5 | 8·5 | 8·6 | 7·3 | 8·3 | 7·5 | 6·1 | 3·8 | 2·1 | 6·09 |
| 14 | 2·4 | 3·8 | 6·7 | 8·2 | 8·0 | 8·4 | 8·2 | 7·8 | 6·7 | 5·3 | 3·0 | 1·5 | 5·71 |
| 15 | 1·7 | 2·9 | 5·3 | 7·0 | 6·5 | 7·6 | 7·8 | 5·8 | 5·4 | 4·0 | 1·9 | 0·9 | 4·61 |
| 16 | 1·4 | 1·9 | 3·7 | 5·8 | 5·1 | 6·2 | 6·4 | 3·7 | 4·0 | 3·1 | 1·7 | 0·7 | 3·52 |
| 17 | 1·2 | 1·5 | 3·0 | 5·0 | 3·9 | 5·2 | 5·1 | 2·2 | 3·1 | 3·1 | 1·2 | 0·6 | 2·81 |
| 18 | 1·2 | 1·3 | 2·6 | 4·3 | 3·4 | 4·6 | 4·4 | 2·0 | 2·6 | 2·9 | 0·9 | 0·4 | 2·43 |
| 19 | 0·9 | 1·2 | 2·6 | 3·9 | 3·5 | 4·5 | 3·9 | 2·4 | 2·4 | 2·8 | 0·7 | 0·2 | 2·30 |
| 20 | 0·5 | 1·0 | 2·5 | 3·6 | 3·5 | 4·4 | 3·7 | 2·3 | 2·5 | 2·4 | 0·5 | 0·1 | 2·13 |
| 21 | 0·4 | 0·8 | 2·3 | 3·4 | 3·7 | 4·6 | 3·5 | 2·3 | 2·4 | 2·5 | 0·2 | 0·0 | 2·05 |
| 22 | 0·2 | 0·6 | 2·0 | 3·4 | 3·7 | 4·4 | 3·0 | 2·3 | 2·3 | 2·2 | 0·3 | 0·0 | 1·91 |
| 23 | 0·3 | 0·6 | 1·9 | 3·2 | 3·8 | 4·2 | 3·3 | 2·1 | 2·2 | 2·2 | 0·3 | 0·1 | 1·90 |
| 24 | 0·5 | 0·7 | 2·0 | 3·0 | 3·6 | 3·7 | 3·2 | 2·0 | 2·0 | 2·4 | 0·1 | 0·2 | 1·83 |
| Means $0^h$–$23^h$ | 1′·02 | 1′·34 | 2′·78 | 3′·87 | 3′·85 | 4′·13 | 3′·61 | 2′·78 | 2′·84 | 2′·78 | 1′·10 | 0′·56 | 2′·44 |
| Means $1^h$–$24^h$ | 1′·03 | 1′·36 | 2′·77 | 3′·86 | 3′·84 | 4′·12 | 3′·62 | 2′·78 | 2′·86 | 2′·78 | 1′·10 | 0′·56 | 2′·44 |

## 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.)*

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913. | | | | | | | | | | | |
| | 18000 γ + | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| 1 | ... | 508 γ | 526 γ | 506 γ | 508 γ | 510 γ | 505 γ | 532 γ | 538 γ | 531 γ | 527 γ | 525 γ |
| 2 | 526 γ | 507 | 530 | 502 | 504 | 498 | 511 | 535 | 532 | 534 | 516 | 521 |
| 3 | 514 | 522 | 535 | 507 | 507 | 495 | 517 | 527 | 527 | 530 | 515 | 522 |
| 4 | 520 | 532 | 534 | 506 | 506 | 505 | 524 | 520 | 534 | 534 | 511 | 504 |
| 5 | 531 | 529 | 535 | 505 | 508 | 503 | 523 | 511 | 538 | 520 | 512 | 492 |
| 6 | 524 | 529 | 536 | 509 | 507 | 505 | 525 | 511 | 540 | 504 | 496 | 496 |
| 7 | 529 | 530 | 529 | 507 | 498 | 510 | 518 | 506 | 527 | 510 | 495 | 501 |
| 8 | 532 | 527 | 520 | 505 | 498 | 515 | 509 | 512 | 517 | 509 | 492 | 506 |
| 9 | 533 | 528 | 525 | 497 | 505 | 512 | 516 | 511 | 508 | 506 | 489 | 524 |
| 10 | 516 | 530 | 541 | 487 | 506 | 516 | 523 | 511 | 502 | 495 | 506 | 516 |
| 11 | 517 | 527 | 549 | 494 | 512 | 509 | 520 | 519 | 505 | 497 | 524 | 514 |
| 12 | 520 | 524 | 536 | 483 | 512 | 509 | 531 | 521 | 515 | 500 | 526 | 520 |
| 13 | 512 | 515 | 540 | 472 | 521 | 511 | 529 | 524 | 514 | 504 | 518 | 509 |
| 14 | 510 | 507 | 545 | 476 | 526 | 512 | 534 | 524 | 509 | 510 | 514 | 496 |
| 15 | 518 | 503 | 521 | 486 | 517 | 513 | 541 | 532 | 498 | 501 | 508 | 508 |
| 16 | 515 | 501 | 512 | 491 | 510 | 515 | 534 | 530 | 500 | 508 | 505 | 514 |
| 17 | 518 | 494 | 511 | 493 | 511 | 523 | 537 | 529 | 507 | 498 | 515 | 509 |
| 18 | 507 | 496 | 500 | 491 | 499 | 519 | 540 | 518 | 509 | 490 | 519 | 507 |
| 19 | 508 | 498 | 507 | 498 | 490 | 513 | 532 | 510 | 506 | 486 | 504 | 502 |
| 20 | 512 | 500 | 511 | 497 | 494 | 514 | 518 | 512 | 505 | 496 | 502 | 500 |
| 21 | 510 | 509 | 520 | 513 | 501 | 521 | 523 | 520 | 504 | 505 | 512 | 500 |
| 22 | 502 | 509 | 525 | 524 | 499 | 526 | 527 | 530 | 502 | 495 | 507 | 502 |
| 23 | 518 | 503 | 533 | 519 | 518 | 526 | 519 | 528 | 504 | 483 | 498 | 504 |
| 24 | 524 | 511 | 530 | 509 | 533 | 522 | 523 | 518 | 513 | 484 | 504 | 505 |
| 25 | 524 | 513 | 521 | 511 | 539 | 523 | 513 | 513 | 521 | 486 | 506 | 500 |
| 26 | 506 | 524 | 514 | 509 | 545 | 522 | 510 | 515 | 533 | 494 | 514 | 505 |
| 27 | 505 | 523 | 525 | 521 | 545 | 512 | 511 | 523 | 535 | 505 | 502 | 507 |
| 28 | 509 | 522 | 526 | 523 | 540 | 509 | 520 | 522 | 531 | 518 | 510 | 497 |
| 29 | 517 | | 532 | 525 | 544 | 514 | 517 | 504 | 533 | 520 | 506 | 497 |
| 30 | 520 | | 537 | 524 | 541 | 509 | 516 | 510 | 531 | 515 | 517 | 494 |
| 31 | 509 | | 534 | | 525 | | 517 | 512 | | 507 | | 491 |
| Means | 517 | 515 | 527 | 503 | 515 | 513 | 522 | 519 | 518 | 506 | 509 | 506 |

## TABLE VI.—MONTHLY AND ANNUAL 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.)*

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913. | | | | | | | | | | | | |
| Midn. | 10 γ | 11 γ | 13 γ | 25 γ | 22 γ | 25 γ | 25 γ | 26 γ | 29 γ | 25 γ | 14 γ | 1 γ | 18·1 γ |
| $1^h$ | 10 | 11 | 13 | 23 | 21 | 24 | 24 | 26 | 29 | 24 | 13 | 1 | 17·5 |
| 2 | 9 | 10 | 12 | 21 | 19 | 23 | 21 | 24 | 28 | 24 | 14 | 2 | 16·6 |
| 3 | 10 | 11 | 12 | 21 | 17 | 21 | 20 | 23 | 27 | 25 | 14 | 3 | 16·3 |
| 4 | 11 | 11 | 12 | 21 | 16 | 21 | 19 | 23 | 26 | 26 | 15 | 4 | 16·4 |
| 5 | 13 | 13 | 14 | 20 | 15 | 19 | 19 | 21 | 24 | 26 | 16 | 6 | 16·5 |
| 6 | 15 | 14 | 14 | 19 | 12 | 15 | 16 | 18 | 22 | 24 | 17 | 7 | 15·4 |
| 7 | 14 | 14 | 14 | 17 | 8 | 10 | 13 | 13 | 18 | 20 | 16 | 6 | 12·9 |
| 8 | 11 | 12 | 11 | 12 | 3 | 5 | 7 | 6 | 11 | 14 | 11 | 5 | 8·3 |
| 9 | 5 | 8 | 4 | 5 | 1 | 2 | 4 | 2 | 4 | 7 | 5 | 4 | 3·6 |
| 10 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0·3 |
| 11 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 3 | 1 | 0 | 0 | 0 | 0·0 |
| Noon | 0 | 0 | 2 | 5 | 6 | 6 | 3 | 8 | 8 | 4 | 2 | 0 | 3·0 |
| $13^h$ | 4 | 2 | 5 | 10 | 11 | 11 | 7 | 14 | 16 | 10 | 5 | 1 | 7·3 |
| 14 | 6 | 5 | 8 | 13 | 16 | 18 | 11 | 17 | 20 | 14 | 8 | 2 | 10·8 |
| 15 | 7 | 6 | 10 | 18 | 19 | 24 | 17 | 20 | 22 | 17 | 10 | 1 | 13·5 |
| 16 | 7 | 7 | 12 | 21 | 20 | 27 | 22 | 23 | 23 | 19 | 11 | 2 | 15·5 |
| 17 | 9 | 8 | 12 | 24 | 22 | 31 | 25 | 25 | 26 | 20 | 14 | 4 | 17·6 |
| 18 | 9 | 10 | 14 | 26 | 25 | 33 | 28 | 28 | 28 | 22 | 14 | 3 | 19·3 |
| 19 | 8 | 11 | 14 | 27 | 26 | 34 | 31 | 31 | 30 | 23 | 15 | 3 | 20·4 |
| 20 | 8 | 11 | 16 | 26 | 25 | 33 | 31 | 31 | 31 | 23 | 14 | 2 | 20·2 |
| 21 | 9 | 11 | 15 | 26 | 26 | 31 | 30 | 31 | 31 | 24 | 14 | 1 | 20·0 |
| 22 | 9 | 10 | 15 | 26 | 24 | 29 | 29 | 29 | 30 | 24 | 14 | 1 | 19·3 |
| 23 | 9 | 11 | 14 | 26 | 23 | 27 | 26 | 27 | 30 | 24 | 14 | 1 | 18·6 |
| 24 | 9 | 11 | 14 | 25 | 23 | 25 | 26 | 26 | 29 | 24 | 14 | 0 | 18·1 |
| Means $0^h$–$23^h$ | 8·1 | 8·8 | 10·7 | 18·0 | 15·8 | 19·6 | 17·8 | 19·5 | 21·4 | 18·3 | 11·3 | 2·6 | 13·6 |
| Means $1^h$–$24^h$ | 8·1 | 8·8 | 10·8 | 18·0 | 15·9 | 19·6 | 17·9 | 19·5 | 21·4 | 18·3 | 11·3 | 2·5 | 13·6 |

## 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.)*

| | 1913. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
| d | | | | | | | | | | | | |
| 1 | ... | 8 γ | 16 γ | 27 γ | 20 γ | 37 γ | 42 γ | 36 γ | 36 γ | 30 γ | 27 γ | 13 γ |
| 2 | 20 γ | 17 | 11 | 33 | 35 | 45 | 43 | 37 | 45 | 35 | 49 | 16 |
| 3 | 62 | 19 | 13 | 30 | 47 | 47 | 42 | 35 | 41 | 37 | 57 | 22 |
| 4 | 24 | 13 | 25 | 33 | 28 | 32 | 27 | 28 | 52 | 36 | 31 | 54 |
| 5 | 31 | 34 | 19 | 48 | 37 | 36 | 36 | 36 | 47 | 66 | 29 | 28 |
| 6 | 24 | 22 | 26 | 36 | 49 | 64 | 44 | 29 | 49 | 74 | 27 | 24 |
| 7 | 21 | 24 | 30 | 36 | 52 | 47 | 49 | 41 | 36 | 30 | 41 | 24 |
| 8 | 19 | 25 | 28 | 48 | 31 | 43 | 47 | 44 | 61 | 50 | 27 | 24 |
| 9 | 16 | 23 | 24 | 40 | 28 | 37 | 53 | 40 | 71 | 30 | 30 | 16 |
| 10 | 23 | 15 | 27 | 60 | 32 | 29 | 46 | 36 | 29 | 43 | 30 | 17 |
| 11 | 11 | 14 | 17 | 44 | 36 | 33 | 36 | 47 | 39 | 26 | 29 | 13 |
| 12 | 18 | 31 | 25 | 31 | 37 | 33 | 42 | 43 | 29 | 45 | 24 | 18 |
| 13 | 13 | 23 | 28 | 39 | 38 | 29 | 47 | 37 | 33 | 36 | 20 | 15 |
| 14 | 23 | 70 | 51 | 37 | 30 | 43 | 58 | 35 | 26 | 24 | 14 | 21 |
| 15 | 22 | 31 | 46 | 33 | 28 | 37 | 26 | 25 | 31 | 31 | 9 | 26 |
| 16 | 22 | 27 | 21 | 41 | 32 | 36 | 48 | 30 | 31 | 32 | 15 | 16 |
| 17 | 15 | 19 | 37 | 23 | 22 | 42 | 34 | 30 | 37 | 23 | 26 | 6 |
| 18 | 22 | 26 | 26 | 37 | 22 | 50 | 39 | 48 | 32 | 51 | 17 | 15 |
| 19 | 22 | 23 | 15 | 28 | 28 | 38 | 20 | 44 | 51 | 34 | 24 | 22 |
| 20 | 19 | 32 | 27 | 34 | 31 | 42 | 39 | 46 | 37 | 38 | 36 | 11 |
| 21 | 15 | 18 | 26 | 40 | 31 | 56 | 41 | 50 | 36 | 31 | 22 | 12 |
| 22 | 21 | 19 | 39 | 34 | 35 | 50 | 31 | 37 | 62 | 34 | 19 | 13 |
| 23 | 25 | 21 | 31 | 32 | 51 | 43 | 33 | 30 | 41 | 28 | 33 | 11 |
| 24 | 18 | 14 | 29 | 40 | 50 | 33 | 32 | 40 | 34 | 31 | 22 | 8 |
| 25 | 23 | 55 | 24 | 23 | 36 | 39 | 36 | 30 | 26 | 37 | 20 | 33 |
| 26 | 9 | 26 | 31 | 37 | 37 | 46 | 37 | 41 | 16 | 32 | 20 | 22 |
| 27 | 15 | 18 | 38 | 40 | 37 | 29 | 29 | 32 | 29 | 41 | 36 | 24 |
| 28 | 14 | 18 | 36 | 47 | 44 | 65 | 27 | 28 | 30 | 37 | 27 | 11 |
| 29 | 24 | | 17 | 28 | 47 | 48 | 35 | 34 | 28 | 23 | 38 | 10 |
| 30 | 30 | | 24 | 31 | 27 | 30 | 24 | 33 | 29 | 30 | 15 | 9 |
| 31 | 41 | | 18 | | 20 | | 39 | 36 | | 42 | | 10 |
| Means | 22·1 | 24·5 | 26·6 | 36·3 | 34·8 | 41·3 | 38·1 | 36·7 | 38·1 | 36·7 | 27·1 | 18·2 |

The mean of the twelve monthly values is 31·7 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 (* January 6 substituted for January 1):—*

January 6*, 7, 12, 16, 24.
February 3, 4, 23, 24, 28.
March 1, 2, 10, 26, 27.
April 6, 20, 21, 22, 26.
May 14, 20, 21, 22, 23.
June 7, 8, 11, 12, 27.
July 4, 9, 17, 19, 28.
August 1, 5, 20, 29, 30.
September 4, 14, 20, 27, 29.
October 2, 3, 23, 24, 28.
November 4, 14, 15, 16, 25.
December 10, 11, 13, 17, 23.

| | 1913. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
| Midn. | 15 γ | 4 γ | 11 γ | 26 γ | 22 γ | 22 γ | 21 γ | 31 γ | 26 γ | 26 γ | 14 γ | 7 γ | 17·7 γ |
| $1^h$ | 16 | 4 | 11 | 26 | 21 | 21 | 18 | 30 | 26 | 27 | 11 | 5 | 17·0 |
| 2 | 14 | 4 | 11 | 25 | 19 | 21 | 16 | 28 | 27 | 28 | 11 | 5 | 16·4 |
| 3 | 15 | 4 | 13 | 23 | 16 | 19 | 15 | 28 | 26 | 28 | 12 | 4 | 15·9 |
| 4 | 16 | 4 | 13 | 23 | 18 | 19 | 15 | 27 | 25 | 27 | 13 | 4 | 16·0 |
| 5 | 17 | 5 | 15 | 22 | 16 | 19 | 15 | 25 | 24 | 27 | 12 | 5 | 15·8 |
| 6 | 18 | 6 | 15 | 23 | 14 | 16 | 13 | 22 | 23 | 26 | 12 | 6 | 15·2 |
| 7 | 19 | 6 | 16 | 23 | 9 | 7 | 10 | 16 | 20 | 23 | 11 | 6 | 12·8 |
| 8 | 16 | 6 | 16 | 19 | 2 | 4 | 7 | 8 | 13 | 16 | 8 | 5 | 9·0 |
| 9 | 8 | 5 | 8 | 13 | 0 | 1 | 5 | 4 | 5 | 8 | 4 | 5 | 4·5 |
| 10 | 3 | 2 | 1 | 4 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 0·3 |
| 11 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 0·0 |
| Noon | 1 | 0 | 3 | 7 | 9 | 3 | 1 | 13 | 5 | 9 | 4 | 1 | 3·7 |
| $13^h$ | 8 | 2 | 6 | 12 | 16 | 9 | 2 | 19 | 12 | 16 | 7 | 2 | 8·3 |
| 14 | 11 | 3 | 8 | 16 | 22 | 14 | 6 | 20 | 17 | 22 | 11 | 5 | 11·9 |
| 15 | 14 | 4 | 10 | 21 | 25 | 17 | 11 | 24 | 18 | 27 | 11 | 5 | 14·6 |
| 16 | 15 | 5 | 15 | 25 | 23 | 20 | 17 | 26 | 20 | 28 | 12 | 6 | 16·7 |
| 17 | 16 | 9 | 18 | 29 | 26 | 24 | 23 | 29 | 23 | 29 | 15 | 6 | 19·6 |
| 18 | 16 | 11 | 17 | 32 | 27 | 27 | 27 | 31 | 25 | 31 | 16 | 8 | 21·3 |
| 19 | 14 | 10 | 19 | 33 | 29 | 28 | 27 | 35 | 28 | 32 | 16 | 7 | 22·2 |
| 20 | 13 | 9 | 19 | 31 | 29 | 26 | 27 | 36 | 31 | 30 | 16 | 6 | 21·7 |
| 21 | 13 | 9 | 18 | 32 | 32 | 24 | 26 | 35 | 30 | 29 | 15 | 4 | 21·3 |
| 22 | 15 | 10 | 19 | 33 | 31 | 22 | 24 | 34 | 29 | 29 | 14 | 3 | 20·9 |
| 23 | 14 | 9 | 17 | 33 | 29 | 21 | 22 | 34 | 29 | 28 | 14 | 1 | 19·9 |
| 24 | 15 | 8 | 17 | 32 | 28 | 19 | 21 | 34 | 28 | 27 | 13 | 2 | 19·3 |
| Means $0^h$–$23^h$ | 12·8 | 5·5 | 12·5 | 22·1 | 18·3 | 16·0 | 14·5 | 23·3 | 20·1 | 22·9 | 10·8 | 4·5 | 14·3 |
| Means $1^h$–$24^h$ | 12·8 | 5·6 | 12·7 | 22·4 | 18·5 | 15·9 | 14·5 | 23·5 | 20·2 | 23·0 | 10·8 | 4·3 | 14·3 |

### 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.*)

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 43000 γ + | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| 1 | ... | 298 γ | 305 γ | 264 γ | 278 γ | 290 γ | 312 γ | 304 γ | 313 γ | 287 γ | 299 γ | 295 γ |
| 2 | 295 γ | 298 | 299 | 266 | 281 | 273 | 303 | 309 | 314 | 286 | 308 | 295 |
| 3 | 306 | 298 | 303 | 260 | 278 | 297 | 302 | 293 | 305 | 276 | 299 | 295 |
| 4 | 306 | 308 | 314 | 265 | 278 | 292 | 303 | 304 | 303 | 283 | 295 | 293 |
| 5 | 320 | 310 | 316 | 265 | 263 | 294 | 305 | 302 | 302 | 283 | 288 | 286 |
| 6 | 303 | 311 | 328 | 267 | 267 | 287 | 304 | 296 | 309 | 281 | 286 | 282 |
| 7 | 319 | 313 | 319 | 256 | 267 | 276 | 290 | 291 | 313 | 286 | 291 | 274 |
| 8 | 313 | 311 | 320 | 244 | 258 | 274 | 294 | 293 | 302 | 275 | 283 | 273 |
| 9 | 303 | 307 | 309 | 259 | 268 | 270 | 284 | 285 | 303 | 277 | 280 | 280 |
| 10 | 306 | 310 | 304 | 253 | 272 | 266 | 281 | 286 | 301 | 275 | 276 | 283 |
| 11 | 290 | 302 | 313 | 246 | 282 | 264 | 290 | 279 | 294 | 259 | 286 | 275 |
| 12 | 288 | 300 | 318 | 238 | 273 | 263 | 295 | 286 | 294 | 259 | 282 | 272 |
| 13 | 276 | 292 | 320 | 235 | 282 | 267 | 302 | 289 | 306 | 257 | 280 | 276 |
| 14 | 269 | 286 | 321 | 241 | 285 | 267 | 299 | 292 | 300 | 264 | 276 | 272 |
| 15 | 281 | 283 | 314 | 238 | 287 | 266 | 299 | 290 | 286 | 260 | 273 | 266 |
| 16 | 274 | 284 | 314 | 250 | 287 | 271 | 299 | 298 | 277 | 261 | 261 | 265 |
| 17 | 274 | 268 | 315 | 244 | 286 | 281 | 295 | 296 | 278 | 257 | 260 | 266 |
| 18 | 278 | 258 | 308 | 237 | 286 | 287 | 301 | 299 | 275 | 252 | 273 | 267 |
| 19 | 280 | 258 | 308 | 239 | 281 | 293 | 306 | 298 | 273 | 253 | 269 | 254 |
| 20 | 280 | 255 | 308 | 246 | 278 | 295 | 306 | 290 | 264 | 255 | 264 | 255 |
| 21 | 282 | 251 | 305 | 252 | 278 | 287 | 304 | 287 | 270 | 263 | 262 | 253 |
| 22 | 282 | 260 | 312 | 249 | 278 | 282 | 297 | 285 | 274 | 257 | 260 | 249 |
| 23 | 271 | 251 | 312 | 258 | 272 | 276 | 294 | 296 | 272 | 256 | 250 | 244 |
| 24 | 282 | 256 | 311 | 264 | 281 | 287 | 295 | 294 | 275 | 248 | 241 | 245 |
| 25 | 295 | 268 | 305 | 272 | 285 | 275 | 298 | 283 | 279 | 241 | 239 | 238 |
| 26 | 290 | 266 | 304 | 271 | 295 | 269 | 309 | 289 | 286 | 244 | 245 | 242 |
| 27 | 285 | 273 | 307 | 267 | 306 | 274 | 307 | 285 | 288 | 246 | 237 | 244 |
| 28 | 274 | 274 | 308 | 270 | 307 | 273 | 300 | 287 | 294 | 251 | 239 | 239 |
| 29 | 276 | | 315 | 279 | 312 | 274 | 308 | 296 | 292 | 256 | 244 | 232 |
| 30 | 287 | | 316 | 278 | 324 | 294 | 311 | 297 | 292 | 259 | 247 | 226 |
| 31 | 287 | | 322 | | 332 | | 311 | 303 | | 253 | | 214 |
| Means | 289 | 284 | 312 | 256 | 284 | 279 | 300 | 293 | 291 | 263 | 270 | 263 |

### 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.*)

1913.

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Midn. | 1 γ | 12 γ | 18 γ | 19 γ | 21 γ | 17 γ | 17 γ | 15 γ | 14 γ | 9 γ | 4 γ | 6 γ | 12·7 γ |
| $1^h$ | 0 | 10 | 18 | 19 | 21 | 17 | 17 | 15 | 12 | 9 | 3 | 6 | 12·1 |
| 2 | 1 | 10 | 18 | 21 | 22 | 17 | 16 | 15 | 12 | 8 | 3 | 6 | 12·3 |
| 3 | 2 | 9 | 18 | 23 | 23 | 17 | 16 | 15 | 12 | 7 | 3 | 6 | 12·5 |
| 4 | 3 | 10 | 19 | 24 | 24 | 19 | 19 | 16 | 12 | 7 | 3 | 7 | 13·5 |
| 5 | 3 | 10 | 19 | 23 | 26 | 20 | 20 | 17 | 14 | 7 | 3 | 8 | 14·1 |
| 6 | 4 | 10 | 18 | 23 | 25 | 20 | 19 | 18 | 14 | 7 | 4 | 6 | 13·9 |
| 7 | 3 | 10 | 17 | 22 | 23 | 19 | 19 | 18 | 16 | 8 | 4 | 6 | 13·7 |
| 8 | 2 | 8 | 17 | 19 | 21 | 14 | 16 | 16 | 13 | 9 | 3 | 3 | 11·6 |
| 9 | 2 | 8 | 14 | 15 | 16 | 11 | 13 | 14 | 11 | 7 | 1 | 2 | 9·4 |
| 10 | 2 | 3 | 8 | 8 | 9 | 6 | 10 | 10 | 6 | 3 | 0 | 0 | 5·3 |
| 11 | 1 | 0 | 3 | 3 | 2 | 1 | 4 | 4 | 2 | 0 | 0 | 0 | 1·6 |
| Noon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0·0 |
| $13^h$ | 1 | 4 | 2 | 1 | 5 | 5 | 2 | 3 | 2 | 4 | 1 | 0 | 2·4 |
| 14 | 4 | 8 | 9 | 9 | 11 | 9 | 7 | 9 | 6 | 8 | 5 | 2 | 7·2 |
| 15 | 5 | 11 | 13 | 17 | 17 | 13 | 12 | 13 | 10 | 11 | 6 | 3 | 10·8 |
| 16 | 5 | 14 | 19 | 21 | 21 | 17 | 15 | 16 | 13 | 12 | 5 | 6 | 13·6 |
| 17 | 4 | 15 | 20 | 24 | 26 | 21 | 20 | 17 | 14 | 11 | 7 | 6 | 15·3 |
| 18 | 4 | 13 | 19 | 26 | 26 | 22 | 23 | 17 | 14 | 12 | 7 | 6 | 15·6 |
| 19 | 4 | 13 | 19 | 26 | 26 | 22 | 22 | 16 | 15 | 12 | 6 | 6 | 15·5 |
| 20 | 3 | 11 | 20 | 24 | 25 | 19 | 21 | 16 | 13 | 11 | 5 | 6 | 14·4 |
| 21 | 0 | 11 | 19 | 22 | 25 | 18 | 18 | 13 | 13 | 10 | 5 | 5 | 13·2 |
| 22 | 0 | 10 | 18 | 20 | 24 | 17 | 17 | 14 | 13 | 10 | 3 | 4 | 12·4 |
| 23 | 0 | 10 | 18 | 19 | 24 | 16 | 17 | 15 | 13 | 9 | 2 | 3 | 12·1 |
| 24 | 0 | 12 | 18 | 20 | 23 | 17 | 17 | 16 | 13 | 8 | 2 | 3 | 12·3 |
| Means $0^h$–$23^h$ | 2·3 | 9·2 | 15·1 | 17·8 | 19·3 | 14·9 | 15·0 | 13·4 | 11·0 | 8·0 | 3·5 | 4·3 | 11·0 |
| Means $1^h$–$24^h$ | 2·2 | 9·2 | 15·1 | 17·9 | 19·4 | 14·9 | 15·0 | 13·5 | 11·0 | 7·9 | 3·4 | 4·2 | 11·0 |

## 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.)*

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913. | | | | | | | | | | | |
| d | | | | | | | | | | | | |
| 1 | ... | 15 γ | 12 γ | 29 γ | 49 γ | 28 γ | 26 γ | 14 γ | 23 γ | 26 γ | 16 γ | 14 γ |
| 2 | 13 γ | 19 | 22 | 27 | 35 | 37 | 36 | 23 | 32 | 26 | 28 | 16 |
| 3 | 59 | 22 | 24 | 24 | 35 | 23 | 37 | 29 | 28 | 33 | 23 | 10 |
| 4 | 17 | 16 | 23 | 23 | 48 | 28 | 24 | 12 | 19 | 22 | 14 | 26 |
| 5 | 19 | 10 | 19 | 32 | 61 | 25 | 21 | 23 | 30 | 32 | 10 | 17 |
| 6 | 15 | 18 | 20 | 32 | 58 | 59 | 31 | 29 | 21 | 28 | 11 | 14 |
| 7 | 10 | 11 | 22 | 46 | 23 | 33 | 36 | 29 | 25 | 18 | 15 | 10 |
| 8 | 21 | 24 | 32 | 32 | 29 | 30 | 20 | 27 | 28 | 35 | 19 | 12 |
| 9 | 7 | 13 | 38 | 70 | 29 | 29 | 23 | 25 | 32 | 19 | 13 | 10 |
| 10 | 20 | 17 | 30 | 29 | 31 | 30 | 31 | 17 | 17 | 25 | 18 | 12 |
| 11 | 11 | 49 | 23 | 39 | 29 | 29 | 16 | 29 | 11 | 20 | 13 | 16 |
| 12 | 8 | 27 | 24 | 36 | 35 | 22 | 34 | 30 | 20 | 14 | 12 | 17 |
| 13 | 17 | 19 | 26 | 27 | 34 | 25 | 20 | 23 | 7 | 18 | 23 | 19 |
| 14 | 12 | 37 | 40 | 25 | 42 | 26 | 23 | 20 | 28 | 9 | 18 | 14 |
| 15 | 20 | 43 | 33 | 29 | 29 | 23 | 44 | 21 | 15 | 19 | 18 | 10 |
| 16 | 13 | 18 | 36 | 38 | 21 | 29 | 24 | 21 | 12 | 12 | 16 | 18 |
| 17 | 11 | 29 | 23 | 34 | 18 | 13 | 28 | 23 | 24 | 22 | 26 | 22 |
| 18 | 13 | 23 | 32 | 29 | 27 | 16 | 29 | 26 | 27 | 52 | 14 | 19 |
| 19 | 13 | 12 | 19 | 19 | 37 | 38 | 16 | 32 | 23 | 16 | 19 | 9 |
| 20 | 16 | 21 | 30 | 27 | 33 | 17 | 62 | 23 | 31 | 15 | 17 | 8 |
| 21 | 13 | 23 | 35 | 42 | 29 | 39 | 20 | 20 | 26 | 10 | 13 | 11 |
| 22 | 11 | 23 | 24 | 27 | 42 | 20 | 29 | 31 | 23 | 15 | 9 | 10 |
| 23 | 11 | 45 | 32 | 25 | 48 | 38 | 26 | 22 | 20 | 10 | 21 | 10 |
| 24 | 23 | 25 | 23 | 39 | 32 | 13 | 26 | 26 | 23 | 17 | 17 | 10 |
| 25 | 12 | 33 | 40 | 36 | 22 | 29 | 41 | 17 | 17 | 14 | 19 | 15 |
| 26 | 15 | 32 | 36 | 33 | 35 | 25 | 20 | 23 | 23 | 11 | 12 | 12 |
| 27 | 7 | 17 | 32 | 38 | 22 | 19 | 26 | 18 | 22 | 16 | 17 | 12 |
| 28 | 25 | 14 | 37 | 33 | 41 | 24 | 27 | 22 | 16 | 10 | 28 | 13 |
| 29 | 13 | | 32 | 37 | 28 | 36 | 29 | 21 | 24 | 10 | 13 | 21 |
| 30 | 14 | | 29 | 30 | 29 | 18 | 24 | 29 | 22 | 16 | 9 | 12 |
| 31 | 24 | | 38 | | 29 | | 20 | 17 | | 23 | | 9 |
| Means | 16·1 | 23·4 | 28·6 | 32·9 | 34·2 | 27·4 | 28·0 | 23·3 | 22·3 | 19·8 | 16·7 | 13·8 |

The mean of the twelve monthly values is 23·9γ.

## 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 6 substituted for January 1):—*

| | | | |
|---|---|---|---|
| January 6*, 7, 12, 16, 24. | April 6, 20, 21, 22, 26. | July 4, 9, 17, 19, 28. | October 2, 3, 23, 24, 28. |
| February 3, 4, 23, 24, 28. | May 14, 20, 21, 22, 23. | August 1, 5, 20, 29, 30. | November 4, 14, 15, 16, 25. |
| March 1, 2, 10, 26, 27. | June 7, 8, 11, 12, 27. | September 4, 14, 20, 27, 29. | December 10, 11, 13, 17, 23. |

| Hour, Greenwich Civil Time. | January. | February | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913. | | | | | | | | | | | | |
| Midn. | 2 γ | 14 γ | 18 γ | 25 γ | 27 γ | 18 γ | 17 γ | 15 γ | 17 γ | 11 γ | 4 γ | 6 γ | 13·8 γ |
| $1^h$ | 0 | 13 | 18 | 26 | 27 | 15 | 16 | 16 | 17 | 13 | 6 | 8 | 13·9 |
| 2 | 1 | 15 | 19 | 27 | 29 | 17 | 16 | 16 | 16 | 13 | 4 | 8 | 14·4 |
| 3 | 0 | 14 | 19 | 29 | 30 | 21 | 18 | 17 | 16 | 12 | 4 | 10 | 15·1 |
| 4 | 1 | 13 | 19 | 29 | 32 | 22 | 20 | 16 | 16 | 12 | 5 | 9 | 15·5 |
| 5 | 4 | 13 | 19 | 29 | 34 | 23 | 20 | 18 | 19 | 13 | 6 | 10 | 16·6 |
| 6 | 3 | 11 | 19 | 28 | 34 | 23 | 21 | 17 | 20 | 13 | 6 | 10 | 16·4 |
| 7 | 1 | 11 | 19 | 26 | 33 | 23 | 21 | 17 | 20 | 16 | 6 | 10 | 16·2 |
| 8 | 2 | 9 | 18 | 23 | 30 | 16 | 17 | 16 | 20 | 15 | 4 | 5 | 13·9 |
| 9 | 2 | 9 | 17 | 19 | 22 | 10 | 14 | 15 | 16 | 10 | 3 | 2 | 10·9 |
| 10 | 3 | 4 | 9 | 12 | 10 | 7 | 10 | 12 | 10 | 5 | 3 | 0 | 6·4 |
| 11 | 4 | 0 | 3 | 5 | 1 | 1 | 4 | 5 | 4 | 2 | 1 | 1 | 1·9 |
| Noon | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0·0 |
| $13^h$ | 2 | 5 | 2 | 0 | 5 | 3 | 0 | 4 | 0 | 5 | 0 | 4 | 1·8 |
| 14 | 5 | 9 | 6 | 6 | 12 | 10 | 5 | 10 | 1 | 10 | 7 | 5 | 6·5 |
| 15 | 5 | 14 | 11 | 11 | 19 | 14 | 9 | 12 | 6 | 11 | 7 | 5 | 9·6 |
| 16 | 4 | 16 | 19 | 13 | 21 | 20 | 13 | 15 | 9 | 11 | 5 | 7 | 12·0 |
| 17 | 5 | 17 | 19 | 19 | 26 | 24 | 17 | 15 | 13 | 11 | 6 | 8 | 14·3 |
| 18 | 7 | 18 | 19 | 19 | 24 | 22 | 19 | 14 | 12 | 10 | 6 | 9 | 14·2 |
| 19 | 5 | 16 | 19 | 20 | 22 | 23 | 19 | 13 | 11 | 12 | 3 | 8 | 13·5 |
| 20 | 6 | 14 | 19 | 19 | 21 | 19 | 17 | 12 | 9 | 11 | 3 | 8 | 12·5 |
| 21 | 3 | 14 | 18 | 19 | 21 | 19 | 16 | 10 | 10 | 11 | 3 | 8 | 12·0 |
| 22 | 3 | 12 | 19 | 21 | 21 | 18 | 16 | 11 | 10 | 10 | 2 | 6 | 11·7 |
| 23 | 3 | 13 | 19 | 20 | 23 | 18 | 16 | 13 | 12 | 10 | 1 | 6 | 12·1 |
| 24 | 3 | 11 | 20 | 26 | 25 | 17 | 18 | 16 | 13 | 11 | 1 | 6 | 13·2 |
| Means $0^h$–$23^h$ | 3·0 | 11·5 | 15·3 | 18·5 | 21·8 | 16·1 | 14·2 | 12·9 | 11·9 | 10·3 | 4·0 | 6·4 | 11·5 |
| Means $1^h$–$24^h$ | 3·1 | 11·3 | 15·4 | 18·6 | 21·8 | 16·0 | 14·3 | 12·9 | 11·7 | 10·3 | 3·9 | 6·4 | 11·4 |

## TABLE XIII.—MEAN TEMPERATURE for each CIVIL DAY within the box inclosing the HORIZONTAL FORCE MAGNET.

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | ... | 66·8 | 66·2 | 67·3 | 67·1 | 66·9 | 67·2 | 67·2 | 67·2 | 66·9 | 66·8 | 67·4 |
| 2 | 65·9 | 66·0 | 66·0 | 66·6 | 67·6 | 67·6 | 67·6 | 66·9 | 67·3 | 66·8 | 67·0 | 66·3 |
| 3 | 66·2 | 67·0 | 66·8 | 67·0 | 67·4 | 67·1 | 67·8 | 68·0 | 67·0 | 67·7 | 66·3 | 67·0 |
| 4 | 68·2 | 67·1 | 67·2 | 66·9 | 66·2 | 67·7 | 67·7 | 67·7 | 67·8 | 66·8 | 66·1 | 66·7 |
| 5 | 67·3 | 67·5 | 67·7 | 66·9 | 67·4 | 67·5 | 66·9 | 66·6 | 68·1 | 66·1 | 67·8 | 67·1 |
| 6 | 66·9 | 67·2 | 67·6 | 66·9 | 67·4 | 66·6 | 66·3 | 66·4 | 67·2 | 65·6 | 66·9 | 67·3 |
| 7 | 66·5 | 67·6 | 67·1 | 66·5 | 66·3 | 67·5 | 67·1 | 67·2 | 66·3 | 65·4 | 66·5 | 66·8 |
| 8 | 66·5 | 67·0 | 66·2 | 67·3 | 67·2 | 67·4 | 66·8 | 66·5 | 66·6 | 66·7 | 67·5 | 67·1 |
| 9 | 66·9 | 67·2 | 65·9 | 67·0 | 67·7 | 66·5 | 67·0 | 66·5 | 66·8 | 66·4 | 66·9 | 67·1 |
| 10 | 65·6 | 67·9 | 67·3 | 66·3 | 67·0 | 66·9 | 67·0 | 67·1 | 66·0 | 66·0 | 68·0 | 66·1 |
| 11 | 65·5 | 66·9 | 67·0 | 66·0 | 66·6 | 67·0 | 67·3 | 67·6 | 66·5 | 66·3 | 66·8 | 66·3 |
| 12 | 66·4 | 67·1 | 68·4 | 65·9 | 67·5 | 67·4 | 68·2 | 67·2 | 67·6 | 66·5 | 67·1 | 66·7 |
| 13 | 65·7 | 67·0 | 67·7 | 66·2 | 68·1 | 67·5 | 68·5 | 66·8 | 67·1 | 67·1 | 65·1 | 65·7 |
| 14 | 66·0 | 65·7 | 67·7 | 66·9 | 67·0 | 67·2 | 67·5 | 67·0 | 66·9 | 66·5 | 65·6 | 66·0 |
| 15 | 66·6 | 66·9 | 66·4 | 67·5 | 67·5 | 67·9 | 67·1 | 67·4 | 66·6 | 66·7 | 65·4 | 66·9 |
| 16 | 66·8 | 66·9 | 67·1 | 67·4 | 67·0 | 68·7 | 67·0 | 67·2 | 66·9 | 66·7 | 66·4 | 66·2 |
| 17 | 66·9 | 66·8 | 66·4 | 66·9 | 67·7 | 69·1 | 67·0 | 67·4 | 66·9 | 66·2 | 67·9 | 66·5 |
| 18 | 66·8 | 65·8 | 66·7 | 66·6 | 68·0 | 69·1 | 67·6 | 67·2 | 66·5 | 67·5 | 67·7 | 65·9 |
| 19 | 65·5 | 66·3 | 67·3 | 67·4 | 66·9 | 68·8 | 66·9 | 66·4 | 66·8 | 67·0 | 65·8 | 66·2 |
| 20 | 66·9 | 65·2 | 66·9 | 67·0 | 67·0 | 68·2 | 67·0 | 66·6 | 67·0 | 67·8 | 68·2 | 67·1 |
| 21 | 66·6 | 65·8 | 66·9 | 66·1 | 67·9 | 66·5 | 66·9 | 67·1 | 67·0 | 67·1 | 67·5 | 66·8 |
| 22 | 66·1 | 66·2 | 67·4 | 67·0 | 67·3 | 66·9 | 66·8 | 68·0 | 66·7 | 66·0 | 65·9 | 66·9 |
| 23 | 67·0 | 65·5 | 67·2 | 66·8 | 67·8 | 67·9 | 66·2 | 67·8 | 66·7 | 67·0 | 64·6 | 66·9 |
| 24 | 67·6 | 66·2 | 66·8 | 66·6 | 68·4 | 66·4 | 66·2 | 66·9 | 67·1 | 67·5 | 66·8 | 66·6 |
| 25 | 67·3 | 67·1 | 65·3 | 67·8 | 68·1 | 66·5 | 67·7 | 67·8 | 67·6 | 67·4 | 68·2 | 66·6 |
| 26 | 66·6 | 66·7 | 66·9 | 66·5 | 68·5 | 67·0 | 67·3 | 67·2 | 68·0 | 67·8 | 66·7 | 66·9 |
| 27 | 66·8 | 66·8 | 67·3 | 67·7 | 68·8 | 67·0 | 66·8 | 67·7 | 68·4 | 68·1 | 66·2 | 66·8 |
| 28 | 66·2 | 66·9 | 67·9 | 68·3 | 68·7 | 67·6 | 68·1 | 68·1 | 67·6 | 68·0 | 67·7 | 66·4 |
| 29 | 67·1 | | 66·9 | 67·1 | 68·9 | 68·5 | 67·5 | 68·4 | 67·2 | 67·5 | 67·4 | 65·8 |
| 30 | 67·1 | | 68·1 | 67·4 | 69·3 | 68·0 | 67·3 | 68·3 | 67·0 | 67·1 | 67·9 | 66·6 |
| 31 | 67·2 | | 67·1 | | 67·7 | | 66·7 | 68·6 | | 67·0 | | 66·8 |
| Means | 66°·62 | 66°·68 | 67°·01 | 66°·93 | 67°·61 | 67°·50 | 67°·19 | 67°·32 | 67°·08 | 66°·88 | 66°·82 | 66°·63 |

## TABLE XIV.—MONTHLY and ANNUAL MEAN TEMPERATURE at each HOUR of the DAY within the box inclosing the HORIZONTAL FORCE MAGNET.

1913.

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| Midn. | 67·2 | 67·4 | 67·6 | 67·5 | 68·0 | 67·8 | 67·5 | 67·6 | 67·3 | 67·2 | 67·2 | 67·0 | 67·44 |
| 1h | 67·0 | 67·1 | 67·4 | 67·3 | 67·9 | 67·7 | 67·4 | 67·5 | 67·3 | 67·1 | 67·1 | 66·9 | 67·31 |
| 2 | 66·8 | 66·9 | 67·2 | 67·1 | 67·7 | 67·6 | 67·3 | 67·4 | 67·2 | 67·0 | 66·9 | 66·8 | 67·16 |
| 3 | 66·6 | 66·6 | 67·0 | 66·9 | 67·5 | 67·5 | 67·2 | 67·3 | 67·1 | 66·9 | 66·8 | 66·7 | 67·01 |
| 4 | 66·4 | 66·4 | 66·8 | 66·7 | 67·4 | 67·4 | 67·1 | 67·2 | 67·0 | 66·8 | 66·7 | 66·5 | 66·87 |
| 5 | 66·2 | 66·3 | 66·7 | 66·5 | 67·2 | 67·3 | 67·0 | 67·1 | 66·9 | 66·7 | 66·6 | 66·4 | 66·74 |
| 6 | 66·1 | 66·2 | 66·6 | 66·4 | 67·1 | 67·2 | 67·0 | 67·1 | 66·8 | 66·5 | 66·6 | 66·3 | 66·66 |
| 7 | 66·1 | 66·1 | 66·6 | 66·4 | 67·1 | 67·2 | 66·9 | 67·0 | 66·8 | 66·5 | 66·5 | 66·3 | 66·62 |
| 8 | 66·1 | 66·1 | 66·6 | 66·4 | 67·1 | 67·2 | 66·9 | 67·0 | 66·8 | 66·5 | 66·5 | 66·4 | 66·63 |
| 9 | 66·1 | 66·1 | 66·6 | 66·5 | 67·1 | 67·2 | 66·9 | 67·0 | 66·8 | 66·5 | 66·6 | 66·4 | 66·65 |
| 10 | 66·2 | 66·2 | 66·6 | 66·5 | 67·1 | 67·2 | 67·0 | 67·0 | 66·8 | 66·6 | 66·5 | 66·4 | 66·68 |
| 11 | 66·3 | 66·3 | 66·6 | 66·5 | 67·2 | 67·2 | 66·9 | 67·1 | 66·8 | 66·6 | 66·5 | 66·4 | 66·70 |
| Noon | 66·4 | 66·3 | 66·6 | 66·6 | 67·3 | 67·2 | 66·9 | 67·1 | 66·8 | 66·6 | 66·6 | 66·4 | 66·73 |
| 13h | 66·5 | 66·4 | 66·7 | 66·7 | 67·5 | 67·3 | 67·1 | 67·2 | 67·0 | 66·7 | 66·7 | 66·5 | 66·86 |
| 14 | 66·6 | 66·6 | 66·8 | 66·8 | 67·6 | 67·4 | 67·1 | 67·3 | 67·0 | 66·8 | 66·8 | 66·6 | 66·95 |
| 15 | 66·7 | 66·7 | 67·0 | 66·9 | 67·7 | 67·5 | 67·2 | 67·3 | 67·1 | 66·9 | 66·9 | 66·7 | 67·05 |
| 16 | 66·8 | 66·8 | 67·2 | 67·1 | 67·8 | 67·6 | 67·3 | 67·4 | 67·2 | 67·0 | 67·0 | 66·8 | 67·17 |
| 17 | 66·8 | 66·9 | 67·2 | 67·2 | 67·9 | 67·7 | 67·3 | 67·5 | 67·3 | 67·1 | 67·0 | 66·8 | 67·22 |
| 18 | 66·9 | 67·0 | 67·3 | 67·3 | 68·0 | 67·7 | 67·3 | 67·5 | 67·3 | 67·1 | 67·0 | 66·7 | 67·26 |
| 19 | 66·9 | 67·0 | 67·3 | 67·4 | 68·1 | 67·7 | 67·4 | 67·5 | 67·3 | 67·2 | 67·0 | 66·7 | 67·29 |
| 20 | 66·9 | 67·1 | 67·4 | 67·4 | 68·1 | 67·8 | 67·4 | 67·6 | 67·4 | 67·2 | 67·0 | 66·7 | 67·33 |
| 21 | 67·0 | 67·2 | 67·4 | 67·4 | 68·2 | 67·8 | 67·5 | 67·6 | 67·3 | 67·2 | 67·0 | 66·8 | 67·37 |
| 22 | 67·1 | 67·3 | 67·5 | 67·4 | 68·1 | 67·8 | 67·5 | 67·7 | 67·3 | 67·2 | 67·1 | 66·9 | 67·41 |
| 23 | 67·2 | 67·4 | 67·6 | 67·4 | 68·1 | 67·9 | 67·5 | 67·6 | 67·3 | 67·2 | 67·1 | 67·0 | 67·44 |
| 24 | 67·2 | 67·3 | 67·6 | 67·4 | 68·0 | 67·8 | 67·5 | 67·6 | 67·3 | 67·2 | 67·2 | 67·0 | 67·43 |

## TABLE XV.—MEAN TEMPERATURE for each CIVIL DAY within the box inclosing the VERTICAL FORCE MAGNET.

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | ... | 67.6 | 66.2 | 67.0 | 67.1 | 67.0 | 66.8 | 66.5 | 66.4 | 66.3 | 66.8 | 66.6 |
| 2 | 66.5 | 67.3 | 66.8 | 66.7 | 67.1 | 68.3 | 67.7 | 66.1 | 66.0 | 66.4 | 67.1 | 66.5 |
| 3 | 66.8 | 67.7 | 67.7 | 67.9 | 67.0 | 66.5 | 68.0 | 68.2 | 66.9 | 67.8 | 66.7 | 66.9 |
| 4 | 68.5 | 66.6 | 67.7 | 67.4 | 66.1 | 67.0 | 67.6 | 67.1 | 67.8 | 66.8 | 66.8 | 67.0 |
| 5 | 66.9 | 67.0 | 68.0 | 67.2 | 66.8 | 66.7 | 66.7 | 66.3 | 67.8 | 66.0 | 68.0 | 67.2 |
| 6 | 68.1 | 67.1 | 67.3 | 66.8 | 67.5 | 66.6 | 66.0 | 66.1 | 66.7 | 66.3 | 66.9 | 67.1 |
| 7 | 66.3 | 67.1 | 67.7 | 66.8 | 66.3 | 67.4 | 67.8 | 66.9 | 65.7 | 65.6 | 66.3 | 66.9 |
| 8 | 65.9 | 67.0 | 66.3 | 67.6 | 67.7 | 67.9 | 66.9 | 65.9 | 66.8 | 67.2 | 67.2 | 67.1 |
| 9 | 67.0 | 67.4 | 66.2 | 67.0 | 67.6 | 67.1 | 67.0 | 66.5 | 67.0 | 66.6 | 67.4 | 66.6 |
| 10 | 66.2 | 67.8 | 67.5 | 66.4 | 67.0 | 67.2 | 67.5 | 67.0 | 65.9 | 65.9 | 68.2 | 66.0 |
| 11 | 66.6 | 66.9 | 67.0 | 66.7 | 66.7 | 67.6 | 67.0 | 68.0 | 66.6 | 67.0 | 66.5 | 66.8 |
| 12 | 66.4 | 66.2 | 67.6 | 67.3 | 68.1 | 67.4 | 67.9 | 66.8 | 67.7 | 67.3 | 66.6 | 66.9 |
| 13 | 66.5 | 67.1 | 67.1 | 67.3 | 68.1 | 67.3 | 67.8 | 66.1 | 66.5 | 67.8 | 65.6 | 66.1 |
| 14 | 67.4 | 66.5 | 66.8 | 67.0 | 67.0 | 67.3 | 66.9 | 66.3 | 66.4 | 66.4 | 66.1 | 66.4 |
| 15 | 66.5 | 67.8 | 67.3 | 67.6 | 67.1 | 67.7 | 66.9 | 66.7 | 67.2 | 66.7 | 65.9 | 67.0 |
| 16 | 67.6 | 67.1 | 68.5 | 67.2 | 66.9 | 68.1 | 67.2 | 66.5 | 67.4 | 66.9 | 67.1 | 66.2 |
| 17 | 67.5 | 67.9 | 66.5 | 66.5 | 67.6 | 68.5 | 67.3 | 66.7 | 66.9 | 66.8 | 68.1 | 66.6 |
| 18 | 67.6 | 67.4 | 67.5 | 67.1 | 67.9 | 68.3 | 67.7 | 66.6 | 66.7 | 67.9 | 67.5 | 65.9 |
| 19 | 66.7 | 66.8 | 67.6 | 68.0 | 66.7 | 67.7 | 66.6 | 65.9 | 66.7 | 67.3 | 66.3 | 67.0 |
| 20 | 67.3 | 66.3 | 67.3 | 67.2 | 66.9 | 66.9 | 67.0 | 66.6 | 67.8 | 67.7 | 67.6 | 67.1 |
| 21 | 67.0 | 66.6 | 67.3 | 66.1 | 67.8 | 66.4 | 66 6 | 67.2 | 67.5 | 66.6 | 67.5 | 66.7 |
| 22 | 66.5 | 66.9 | 68.0 | 67.1 | 67.2 | 66.9 | 67.2 | 67.5 | 66.8 | 66.5 | 66.4 | 66.8 |
| 23 | 67.8 | 66.6 | 67.8 | 67.5 | 67.6 | 68.6 | 66.6 | 67.0 | 66.8 | 67.1 | 65.8 | 67.1 |
| 24 | 67.9 | 67.0 | 67.1 | 67.1 | 67.6 | 66.2 | 66.5 | 66.1 | 67.2 | 67.2 | 67.2 | 66.4 |
| 25 | 67.3 | 66.8 | 66.4 | 67.7 | 67.5 | 66.4 | 68.0 | 67.9 | 67.7 | 67.5 | 68.4 | 66.7 |
| 26 | 67.2 | 67.2 | 67.5 | 66.3 | 67.9 | 67.1 | 66.8 | 66.6 | 67.7 | 67.6 | 66.8 | 67.0 |
| 27 | 66.8 | 67.5 | 67.3 | 67.0 | 67.9 | 67.3 | 66.7 | 67.1 | 67.9 | 67.8 | 67.1 | 66.8 |
| 28 | 67.6 | 67.0 | 67.8 | 68.1 | 67.8 | 67.5 | 68.0 | 67.5 | 67.1 | 67.2 | 68.0 | 66.5 |
| 29 | 67.9 | | 66.6 | 66.6 | 68.3 | 68.7 | 66.9 | 67.7 | 66.6 | 66.9 | 67.6 | 66.1 |
| 30 | 67.4 | | 67.7 | 67.5 | 68.5 | 67.3 | 66.6 | 67.6 | 66.6 | 66.6 | 67.4 | 66.7 |
| 31 | 67.1 | | 67.0 | | 66.9 | | 66.1 | 67.7 | | 67.1 | | 67.7 |
| Means | 67°.09 | 67°.08 | 67°.26 | 67°.12 | 67°.36 | 67°.36 | 67°.11 | 66°.86 | 66°.96 | 66°.93 | 67°.03 | 66°.72 |

## TABLE XVI.—MONTHLY and ANNUAL MEAN TEMPERATURE at each HOUR of the DAY within the box inclosing the VERTICAL FORCE MAGNET.

1913.

| Hour, Greenwich Civil Time. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | For the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| Midn. | 67.7 | 67.7 | 67.8 | 67.7 | 67.7 | 67.6 | 67.4 | 67.1 | 67.2 | 67.2 | 67.3 | 67.1 | 67.46 |
| 1h | 67.5 | 67.5 | 67.6 | 67.5 | 67.6 | 67.5 | 67.3 | 67.0 | 67.1 | 67.1 | 67.2 | 67.0 | 67.32 |
| 2 | 67.2 | 67.2 | 67.4 | 67.2 | 67.4 | 67.4 | 67.2 | 66.9 | 67.0 | 67.0 | 67.1 | 66.8 | 67.15 |
| 3 | 67.0 | 67.0 | 67.2 | 67.0 | 67.2 | 67.3 | 67.1 | 66.8 | 66.9 | 66.9 | 67.0 | 66.7 | 67.01 |
| 4 | 66.8 | 66.7 | 67.0 | 66.8 | 67.1 | 67.2 | 67.0 | 66.7 | 66.8 | 66.8 | 66.9 | 66.5 | 66.86 |
| 5 | 66.6 | 66.6 | 66.8 | 66.7 | 66.9 | 67.1 | 66.9 | 66.6 | 66.7 | 66.7 | 66.8 | 66.4 | 66.73 |
| 6 | 66.5 | 66.4 | 66.7 | 66.5 | 66.8 | 67.0 | 66.8 | 66.5 | 66.7 | 66.5 | 66.7 | 66.3 | 66.62 |
| 7 | 66.5 | 66.4 | 66.7 | 66.5 | 66.8 | 66.9 | 66.8 | 66.5 | 66.6 | 66.5 | 66.7 | 66.4 | 66.61 |
| 8 | 66.5 | 66.4 | 66.6 | 66.6 | 66.8 | 67.0 | 66.8 | 66.5 | 66.6 | 66.5 | 66.7 | 66.4 | 66.62 |
| 9 | 66.5 | 66.4 | 66.6 | 66.6 | 66.8 | 67.0 | 66.8 | 66.5 | 66.6 | 66.5 | 66.8 | 66.4 | 66.63 |
| 10 | 66.6 | 66.5 | 66.7 | 66.6 | 66.9 | 67.0 | 66.8 | 66.5 | 66.7 | 66.6 | 66.8 | 66.5 | 66.68 |
| 11 | 66.8 | 66.7 | 66.8 | 66.6 | 67.1 | 67.1 | 66.8 | 66.6 | 66.7 | 66.7 | 66.8 | 66.6 | 66.77 |
| Noon. | 66.9 | 66.8 | 66.9 | 66.7 | 67.2 | 67.2 | 66.8 | 66.7 | 66.8 | 66.8 | 66.9 | 66.7 | 66.87 |
| 13h | 67.0 | 66.9 | 67.1 | 67.0 | 67.3 | 67.3 | 67.0 | 66.8 | 66.9 | 66.9 | 67.0 | 66.8 | 67.00 |
| 14 | 67.1 | 67.1 | 67.3 | 67.2 | 67.5 | 67.5 | 67.1 | 66.9 | 67.0 | 67.0 | 67.1 | 66.9 | 67.14 |
| 15 | 67.2 | 67.3 | 67.5 | 67.3 | 67.5 | 67.6 | 67.2 | 67.0 | 67.1 | 67.1 | 67.2 | 67.0 | 67.25 |
| 16 | 67.2 | 67.3 | 67.6 | 67.4 | 67.7 | 67.7 | 67.3 | 67.1 | 67.2 | 67.2 | 67.3 | 66.9 | 67.32 |
| 17 | 67.3 | 67.4 | 67.6 | 67.5 | 67.7 | 67.7 | 67.3 | 67.1 | 67.2 | 67.2 | 67.3 | 66.9 | 67.35 |
| 18 | 67.4 | 67.5 | 67.7 | 67.6 | 67.8 | 67.7 | 67.3 | 67.1 | 67.2 | 67.2 | 67.2 | 66.8 | 67.37 |
| 19 | 67.4 | 67.5 | 67.7 | 67.6 | 67.8 | 67.6 | 67.3 | 67.1 | 67.2 | 67.2 | 67.2 | 66.8 | 67.37 |
| 20 | 67.5 | 67.5 | 67.7 | 67.6 | 67.8 | 67.6 | 67.3 | 67.1 | 67.2 | 67.2 | 67.1 | 66.8 | 67.37 |
| 21 | 67.6 | 67.6 | 67.7 | 67.6 | 67.8 | 67.6 | 67.4 | 67.2 | 67.2 | 67.2 | 67.1 | 66.8 | 67.40 |
| 22 | 67.7 | 67.7 | 67.8 | 67.6 | 67.8 | 67.6 | 67.4 | 67.2 | 67.2 | 67.2 | 67.2 | 66.9 | 67.44 |
| 23 | 67.7 | 67.8 | 67.8 | 67.6 | 67.7 | 67.7 | 67.4 | 67.1 | 67.2 | 67.2 | 67.3 | 67.0 | 67.46 |
| 24 | 67.7 | 67.7 | 67.9 | 67.6 | 67.7 | 67.6 | 67.4 | 67.1 | 67.2 | 67.2 | 67.3 | 67.1 | 67.46 |

TABLE XVII.—VALUES of the CO-EFFICIENTS in the PERIODICAL EXPRESSION

$$V_t = m + a_1 \cos t + b_1 \sin t + a_2 \cos 2t + b_2 \sin 2t + a_3 \cos 3t + b_3 \sin 3t + a_4 \cos 4t + b_4 \sin 4t$$

(in which $t$ is the time from Greenwich mean midnight converted into arc at the rate of 15° to each hour, and $V_t$ the mean value of the magnetic element at the time $t$ for each month and for the year, as given in Tables II., V., IX., and XII., the values for Horizontal Force and Vertical Force being corrected for temperature).

The values of the co-efficients for Declination are given in minutes of arc: the unit for Horizontal Force and Vertical Force is 1 $\gamma$ (0·00001 C.G.S. unit).

| Month, 1913. | $m$ | $a_1$ | $b_1$ | $a_2$ | $b_2$ | $a_3$ | $b_3$ | $a_4$ | $b_4$ |
|---|---|---|---|---|---|---|---|---|---|
| | DECLINATION WEST. | | | | | | | | |
| | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| January | 1·36 | − 1·10 | − 0·20 | + 0·28 | + 0·72 | − 0·37 | − 0·05 | + 0·26 | + 0·13 |
| February | 1·22 | − 1·04 | − 0·58 | + 0·31 | + 0·89 | − 0·33 | − 0·25 | + 0·25 | + 0·21 |
| March | 2·41 | − 1·53 | − 1·08 | + 0·95 | + 1·37 | − 0·67 | − 0·55 | + 0·34 | + 0·36 |
| April | 3·18 | − 1·59 | − 1·44 | + 1·13 | + 1·66 | − 0·71 | − 0·69 | + 0·32 | + 0·23 |
| May | 3·25 | − 1·56 | − 1·62 | + 1·60 | + 1·15 | − 0·72 | − 0·18 | + 0·13 | − 0·01 |
| June | 3·73 | − 1·64 | − 2·31 | + 1·48 | + 1·23 | − 0·61 | − 0·24 | + 0·02 | + 0·08 |
| July | 3·66 | − 1·50 | − 2·26 | + 1·32 | + 1·44 | − 0·55 | − 0·32 | + 0·03 | + 0·04 |
| August | 3·22 | − 1·92 | − 1·55 | + 1·69 | + 1·05 | − 0·93 | − 0·35 | + 0·15 | + 0·16 |
| September | 2·59 | − 1·87 | − 1·15 | + 1·42 | + 0·95 | − 0·87 | − 0·42 | + 0·35 | + 0·12 |
| October | 1·83 | − 1·59 | − 0·50 | + 0·85 | + 0·98 | − 0·64 | − 0·31 | + 0·53 | + 0·09 |
| November | 1·22 | − 1·09 | − 0·25 | + 0·36 | + 0·67 | − 0·50 | − 0·16 | + 0·34 | + 0·11 |
| December | 0·95 | − 0·73 | − 0·05 | + 0·29 | + 0·38 | − 0·23 | + 0·02 | + 0·09 | + 0·04 |
| For the Year | 2·19 | − 1·43 | − 1·08 | + 0·97 | + 1·04 | − 0·59 | − 0·29 | + 0·23 | + 0·13 |
| | HORIZONTAL FORCE. | | | | | | | | |
| January | 8·1 | + 3·2 | + 1·5 | − 3·1 | + 0·7 | + 1·3 | − 1·7 | + 0·4 | + 0·7 |
| February | 8·8 | + 4·0 | + 1·4 | − 3·2 | − 0·5 | + 1·3 | − 0·9 | − 0·1 | + 0·9 |
| March | 10·7 | + 5·0 | − 1·3 | − 3·3 | + 0·4 | + 0·9 | − 1·8 | + 0·1 | + 0·9 |
| April | 18·0 | + 9·3 | − 4·8 | − 4·1 | + 1·7 | + 1·0 | − 1·8 | + 0·7 | + 0·7 |
| May | 15·8 | + 8·0 | − 7·7 | − 1·9 | + 2·5 | − 0·4 | − 1·4 | + 0·4 | + 0·4 |
| June | 19·6 | + 9·8 | − 10·0 | − 4·3 | + 3·1 | − 0·2 | − 1·0 | + 0·2 | + 0·1 |
| July | 17·8 | + 10·9 | − 7·2 | − 4·3 | + 0·9 | + 0·2 | − 1·1 | + 0·3 | + 0·4 |
| August | 19·5 | + 10·2 | − 7·1 | − 3·0 | + 2·8 | − 1·2 | − 1·9 | + 0·6 | + 0·8 |
| September | 21·4 | + 10·9 | − 5·4 | − 3·2 | + 3·6 | − 0·2 | − 2·7 | + 0·5 | + 1·7 |
| October | 18·3 | + 9·5 | − 1·0 | − 4·4 | + 3·0 | + 0·7 | − 2·6 | + 0·3 | + 0·9 |
| November | 11·3 | + 5·2 | − 0·2 | − 3·9 | + 1·1 | + 0·9 | − 1·7 | + 0·5 | + 0·8 |
| December | 2·6 | 0·0 | + 1·4 | − 2·2 | 0·0 | + 0·3 | − 0·3 | + 0·2 | + 0·1 |
| For the Year | 13·6 | + 7·2 | − 3·4 | − 3·4 | + 1·6 | + 0·4 | − 1·6 | + 0·3 | + 0·7 |
| | VERTICAL FORCE. | | | | | | | | |
| January | 2·3 | − 0·8 | − 0·5 | − 1·7 | + 0·8 | + 0·3 | 0·0 | − 0·2 | 0·0 |
| February | 9·2 | + 2·9 | − 2·0 | − 3·2 | + 1·1 | + 2·1 | − 0·2 | − 0·4 | + 0·1 |
| March | 15·1 | + 6·1 | − 0·6 | − 4·9 | + 0·1 | + 2·4 | + 0·2 | − 1·3 | − 0·3 |
| April | 17·8 | + 7·2 | − 0·8 | − 7·6 | + 0·4 | + 2·0 | + 0·6 | − 1·1 | − 0·1 |
| May | 19·3 | + 7·9 | − 0·9 | − 7·1 | 0·0 | + 2·3 | − 0·6 | − 0·9 | − 0·1 |
| June | 14·9 | + 5·9 | − 1·1 | − 6·0 | + 0·7 | + 1·7 | − 0·2 | + 0·1 | + 0·4 |
| July | 15·0 | + 5·8 | − 0·6 | − 5·9 | − 0·9 | + 1·6 | + 0·7 | 0·0 | − 0·1 |
| August | 13·4 | + 3·8 | + 0·5 | − 4·6 | 0·0 | + 2·7 | + 0·2 | − 0·7 | − 0·1 |
| September | 11·0 | + 4·0 | − 0·1 | − 3·9 | − 0·5 | + 2·3 | − 0·2 | − 0·3 | + 0·1 |
| October | 8·0 | + 2·2 | − 2·3 | − 2·4 | + 0·3 | + 1·9 | − 0·3 | − 0·9 | + 0·7 |
| November | 3·5 | + 0·7 | − 1·6 | − 1·7 | + 0·7 | + 0·5 | − 0·2 | 0·0 | + 0·5 |
| December | 4·3 | + 2·4 | + 0·1 | − 2·1 | + 1·0 | + 0·2 | + 0·1 | + 0·2 | + 0·1 |
| For the Year | 11·0 | + 4·0 | − 0·8 | − 4·3 | + 0·3 | + 1·7 | 0·0 | − 0·5 | + 0·1 |

TABLE XVIII.—VALUES of the CO-EFFICIENTS and CONSTANT ANGLES in the PERIODICAL EXPRESSIONS

$$V_t = m + c_1 \sin(t + \alpha) + c_2 \sin(2t + \beta) + c_3 \sin(3t + \gamma) + c_4 \sin(4t + \delta)$$
$$V_{t'} = m + c_1 \sin(t' + \alpha') + c_2 \sin(2t' + \beta') + c_3 \sin(3t' + \gamma') + c_4 \sin(4t' + \delta')$$

(in which $t$ and $t'$ are the times from Greenwich mean midnight and apparent midnight respectively, converted into arc at the rate of 15° to each hour, and $V_t$, $V_{t'}$ the mean value of the magnetic element at the time $t$ or $t'$ for each month and for the year, as given in Tables II., V., IX., and XII., the values for Horizontal Force and Vertical Force being corrected for temperature).

The values of the co-efficients for Declination are given in minutes of arc: the unit for Horizontal Force and Vertical Force is 1 γ (0·00001 C.G.S. unit).

| Month, 1913. | $m$ | $c_1$ | $\alpha$ | $\alpha'$ | $c_2$ | $\beta$ | $\beta'$ | $c_3$ | $\gamma$ | $\gamma'$ | $c_4$ | $\delta$ | $\delta'$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | DECLINATION WEST. | | | | | | | |
| | ′ | ′ | ° ′ | ° ′ | ′ | ° ′ | ° ′ | ′ | ° ′ | ° ′ | ′ | ° ′ | ° ′ |
| January | 1·36 | 1·11 | 259. 52 | 262. 13 | 0·77 | 20. 48 | 25. 29 | 0·37 | 262. 5 | 269. 7 | 0·29 | 63. 17 | 72. 40 |
| February | 1·22 | 1·19 | 240. 36 | 244. 6 | 0·94 | 19. 1 | 26. 0 | 0·41 | 233. 6 | 243. 35 | 0·33 | 50. 33 | 64. 31 |
| March | 2·41 | 1·87 | 234. 54 | 237. 5 | 1·66 | 34. 47 | 39. 10 | 0·87 | 230. 30 | 237. 4 | 0·50 | 43. 26 | 52. 11 |
| April | 3·18 | 2·14 | 227. 45 | 227. 49 | 2·01 | 34. 11 | 34. 18 | 0·99 | 225. 41 | 225. 52 | 0·40 | 54. 37 | 54. 52 |
| May | 3·25 | 2·25 | 223. 50 | 222. 59 | 1·97 | 54. 24 | 52. 41 | 0·74 | 256. 1 | 253. 27 | 0·13 | 93. 19 | 89. 53 |
| June | 3·73 | 2·84 | 215. 22 | 215. 27 | 1·92 | 50. 14 | 50. 23 | 0·65 | 248. 22 | 248. 36 | 0·08 | 14. 45 | 15. 3 |
| July | 3·66 | 2·71 | 213. 30 | 214. 52 | 1·95 | 42. 41 | 45. 25 | 0·64 | 239. 38 | 243. 44 | 0·05 | 37. 34 | 43. 2 |
| August | 3·22 | 2·47 | 230. 58 | 231. 56 | 1·99 | 58. 11 | 60. 8 | 0·99 | 249. 18 | 252. 13 | 0·22 | 43. 18 | 47. 12 |
| September | 2·59 | 2·20 | 238. 18 | 237. 5 | 1·70 | 56. 13 | 53. 47 | 0·96 | 244. 23 | 240. 44 | 0·37 | 70. 30 | 65. 38 |
| October | 1·83 | 1·67 | 252. 40 | 249. 11 | 1·30 | 41. 6 | 34. 9 | 0·71 | 244. 2 | 233. 36 | 0·54 | 79. 55 | 66. 0 |
| November | 1·22 | 1·12 | 257. 5 | 253. 23 | 0·76 | 28. 30 | 21. 7 | 0·52 | 252. 15 | 241. 10 | 0·35 | 72. 12 | 57. 26 |
| December | 0·95 | 0·73 | 265. 43 | 264. 39 | 0·48 | 38. 2 | 35. 53 | 0·23 | 274. 13 | 271. 0 | 0·09 | 67. 44 | 63. 27 |
| For the Year | 2·19 | 1·79 | 232. 50 | 232. 50 | 1·42 | 43. 8 | 43. 8 | 0·66 | 243. 48 | 243. 48 | 0·27 | 60. 59 | 60. 59 |
| | | | | | | HORIZONTAL FORCE. | | | | | | | |
| January | 8·1 | 3·5 | 64. 21 | 66. 42 | 3·2 | 282. 8 | 286. 49 | 2·1 | 141. 2 | 148. 4 | 0·8 | 29. 53 | 39. 16 |
| February | 8·8 | 4·2 | 70. 57 | 74. 27 | 3·2 | 260. 19 | 267. 18 | 1·5 | 125. 19 | 135. 48 | 0·9 | 354. 30 | 368. 28 |
| March | 10·7 | 5·2 | 104. 22 | 106. 33 | 3·3 | 277. 3 | 281. 26 | 2·0 | 153. 39 | 160. 13 | 0·9 | 7. 34 | 16. 19 |
| April | 18·0 | 10·5 | 117. 5 | 117. 9 | 4·5 | 292. 57 | 293. 4 | 2·1 | 150. 36 | 150. 47 | 1·0 | 42. 36 | 42. 51 |
| May | 15·8 | 11·1 | 133. 36 | 132. 45 | 3·1 | 322. 46 | 321. 3 | 1·4 | 196. 13 | 193. 39 | 0·6 | 43. 53 | 40. 27 |
| June | 19·6 | 14·0 | 135. 33 | 135. 38 | 5·3 | 306. 2 | 306. 11 | 1·0 | 194. 23 | 194. 37 | 0·2 | 49. 38 | 49. 56 |
| July | 17·8 | 13·1 | 123. 25 | 124. 47 | 4·4 | 281. 40 | 284. 24 | 1·1 | 169. 18 | 173. 24 | 0·5 | 39. 9 | 44. 37 |
| August | 19·5 | 12·5 | 124. 52 | 125. 50 | 4·1 | 313. 41 | 315. 38 | 2·3 | 211. 11 | 214. 6 | 1·0 | 38. 17 | 42. 11 |
| September | 21·4 | 12·2 | 116. 19 | 115. 6 | 4·9 | 318. 33 | 316. 7 | 2·8 | 183. 28 | 179. 49 | 1·7 | 15. 27 | 10. 35 |
| October | 18·3 | 9·6 | 96. 9 | 92. 40 | 5·3 | 303. 49 | 296. 52 | 2·6 | 165. 42 | 155. 16 | 0·9 | 16. 5 | 2. 10 |
| November | 11·3 | 5·2 | 91. 39 | 87. 57 | 4·1 | 285. 53 | 278. 30 | 1·9 | 151. 44 | 140. 39 | 1·0 | 34. 23 | 19. 37 |
| December | 2·6 | 1·4 | 358. 38 | 357. 34 | 2·2 | 270. 0 | 267. 51 | 0·5 | 132. 4 | 128. 51 | 0·3 | 60. 28 | 56. 11 |
| For the Year | 13·6 | 7·9 | 115. 1 | 115. 1 | 3·8 | 295. 17 | 295. 17 | 1·6 | 166. 21 | 166. 21 | 0·8 | 25. 47 | 25. 47 |
| | | | | | | VERTICAL FORCE. | | | | | | | |
| January | 2·3 | 0·9 | 238. 13 | 240. 34 | 1·9 | 296. 34 | 301. 15 | 0·3 | 94. 11 | 101. 13 | 0·2 | 270. 0 | 279. 23 |
| February | 9·2 | 3·5 | 124. 13 | 127. 43 | 3·3 | 288. 34 | 295. 33 | 2·1 | 96. 10 | 106. 39 | 0·4 | 288. 47 | 302. 45 |
| March | 15·1 | 6·1 | 95. 13 | 97. 24 | 5·0 | 270. 41 | 275. 4 | 2·4 | 84. 30 | 91. 4 | 1·3 | 256. 52 | 265. 37 |
| April | 17·8 | 7·3 | 94. 23 | 94. 27 | 7·6 | 273. 9 | 273. 16 | 2·1 | 73. 6 | 73. 17 | 1·1 | 266. 11 | 266. 26 |
| May | 19·3 | 8·0 | 96. 18 | 95. 17 | 7·1 | 269. 44 | 268. 1 | 2·4 | 104. 22 | 101. 48 | 0·9 | 261. 13 | 257. 47 |
| June | 14·9 | 6·0 | 100. 14 | 100. 19 | 6·1 | 276. 52 | 277. 1 | 1·7 | 96. 53 | 97. 7 | 0·4 | 19. 14 | 19. 32 |
| July | 15·0 | 5·8 | 95. 45 | 97. 7 | 6·0 | 261. 31 | 264. 15 | 1·8 | 65. 29 | 69. 35 | 0·1 | 180. 0 | 185. 28 |
| August | 13·4 | 3·9 | 82. 13 | 83. 11 | 4·6 | 270. 31 | 272. 28 | 2·7 | 85. 43 | 88. 38 | 0·7 | 263. 57 | 267. 51 |
| September | 11·0 | 4·0 | 90. 51 | 89. 38 | 3·9 | 263. 5 | 260. 39 | 2·3 | 94. 57 | 91. 18 | 0·4 | 293. 2 | 288. 10 |
| October | 8·0 | 3·2 | 136. 53 | 133. 24 | 2·4 | 277. 18 | 270. 21 | 1·9 | 100. 17 | 89. 51 | 1·2 | 308. 20 | 294. 25 |
| November | 3·5 | 1·8 | 157. 54 | 154. 12 | 1·9 | 291. 57 | 284. 34 | 0·6 | 112. 33 | 101. 28 | 0·5 | 4. 41 | 349. 55 |
| December | 4·3 | 2·4 | 87. 59 | 86. 55 | 2·3 | 293. 55 | 291. 46 | 0·2 | 75. 28 | 72. 15 | 0·2 | 70. 12 | 65. 55 |
| For the Year | 11·0 | 4·1 | 101. 30 | 101. 30 | 4·3 | 274. 9 | 274. 9 | 1·7 | 90. 40 | 90. 40 | 0·5 | 281. 43 | 281. 43 |

## TABLE XIX.—DETERMINATIONS of the ABSOLUTE VALUE of HORIZONTAL MAGNETIC FORCE in the YEAR 1913.

Abstract of the Observations of Deflection of a Magnet for Absolute Measure of Horizontal Force made with the Gibson Instrument in the Magnetic Pavilion.

| Greenwich Civil Time, 1913. | Distances of Centres of Magnets. | Temperature Fahrenheit. | Observed Deflection. | Mean of the Times of Vibration of Deflecting Magnet. | Number of Vibrations. | Temperature Fahrenheit. | Observer. | Greenwich Civil Time, 1913. | Distances of Centres of Magnets. | Temperature Fahrenheit. | Observed Deflection. | Mean of the Times of Vibration of Deflecting Magnet. | Number of Vibrations. | Temperature Fahrenheit. | Observer. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d h | ft. | ° | ° ′ ″ | s | | ° | | d h | ft. | ° | ° ′ ″ | s | | ° | |
| Jan. 7. 12 | 1·0 | 54·1 | 9. 34. 25 | 5·826 | 100 | 54·4 | B | July 9. 15 | 1·0 | 66·4 | 9. 32. 30 | 5·829 | 100 | 65·9 | B |
| | 1·3 | | 4. 20. 40 | 5·827 | 100 | 55·2 | | | 1·3 | | 4. 19. 55 | 5·831 | 100 | 66·9 | |
| Jan. 15. 12 | 1·0 | 46·2 | 9. 35. 13 | 5·824 | 100 | 47·6 | B | July 16. 13 | 1·0 | 62·8 | 9. 33. 30 | 5·829 | 100 | 62·6 | B |
| | 1·3 | | 4. 21. 18 | 5·824 | 100 | 48·4 | | | 1·3 | | 4. 20. 30 | 5·831 | 100 | 63·7 | |
| Jan. 22. 12 | 1·0 | 42·4 | 9. 35. 40 | 5·823 | 100 | 42·3 | E | July 23. 12 | 1·0 | 57·1 | 9. 33. 55 | 5·828 | 100 | 57·1 | E |
| | 1·3 | | 4. 21. 21 | 5·823 | 100 | 43·9 | | | 1·3 | | 4. 20. 30 | 5·828 | 100 | 57·7 | |
| Jan. 29. 13 | 1·0 | 47·1 | 9. 34. 54 | 5·825 | 100 | 47·4 | E | July 30. 12 | 1·0 | 63·1 | 9. 32. 58 | 5·830 | 100 | 63·3 | E |
| | 1·3 | | 4. 21. 3 | 5·824 | 100 | 49·0 | | | 1·3 | | 4. 20. 5 | 5·830 | 100 | 64·1 | |
| Feb. 5. 12 | 1·0 | 51·6 | 9. 34. 18 | 5·823 | 100 | 51·8 | E | Aug. 6. 11 | 1·0 | 62·8 | 9. 33. 10 | 5·830 | 100 | 63·1 | E |
| | 1·3 | | 4. 20. 58 | 5·826 | 100 | 52·7 | | | 1·3 | | 4. 20. 28 | 5·829 | 100 | 64·7 | |
| Feb. 12. 12 | 1·0 | 45·0 | 9. 35. 11 | 5·821 | 100 | 44·9 | E | Aug. 13. 12 | 1·0 | 63·6 | 9. 33. 15 | 5·831 | 100 | 63·3 | B |
| | 1·3 | | 4. 21. 10 | 5·822 | 100 | 46·1 | | | 1·3 | | 4. 20. 0 | 5·831 | 100 | 64·5 | |
| Feb. 19. 12 | 1·0 | 43·0 | 9. 35. 13 | 5·822 | 100 | 45·4 | B | Aug. 20. 12 | 1·0 | 60·7 | 9. 33. 19 | 5·831 | 100 | 61·0 | E |
| | 1·3 | | 4. 21. 10 | 5·822 | 100 | 44·6 | | | 1·3 | | 4. 20. 18 | 5·830 | 100 | 62·8 | |
| Feb. 26. 12 | 1·0 | 53·7 | 9. 33. 53 | 5·825 | 100 | 55·3 | B | Aug. 27. 11 | 1·0 | 65·6 | 9. 32. 53 | 5·831 | 100 | 64·9 | B |
| | 1·3 | | 4. 20. 40 | 5·825 | 100 | 55·1 | | | 1·3 | | 4. 20. 10 | 5·831 | 100 | 66·5 | |
| Mar. 5. 12 | 1·0 | 59·2 | 9. 33. 23 | 5·827 | 100 | 58·7 | B | Sept. 3. 13 | 1·0 | 60·7 | 9. 33. 35 | 5·831 | 100 | 60·3 | B |
| | 1·3 | | 4. 20. 25 | 5·827 | 100 | 59·9 | | | 1·3 | | 4. 20. 20 | 5·829 | 100 | 61·9 | |
| Mar. 12. 12 | 1·0 | 53·0 | 9. 34. 38 | 5·825 | 100 | 52·3 | B | Sept. 10. 12 | 1·0 | 60·2 | 9. 34. 25 | 5·831 | 100 | 60·0 | B |
| | 1·3 | | 4. 20. 48 | 5·825 | 100 | 54·1 | | | 1·3 | | 4. 20. 45 | 5·831 | 100 | 61·0 | |
| Mar. 18. 12 | 1·0 | 43·1 | 9. 35. 45 | 5·819 | 100 | 43·3 | E | Sept. 17. 12 | 1·0 | 59·9 | 9. 33. 15 | 5·829 | 100 | 60·3 | E |
| | 1·3 | | 4. 21. 24 | 5·821 | 100 | 44·7 | | | 1·3 | | 4. 20. 8 | 5·829 | 100 | 62·1 | |
| Mar. 26. 12 | 1·0 | 44·6 | 9. 35. 6 | 5·821 | 100 | 45·9 | E | Sept. 24. 12 | 1·0 | 65·0 | 9. 32. 48 | 5·833 | 100 | 66·2 | E |
| | 1·3 | | 4. 21. 18 | 5·821 | 100 | 48·2 | | | 1·3 | | 4. 20. 1 | 5·835 | 100 | 68·0 | |
| Apr. 1. 12 | 1·0 | 49·9 | 9. 34. 45 | 5·825 | 100 | 50·7 | E | Oct. 2. 13 | 1·0 | 64·5 | 9. 33. 0 | 5·831 | 100 | 64·1 | B |
| | 1·3 | | 4. 20. 58 | 5·825 | 100 | 51·9 | | | 1·3 | | 4. 20. 10 | 5·831 | 100 | 65·1 | |
| Apr. 10. 13 | 1·0 | 47·6 | 9. 35. 51 | 5·825 | 100 | 48·1 | E | Oct. 8. 12 | 1·0 | 57·1 | 9. 33. 45 | 5·830 | 100 | 56·9 | E |
| | 1·3 | | 4. 21. 26 | 5·825 | 100 | 49·0 | | | 1·3 | | 4. 20. 33 | 5·831 | 100 | 58·3 | |
| Apr. 16. 14 | 1·0 | 53·9 | 9. 34. 48 | 5·827 | 100 | 53·7 | B | Oct. 15. 13 | 1·0 | 58·2 | 9. 33. 35 | 5·834 | 100 | 58·8 | E |
| | 1·3 | | 4. 21. 5 | 5·825 | 100 | 55·3 | | | 1·3 | | 4. 20. 28 | 5·832 | 100 | 59·1 | |
| Apr. 23. 12 | 1·0 | 59·2 | 9. 34. 10 | 5·830 | 100 | 58·8 | B | Oct. 22. 13 | 1·0 | 55·4 | 9. 34. 5 | 5·832 | 100 | 55·7 | B |
| | 1·3 | | 4. 20. 43 | 5·830 | 100 | 60·8 | | | 1·3 | | 4. 20. 35 | 5·831 | 100 | 56·3 | |
| Apr. 30. 12 | 1·0 | 57·5 | 9. 34. 15 | 5·829 | 100 | 57·4 | B | Oct. 31. 13 | 1·0 | 57·9 | 9. 33. 43 | 5·8346 | 100 | 58·6 | B |
| | 1·3 | | 4. 20. 45 | 5·829 | 100 | 58·4 | | | 1·3 | | 4. 20. 13 | 5·8338 | 100 | 58·4 | |
| May 7. 11 | 1·0 | 52·9 | 9. 34. 45 | 5·828 | 100 | 52·4 | B | Nov. 5. 13 | 1·0 | 53·6 | 9. 33. 40 | 5·8336 | 100 | 53·7 | B |
| | 1·3 | | 4. 21. 0 | 5·828 | 100 | 54·2 | | | 1·3 | | 4. 21. 0 | 5·8316 | 100 | 54·7 | |
| May 14. 15 | 1·0 | 62·3 | 9. 32. 55 | 5·826 | 100 | 61·9 | B | Nov. 12. 13 | 1·0 | 54·6 | 9. 33. 25 | 5·8320 | 100 | 54·6 | B |
| | 1·3 | | 4. 20. 15 | 5·825 | 100 | 63·3 | | | 1·3 | | 4. 20. 35 | 5·8310 | 100 | 55·4 | |
| May 21. 12 | 1·0 | 58·1 | 9. 33. 40 | 5·827 | 100 | 59·1 | E | Nov. 19. 13 | 1·0 | 48·1 | 9. 34. 11 | 5·8274 | 100 | 49·1 | E |
| | 1·3 | | 4. 20. 25 | 5·827 | 100 | 60·6 | | | 1·3 | | 4. 20. 38 | 5·8284 | 100 | 49·8 | |
| May 29. 12 | 1·0 | 71·1 | 9. 32. 5 | 5·834 | 100 | 72·0 | E | Nov. 26. 12 | 1·0 | 51·0 | 9. 35. 3 | 5·8240 | 100 | 51·5 | E |
| | 1·3 | | 4. 19. 45 | 5·834 | 100 | 73·4 | | | 1·3 | | 4. 21. 10 | 5·8250 | 100 | 51·9 | |
| June 4. 12 | 1·0 | 66·8 | 9. 33. 0 | 5·833 | 100 | 67·3 | E | Dec. 3. 12 | 1·0 | 50·5 | 9. 35. 13 | 5·8250 | 100 | 51·1 | E |
| | 1·3 | | 4. 20. 24 | 5·834 | 100 | 68·3 | | | 1·3 | | 4. 21. 20 | 5·8250 | 100 | 51·5 | |
| June 10. 12 | 1·0 | 58·6 | 9. 33. 54 | 5·828 | 100 | 58·4 | E | Dec. 10. 12 | 1·0 | 46·6 | 9. 35. 13 | 5·8256 | 100 | 46·6 | E |
| | 1·3 | | 4. 20. 40 | 5·826 | 100 | 60·0 | | | 1·3 | | 4. 21. 14 | 5·8230 | 100 | 47·2 | |
| June 18. 12 | 1·0 | 71·4 | 9. 32. 50 | 5·836 | 100 | 70·9 | B | Dec. 17. 12 | 1·0 | 46·6 | 9. 35. 13 | 5·8208 | 100 | 46·9 | B |
| | 1·3 | | 4. 20. 0 | 5·834 | 100 | 72·7 | | | 1·3 | | 4. 21. 13 | 5·8200 | 100 | 47·1 | |
| June 25. 11 | 1·0 | 58·5 | 9. 34. 13 | 5·826 | 100 | 58·4 | B | Dec. 24. 13 | 1·0 | 41·9 | 9. 35. 43 | 5·8270 | 100 | 41·1 | B |
| | 1·3 | | 4. 20. 40 | 5·827 | 100 | 59·4 | | | 1·3 | | 4. 21. 15 | 5·8198 | 100 | 42·7 | |
| July 2. 13 | 1·0 | 66·3 | 9. 32. 45 | 5·830 | 100 | 65·8 | B | Dec. 31. 13 | 1·0 | 40·4 | 9. 35. 58 | 5·8230 | 100 | 39·1 | B |
| | 1·3 | | 4. 20. 15 | 5·830 | 100 | 67·4 | | | 1·3 | | 4. 21. 25 | 5·8202 | 100 | 40·9 | |

The deflecting magnet is placed on the east side of the suspended magnet, with its marked pole alternately east and west, and on the west side with its marked pole also alternately east and west: the deflection given in the table above is the mean of four deflections observed in these positions of the magnets. The initials B and E are those of Messrs. Bryant and Edney respectively.

In the subsequent calculations every observation is reduced to the temperature 35° Fahrenheit.

## TABLE XX.—COMPUTATION of the VALUES of HORIZONTAL FORCE in ABSOLUTE MEASURE.

From Observations made with the Gibson Instrument in the Magnetic Pavilion.

| Greenwich Civil Time, 1913. | In British Units. Apparent Value of $A_1$. | Apparent Value of $A_2$. | Apparent Value of P. | Log. $\frac{m}{H}$. | Corrected Time of Vibration of Deflecting Magnet. | Log. $m$ H. | Value of $m$. | Value of Horizontal Force H. | In C. G. S. Units. Value of Horizontal Force. As observed. | Reduced to Mean of Month. |
|---|---|---|---|---|---|---|---|---|---|---|
| d h | | | | | s | | | | | |
| Jan. 7. 12 | 0·08341 | 0·08346 | − 0·00141 | 8·92248 | 5·8282 | 0·12980 | 0·3358 | 4·0148 | ·18511 | ·18507 |
| „ 15. 12 | 0·08341 | 0·08355 | − 0·00395 | 8·92271 | 5·8282 | 0·12975 | 0·3359 | 4·0135 | ·18505 | ·18519 |
| „ 22. 12 | 0·08343 | 0·08352 | − 0·00265 | 8·92266 | 5·8298 | 0·12950 | 0·3358 | 4·0125 | ·18501 | ·18529 |
| „ 29. 13 | 0·08338 | 0·08349 | − 0·00299 | 8·92246 | 5·8287 | 0·12968 | 0·3358 | 4·0143 | ·18509 | ·18514 |
| Feb. 5. 12 | 0·08336 | 0·08352 | − 0·00474 | 8·92250 | 5·8273 | 0·12993 | 0·3359 | 4·0153 | ·18514 | ·18505 |
| „ 12. 12 | 0·08340 | 0·08349 | − 0·00288 | 8·92252 | 5·8277 | 0·12982 | 0·3359 | 4·0147 | ·18511 | ·18515 |
| „ 19. 12 | 0·08337 | 0·08347 | − 0·00288 | 8·92237 | 5·8283 | 0·12972 | 0·3358 | 4·0149 | ·18512 | ·18530 |
| „ 26. 12 | 0·08333 | 0·08346 | − 0·00378 | 8·92225 | 5·8269 | 0·12999 | 0·3358 | 4·0167 | ·18520 | ·18511 |
| Mar. 5. 12 | 0·08334 | 0·08346 | − 0·00355 | 8·92226 | 5·8277 | 0·12991 | 0·3358 | 4·0163 | ·18518 | ·18515 |
| „ 12. 12 | 0·08343 | 0·08349 | − 0·00164 | 8·92258 | 5·8292 | 0·12965 | 0·3358 | 4·0136 | ·18506 | ·18515 |
| „ 18. 12 | 0·08345 | 0·08354 | − 0·00265 | 8·92277 | 5·8283 | 0·12973 | 0·3359 | 4·0131 | ·18504 | ·18544 |
| „ 26. 12 | 0·08338 | 0·08353 | − 0·00446 | 8·92255 | 5·8282 | 0·12975 | 0·3359 | 4·0142 | ·18509 | ·18533 |
| April 1. 12 | 0·08340 | 0·08350 | − 0·00282 | 8·92255 | 5·8292 | 0·12963 | 0·3358 | 4·0137 | ·18506 | ·18508 |
| „ 10. 13 | 0·08353 | 0·08362 | − 0·00259 | 8·92319 | 5·8314 | 0·12930 | 0·3359 | 4·0092 | ·18486 | ·18511 |
| „ 16. 14 | 0·08346 | 0·08359 | − 0·00378 | 8·92295 | 5·8294 | 0·12962 | 0·3360 | 4·0118 | ·18498 | ·18518 |
| „ 23. 12 | 0·08345 | 0·08355 | − 0·00293 | 8·92280 | 5·8314 | 0·12936 | 0·3358 | 4·0113 | ·18495 | ·18494 |
| „ 30. 12 | 0·08344 | 0·08354 | − 0·00293 | 8·92274 | 5·8312 | 0·12938 | 0·3358 | 4·0116 | ·18497 | ·18483 |
| May 7. 11 | 0·08344 | 0·08355 | − 0·00316 | 8·92280 | 5·8322 | 0·12921 | 0·3357 | 4·0106 | ·18492 | ·18527 |
| „ 14. 15 | 0·08332 | 0·08345 | − 0·00389 | 8·92219 | 5·8255 | 0·13026 | 0·3359 | 4·0182 | ·18527 | ·18504 |
| „ 21. 12 | 0·08336 | 0·08344 | − 0·00231 | 8·92229 | 5·8293 | 0·12967 | 0·3357 | 4·0150 | ·18513 | ·18541 |
| „ 29. 12 | 0·08332 | 0·08342 | − 0·00276 | 8·92213 | 5·8306 | 0·12955 | 0·3356 | 4·0152 | ·18514 | ·18488 |
| June 4. 12 | 0·08339 | 0·08356 | − 0·00491 | 8·92268 | 5·8329 | 0·12918 | 0·3357 | 4·0110 | ·18494 | ·18517 |
| „ 10. 12 | 0·08340 | 0·08353 | − 0·00372 | 8·92263 | 5·8302 | 0·12953 | 0·3358 | 4·0128 | ·18502 | ·18515 |
| „ 18. 12 | 0·08344 | 0·08350 | − 0·00197 | 8·92264 | 5·8325 | 0·12926 | 0·3357 | 4·0115 | ·18497 | ·18505 |
| „ 25. 11 | 0·08344 | 0·08353 | − 0·00243 | 8·92273 | 5·8293 | 0·12966 | 0·3359 | 4·0130 | ·18503 | ·18513 |
| July 2. 13 | 0·08335 | 0·08351 | − 0·00462 | 8·92243 | 5·8303 | 0·12956 | 0·3357 | 4·0139 | ·18507 | ·18531 |
| „ 9. 15 | 0·08331 | 0·08340 | − 0·00254 | 8·92206 | 5·8303 | 0·12956 | 0·3356 | 4·0156 | ·18515 | ·18526 |
| „ 16. 13 | 0·08341 | 0·08354 | − 0·00378 | 8·92266 | 5·8307 | 0·12949 | 0·3358 | 4·0125 | ·18501 | ·18505 |
| „ 23. 12 | 0·08339 | 0·08345 | − 0·00203 | 8·92239 | 5·8311 | 0·12939 | 0·3357 | 4·0133 | ·18505 | ·18521 |
| „ 30. 12 | 0·08334 | 0·08341 | − 0·00214 | 8·92214 | 5·8301 | 0·12958 | 0·3356 | 4·0153 | ·18514 | ·18527 |
| Aug. 6. 11 | 0·08336 | 0·08352 | − 0·00479 | 8·92250 | 5·8301 | 0·12958 | 0·3358 | 4·0137 | ·18506 | ·18530 |
| „ 13. 12 | 0·08339 | 0·08339 | − 0·00017 | 8·92222 | 5·8316 | 0·12935 | 0·3356 | 4·0139 | ·18507 | ·18518 |
| „ 20. 12 | 0·08335 | 0·08344 | − 0·00265 | 8·92225 | 5·8323 | 0·12923 | 0·3355 | 4·0132 | ·18504 | ·18522 |
| „ 27. 11 | 0·08336 | 0·08347 | − 0·00333 | 8·92235 | 5·8304 | 0·12954 | 0·3357 | 4·0142 | ·18509 | ·18507 |
| Sept. 3. 13 | 0·08339 | 0·08345 | − 0·00186 | 8·92239 | 5·8308 | 0·12945 | 0·3357 | 4·0136 | ·18506 | ·18504 |
| „ 10. 12 | 0·08350 | 0·08358 | − 0·00226 | 8·92301 | 5·8322 | 0·12925 | 0·3358 | 4·0098 | ·18488 | ·18516 |
| „ 17. 12 | 0·08333 | 0·08337 | − 0·00124 | 8·92199 | 5·8302 | 0·12955 | 0·3356 | 4·0159 | ·18517 | ·18530 |
| „ 24. 12 | 0·08334 | 0·08341 | − 0·00231 | 8·92215 | 5·8318 | 0·12934 | 0·3355 | 4·0142 | ·18509 | ·18521 |
| Oct. 2. 13 | 0·08336 | 0·08345 | − 0·00276 | 8·92232 | 5·8300 | 0·12961 | 0·3357 | 4·0146 | ·18511 | ·18486 |
| „ 8. 12 | 0·08336 | 0·08347 | − 0·00316 | 8·92236 | 5·8320 | 0·12926 | 0·3356 | 4·0128 | ·18502 | ·18505 |
| „ 15. 13 | 0·08335 | 0·08345 | − 0·00299 | 8·92230 | 5·8332 | 0·12908 | 0·3355 | 4·0123 | ·18500 | ·18501 |
| „ 22. 13 | 0·08338 | 0·08345 | − 0·00214 | 8·92238 | 5·8326 | 0·12915 | 0·3356 | 4·0122 | ·18500 | ·18528 |
| „ 31. 13 | 0·08339 | 0·08340 | − 0·00028 | 8·92226 | 5·8324 | 0·12920 | 0·3355 | 4·0130 | ·18503 | ·18510 |
| Nov. 5. 13 | 0·08330 | 0·08364 | − 0·00998 | 8·92262 | 5·8326 | 0·12914 | 0·3356 | 4·0111 | ·18494 | ·18501 |
| „ 12. 13 | 0·08330 | 0·08347 | − 0·00496 | 8·92222 | 5·8315 | 0·12932 | 0·3356 | 4·0137 | ·18507 | ·18505 |
| „ 19. 13 | 0·08329 | 0·08344 | − 0·00440 | 8·92210 | 5·8306 | 0·12941 | 0·3355 | 4·0147 | ·18511 | ·18524 |
| „ 26. 12 | 0·08349 | 0·08361 | − 0·00361 | 8·92305 | 5·8263 | 0·13006 | 0·3362 | 4·0133 | ·18505 | ·18508 |
| Dec. 3. 12 | 0·08347 | 0·08370 | − 0·00666 | 8·92325 | 5·8270 | 0·12996 | 0·3362 | 4·0119 | ·18498 | ·18492 |
| „ 10. 12 | 0·08344 | 0·08357 | − 0·00355 | 8·92283 | 5·8281 | 0·12977 | 0·3360 | 4·0130 | ·18503 | ·18499 |
| „ 17. 12 | 0·08344 | 0·08356 | − 0·00333 | 8·92281 | 5·8243 | 0·13034 | 0·3362 | 4·0157 | ·18516 | ·18515 |
| „ 24. 13 | 0·08342 | 0·08355 | − 0·00378 | 8·92273 | 5·8291 | 0·12959 | 0·3359 | 4·0126 | ·18502 | ·18505 |
| „ 31. 13 | 0·08344 | 0·08358 | − 0·00429 | 8·92286 | 5·8280 | 0·12975 | 0·3360 | 4·0128 | ·18502 | ·18517 |
| Means | ... | ... | − 0·00322 | ... | ... | ... | ... | 4·0135 | ·18506 | ·18514 |

The value of H in British Units is referred to the Foot-Grain-Second Unit.

TABLE XXI.—RESULTS of OBSERVATIONS of MAGNETIC DIP made in the MAGNETIC PAVILION in the YEAR 1913.

| Greenwich Civil Time, 1913. | 3-inch Needle. | Magnetic Dip. | Observer. | Greenwich Civil Time, 1913. | 3-inch Needle. | Magnetic Dip. | Observer. | Greenwich Civil Time, 1913. | 3-inch Needle. | Magnetic Dip. | Observer. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d h | | ° ′ ″ | | d h | | ° ′ ″ | | d h | | ° ′ ″ | |
| Jan. 3. 13 | $D_1$ | 66. 55. 34 | B | May 2. 14 | $D_1$ | 66. 50. 16 | B | Sept. 1. 13 | $D_1$ | 66. 51. 58 | B |
| 4. 12 | $D_2$ | 66. 49. 24 | B | 5. 13 | $D_2$ | 66. 50. 15 | B | 3. 12 | $D_2$ | 66. 50. 28 | B |
| 6. 12 | $D_1$ | 66. 56. 6 | B | 7. 12 | $D_1$ | 66. 51. 8 | B | 5. 12 | $D_1$ | 66. 52. 20 | B |
| 13. 15 | $D_1$ | 66. 50. 25 | B | 13. 15 | $D_1$ | 66. 49. 35 | B | 8. 13 | $D_2$ | 66. 50. 59 | B |
| 14. 13 | $D_2$ | 66. 50. 52 | B | 15. 13 | $D_2$ | 66. 48. 45 | B | 11. 13 | $D_1$ | 66. 52. 49 | B |
| 17. 12 | $D_2$ | 66. 49. 44 | E | 19. 12 | $D_2$ | 66. 45. 55 | E | 12. 12 | $D_2$ | 66. 52. 7 | B |
| 20. 12 | $D_1$ | 66. 51. 36 | E | 21. 11 | $D_1$ | 66. 51. 33 | E | 16. 12 | $D_2$ | 66. 52. 34 | E |
| 22. 11 | $D_2$ | 66. 50. 14 | E | 23. 12 | $D_2$ | 66. 51. 35 | E | 18. 12 | $D_1$ | 66. 51. 46 | E |
| 27. 12 | $D_1$ | 66. 52. 2 | E | 26. 12 | $D_1$ | 66. 54. 27 | E | 22. 12 | $D_2$ | 66. 50. 16 | E |
| 29. 12 | $D_2$ | 66. 50. 1 | E | 29. 11 | $D_2$ | 66. 48. 1 | E | 23. 12 | $D_1$ | 66. 49. 16 | E |
| 31. 12 | $D_1$ | 66. 52. 45 | E | 30. 12 | $D_1$ | 66. 52. 53 | E | 25. 12 | $D_2$ | 66. 49. 31 | E |
| | | | | | | | | 29. 12 | $D_1$ | 66. 50. 24 | E |
| Feb. 3. 12 | $D_1$ | 66. 52. 53 | E | June 2. 12 | $D_1$ | 66. 51. 50 | E | Oct. 3. 12 | $D_1$ | 66. 52. 7 | E |
| 5. 11 | $D_2$ | 66. 51. 10 | E | 4. 11 | $D_2$ | 66. 47. 48 | E | 3. 13 | $D_2$ | 66. 50. 44 | E |
| 7. 12 | $D_1$ | 66. 53. 3 | E | 6. 13 | $D_1$ | 66. 52. 2 | E | 6. 12 | $D_1$ | 66. 52. 0 | E |
| 10. 12 | $D_2$ | 66. 52. 52 | E | 9. 12 | $D_2$ | 66. 48. 20 | E | 9. 12 | $D_2$ | 66. 50. 34 | E |
| 12. 11 | $D_1$ | 66. 52. 20 | E | 12. 12 | $D_1$ | 66. 51. 7 | E | 13. 12 | $D_1$ | 66. 51. 20 | E |
| 14. 15 | $D_2$ | 66. 52. 21 | E | 13. 12 | $D_2$ | 66. 49. 38 | E | 14. 12 | $D_2$ | 66. 49. 59 | E |
| 17. 13 | $D_2$ | 66. 51. 12 | B | 16. 12 | $D_2$ | 66. 47. 31 | B | 17. 12 | $D_2$ | 66. 50. 47 | B |
| 19. 12 | $D_1$ | 66. 54. 24 | B | 18. 13 | $D_1$ | 66. 50. 38 | B | 20. 13 | $D_1$ | 66. 50. 49 | B |
| 21. 15 | $D_1$ | 66. 53. 37 | B | 20. 13 | $D_2$ | 66. 48. 54 | B | 23. 13 | $D_2$ | 66. 47. 42 | B |
| 22. 13 | $D_2$ | 66. 49. 57 | B | 23. 11 | $D_1$ | 66. 51. 2 | B | 24. 13 | $D_1$ | 66. 52. 0 | B |
| 25. 13 | $D_2$ | 66. 51. 25 | B | 25. 12 | $D_2$ | 66. 49. 45 | B | 27. 13 | $D_2$ | 66. 48. 59 | B |
| 28. 11 | $D_1$ | 66. 54. 1 | B | 27. 13 | $D_1$ | 66. 51. 9 | B | 30. 12 | $D_1$ | 66. 51. 24 | B |
| Mar. 3. 13 | $D_1$ | 66. 53. 10 | B | July 1. 13 | $D_1$ | 66. 49. 44 | B | Nov. 3. 12 | $D_1$ | 66. 52. 51 | B |
| 5. 15 | $D_2$ | 66. 50. 0 | B | 3. 12 | $D_2$ | 66. 47. 14 | B | 6. 13 | $D_2$ | 66. 44. 51 | B |
| 7. 12 | $D_1$ | 66. 53. 43 | B | 7. 11 | $D_1$ | 66. 51. 23 | B | 8. 12 | $D_1$ | 66. 49. 22 | B |
| 10. 13 | $D_2$ | 66. 47. 12 | B | 9. 12 | $D_2$ | 66. 49. 54 | B | 10. 13 | $D_2$ | 66. 45. 53 | B |
| 12. 12 | $D_1$ | 66. 54. 56 | B | 11. 12 | $D_1$ | 66. 51. 58 | B | 11. 13 | $D_1$ | 66. 49. 14 | B |
| 13. 12 | $D_2$ | 66. 45. 32 | B | 14. 12 | $D_2$ | 66. 46. 40 | B | 13. 13 | $D_2$ | 66. 47. 53 | B |
| 17. 13 | $D_2$ | 66. 51. 22 | E | 17. 12 | $D_2$ | 66. 48. 21 | E | 17. 12 | $D_2$ | 66. 50. 47 | E |
| 19. 12 | $D_1$ | 66. 50. 41 | E | 21. 12 | $D_1$ | 66. 51. 59 | E | 18. 12 | $D_1$ | 66. 51. 18 | E |
| 25. 13 | $D_2$ | 66. 48. 37 | E | 23. 11 | $D_2$ | 66. 46. 22 | E | 21. 12 | $D_2$ | 66. 50. 28 | E |
| 26. 11 | $D_1$ | 66. 50. 49 | E | 25. 12 | $D_1$ | 66. 52. 3 | E | 24. 12 | $D_1$ | 66. 49. 7 | E |
| 31. 12 | $D_1$ | 66. 52. 17 | E | 28. 12 | $D_2$ | 66. 49. 11 | E | 27. 12 | $D_2$ | 66. 50. 9 | E |
| | | | | 30. 11 | $D_1$ | 66. 51. 1 | E | 28. 12 | $D_1$ | 66. 50. 33 | E |
| Apr. 1. 12 | $D_1$ | 66. 51. 2 | E | Aug. 1. 12 | $D_1$ | 66. 52. 23 | E | Dec. 1. 12 | $D_1$ | 66. 50. 2 | E |
| 4. 12 | $D_2$ | 66. 50. 5 | E | 5. 12 | $D_2$ | 66. 50. 21 | E | 5. 12 | $D_2$ | 66. 50. 17 | E |
| 8. 12 | $D_1$ | 66. 49. 47 | E | 6. 12 | $D_1$ | 66. 50. 18 | E | 8. 12 | $D_1$ | 66. 47. 58 | E |
| 9. 11 | $D_2$ | 66. 49. 58 | E | 8. 12 | $D_2$ | 66. 50. 28 | E | 9. 11 | $D_2$ | 66. 50. 26 | E |
| 11. 11 | $D_1$ | 66. 50. 53 | E | 11. 12 | $D_1$ | 66. 50. 55 | E | 11. 12 | $D_1$ | 66. 48. 23 | E |
| 14. 11 | $D_2$ | 66. 51. 24 | E | 13. 11 | $D_2$ | 66. 51. 20 | E | 15. 12 | $D_2$ | 66. 46. 45 | E |
| 16. 11 | $D_2$ | 66. 48. 34 | B | 18. 10 | $D_1$ | 66. 53. 54 | B | 16. 13 | $D_1$ | 66. 51. 58 | B |
| 16. 12 | $D_1$ | 66. 49. 12 | B | 20. 10 | $D_2$ | 66. 51. 0 | B | 18. 13 | $D_2$ | 66. 46. 41 | B |
| 19. 12 | $D_2$ | 66. 50. 11 | B | 25. 13 | $D_2$ | 66. 47. 14 | B | 20. 12 | $D_2$ | 66. 50. 10 | B |
| 23. 14 | $D_1$ | 66. 51. 26 | B | 26. 12 | $D_1$ | 66. 51. 33 | B | 22. 13 | $D_1$ | 66. 46. 5 | B |
| 25. 12 | $D_2$ | 66. 49. 12 | B | 28. 13 | $D_2$ | 66. 45. 38 | B | 27. 13 | $D_2$ | 66. 49. 49 | B |
| 28. 13 | $D_1$ | 66. 51. 37 | B | 29. 12 | $D_1$ | 66. 50. 6 | B | 29. 15 | $D_1$ | 66. 46. 45 | B |

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

## TABLE XXII.—MONTHLY and ANNUAL MEANS of MAGNETIC DIP from OBSERVATIONS made in the YEAR 1913.

Monthly Means of Magnetic Dip.

| Month, 1913. | $D_1$, 3-inch Needle. | Number of Observations. | $D_2$, 3-inch Needle. | Number of Observations. |
|---|---|---|---|---|
| | ° ′ ″ | | ° ′ ″ | |
| January | 66. 53. 5 | 6 | 66. 50. 10 | 6 |
| February | 66. 53. 23 | 6 | 66. 51. 30 | 6 |
| March | 66. 52. 36 | 6 | 66. 48. 46 | 6 |
| April | 66. 50. 40 | 6 | 66. 49. 54 | 6 |
| May | 66. 51. 39 | 6 | 66. 49. 3 | 6 |
| June | 66. 51. 18 | 6 | 66. 48. 39 | 6 |
| July | 66. 51. 21 | 6 | 66. 47. 57 | 6 |
| August | 66. 51. 32 | 6 | 66. 49. 20 | 6 |
| September | 66. 51. 26 | 6 | 66. 50. 59 | 6 |
| October | 66. 51. 37 | 6 | 66. 49. 48 | 6 |
| November | 66. 50. 24 | 6 | 66. 48. 20 | 6 |
| December | 66. 48. 32 | 6 | 66. 49. 1 | 6 |
| Means | 66. 51. 28 | Sum 72 | 66. 49. 27 | Sum 72 |
| Annual Mean Dip | 66° 50′ 27″ | | | |

The monthly means have been formed without reference to the hour at which the observation on each day was made.
In combining the monthly results, to form annual means, weights have been given proportional to the number of observations.

## TABLE XXIII.—ANNUAL SUMMARY of the MAGNETIC ELEMENTS.

| Month, 1913. | Mean Value of | | | | Monthly Mean Diurnal Range of | | | Sum of Hourly Deviations from Mean of | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Westerly Declination. | Horizontal Force C.G.S. | Vertical Force C.G.S. | Dip. | Declination. | Horizontal Force. | Vertical Force. | Declination. | Horizontal Force. | Vertical Force. |
| | ° ′ | | | ° ′ ″ | ′ | | | ′ | | |
| January | 15. 19·0 | ·18517 | ·43289 | 66. 51. 37 | 3·9 | 15 γ | 5 γ | 19·4 | 65 γ | 33 γ |
| February | 15. 18·7 | ·18515 | ·43284 | 66. 52. 26 | 3·8 | 14 | 15 | 22·6 | 78 | 68 |
| March | 15. 18·1 | ·18527 | ·43312 | 66. 50. 41 | 6·9 | 16 | 20 | 36·0 | 87 | 114 |
| April | 15. 16·9 | ·18503 | ·43256 | 66. 50. 17 | 8·3 | 27 | 26 | 42·2 | 162 | 144 |
| May | 15. 15·9 | ·18515 | ·43284 | 66. 50. 21 | 7·8 | 26 | 26 | 40·1 | 167 | 153 |
| June | 15. 14·8 | ·18513 | ·43279 | 66. 49. 59 | 8·5 | 34 | 22 | 46·9 | 216 | 123 |
| July | 15. 14·0 | ·18522 | ·43300 | 66. 49. 39 | 8·4 | 31 | 23 | 46·2 | 199 | 115 |
| August | 15. 13·8 | ·18519 | ·43293 | 66. 50. 26 | 8·5 | 31 | 18 | 43·7 | 190 | 83 |
| September | 15. 13·3 | ·18518 | ·43291 | 66. 51. 12 | 7·5 | 31 | 16 | 39·8 | 184 | 81 |
| October | 15. 12·7 | ·18506 | ·43263 | 66. 50. 42 | 5·5 | 26 | 12 | 30·5 | 160 | 58 |
| November | 15. 12·2 | ·18509 | ·43270 | 66. 49. 22 | 3·9 | 17 | 7 | 19·4 | 99 | 37 |
| December | 15. 12·6 | ·18506 | ·43263 | 66. 48. 47 | 2·4 | 7 | 8 | 12·7 | 35 | 48 |
| The Year | 15. 15·2 | ·18514 | ·43282 | 66. 50. 27 | 6·28 | 22·9 | 16·5 | 33·29 | 136·8 | 88·1 |

## MAGNETOGRAPH RECORDS on DISTURBED and NORMAL DAYS in the YEAR 1913.

## EXPLANATION OF THE PLATES.

The magnetic motions figured on the Plates are :—

(1.) Those for days of disturbance selected by the International Committee—January 3, March 14, April $9^d$ $5^h$ to $10^d$ $5^h$, June $1^d$ $6^h$ to $2^d$ $6^h$.

(2.) Those for four quiet days—February 4, May 23, August 20, November 16—which are given as types of the ordinary diurnal movement at four seasons of the year.

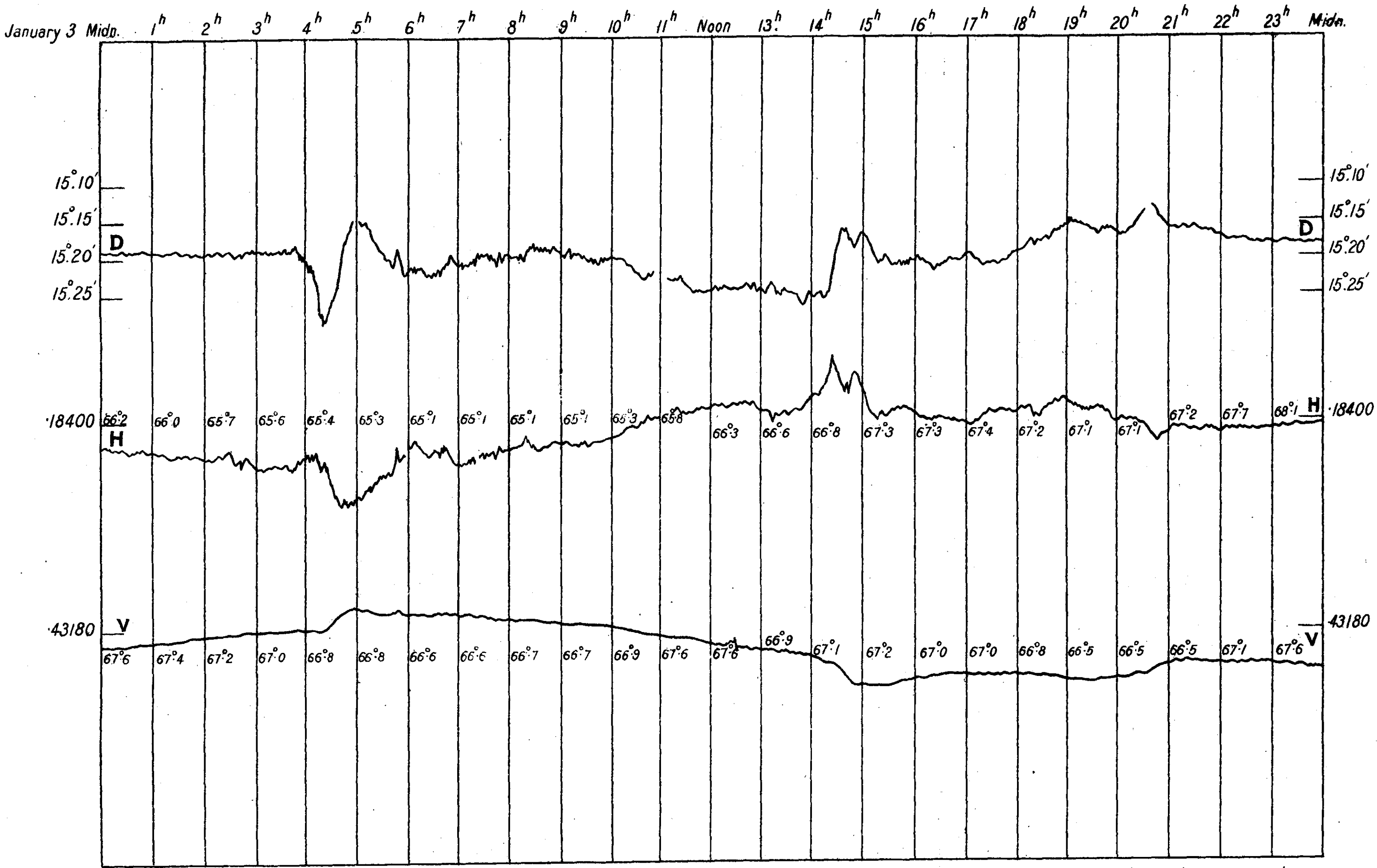
The time is Greenwich Civil Time (commencing at midnight and counting the hours from 0 to 24).

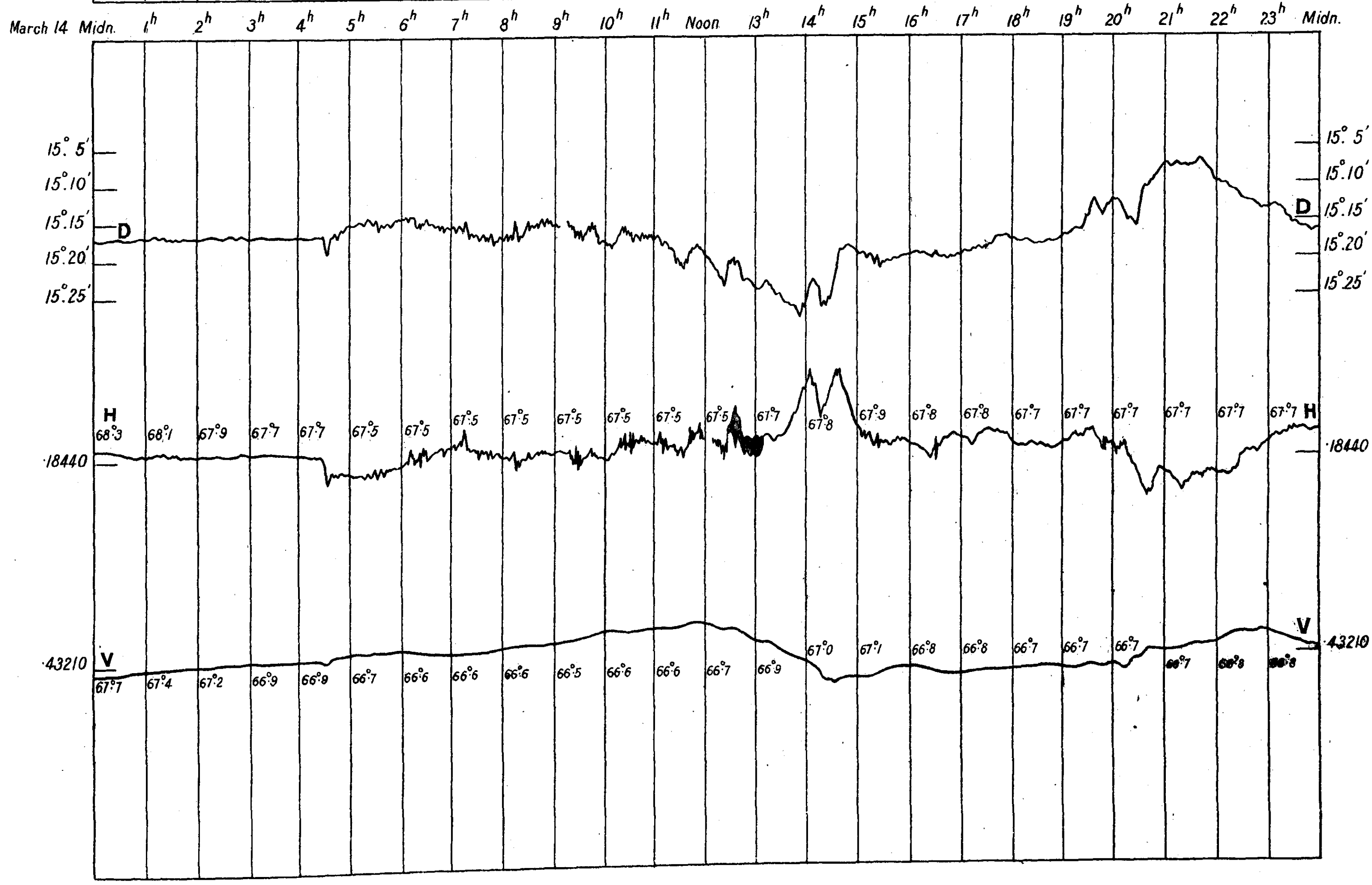
The magnetic declination, horizontal force, and vertical force are indicated by the letters D., H., and V. respectively; the declination (west) is expressed in minutes of arc, the unit for horizontal and vertical force is 1 $\gamma$ (0·00001 C.G.S.), the corresponding scales being given on the sides of each diagram. Equal changes of amplitude in the several registers correspond nearly to equal changes of absolute magnetic force, 0·001 of a C.G.S. unit being represented by $0^{in.}80 = \overset{mm.}{20{\cdot}2}$ in the declination curve, by $0^{in.}73 = \overset{mm.}{18{\cdot}5}$ in the horizontal force curve, and by $0^{in.}77 = \overset{mm.}{19{\cdot}6}$ in the vertical force curve.

Downward motion indicates increase of declination and of horizontal and vertical force.

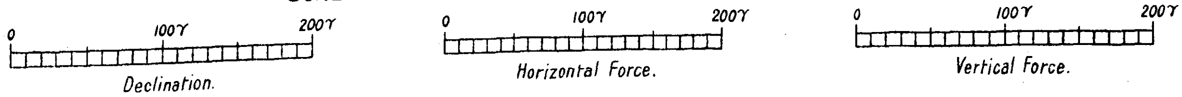
The temperatures (Fahrenheit) of the horizontal and vertical force magnets at each hour are given in small figures on the Diagrams.

# MAGNETIC DISTURBANCES RECORDED AT THE ROYAL OBSERVATORY, GREENWICH, 1913.



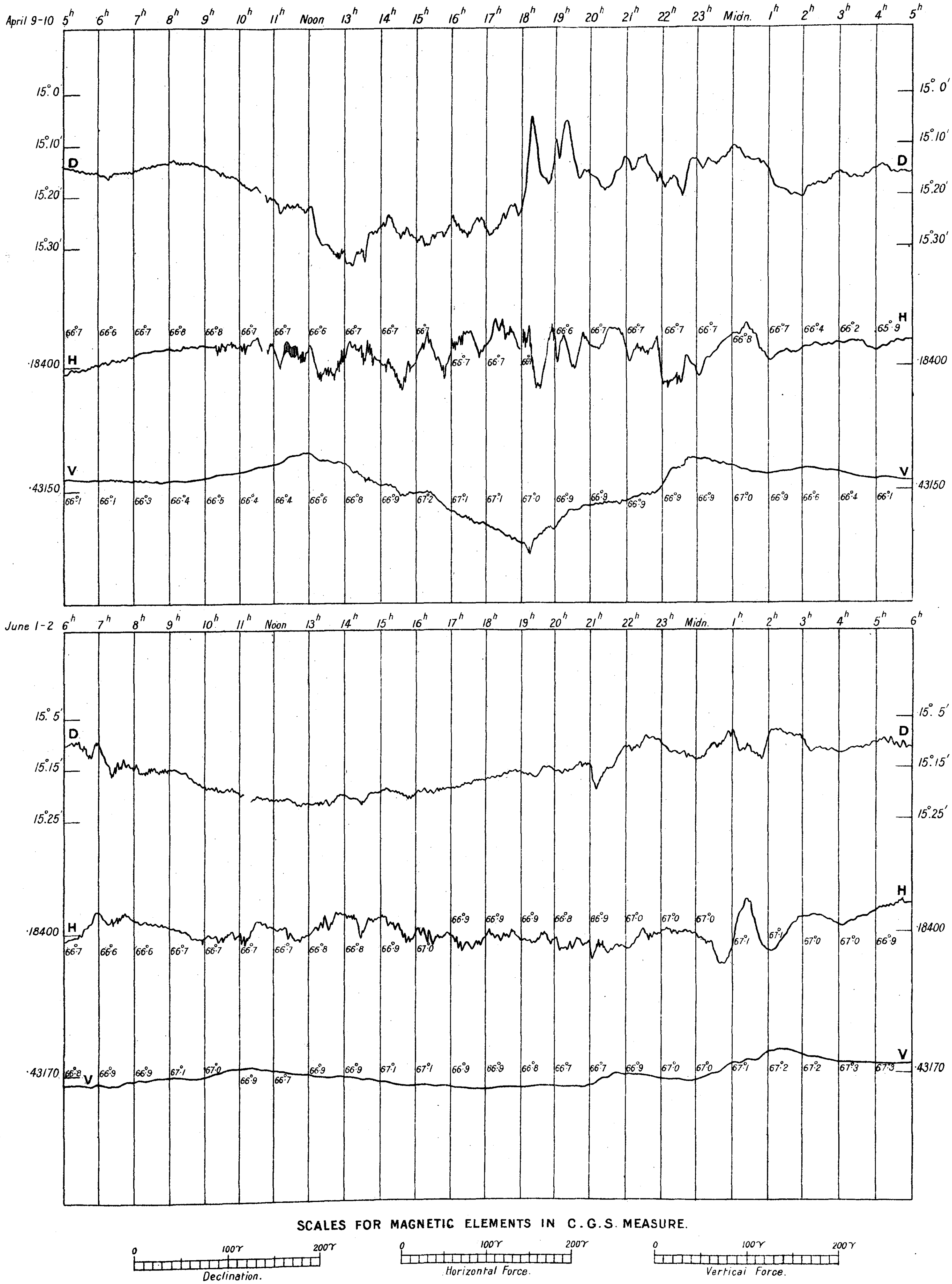

SCALES FOR MAGNETIC ELEMENTS IN C.G.S. MEASURE.




3122. 18647. 104. 600. 10.14.

Malby & Sons Lith.

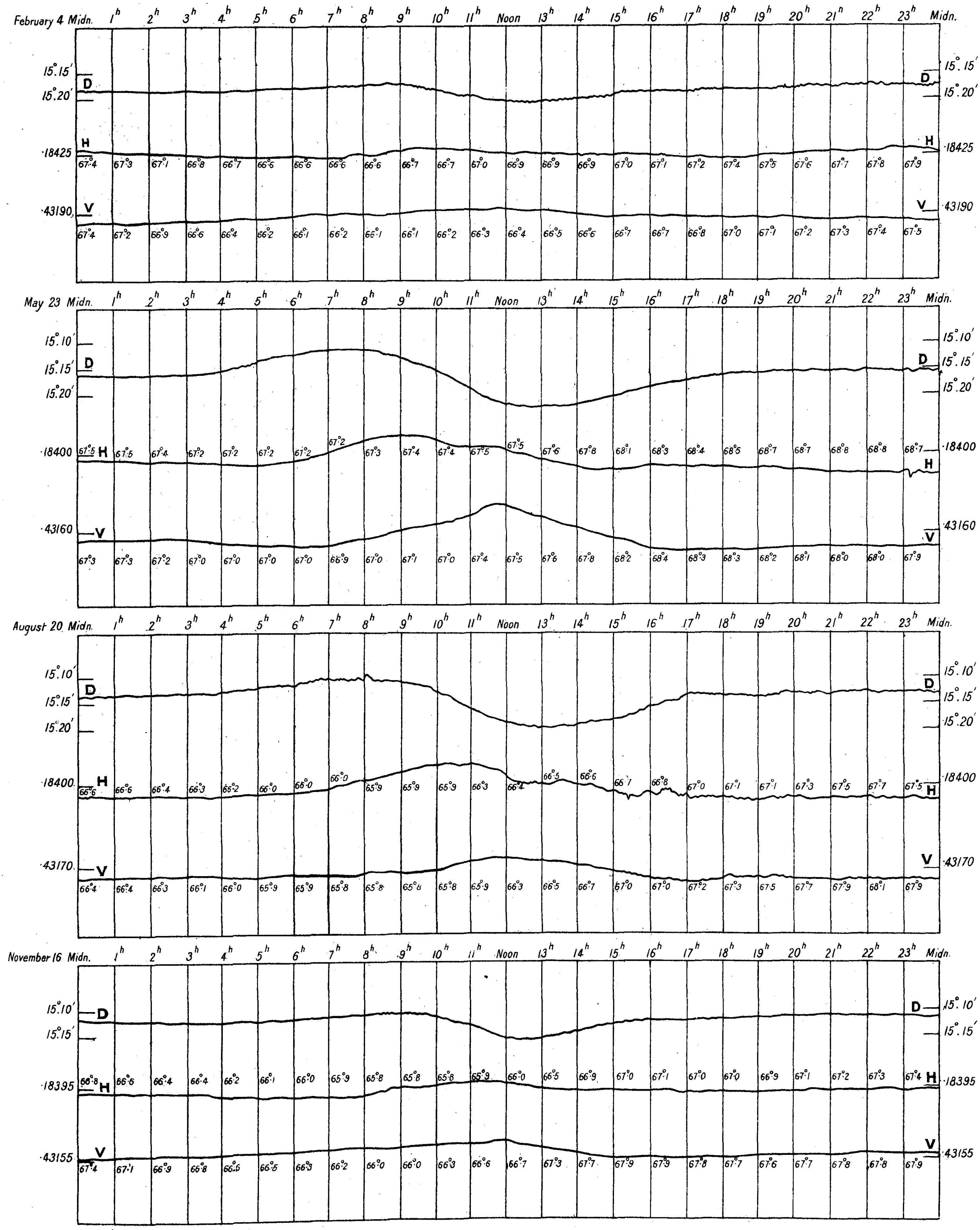
# MAGNETIC DISTURBANCES RECORDED AT THE ROYAL OBSERVATORY, GREENWICH, 1913.




3122. 18647. 104. 600. 10.14.

Malby & Sons, Lith.

# TYPES OF MAGNETIC DIURNAL VARIATIONS AT FOUR SEASONS OF THE YEAR RECORDED AT THE ROYAL OBSERVATORY, GREENWICH, 1913.




SCALES FOR MAGNETIC ELEMENTS IN C.G.S. MEASURE.

| Declination | Horizontal Force | Vertical Force |
|---|---|---|
| 0 — 100γ — 200γ | 0 — 100γ — 200γ | 0 — 100γ — 200γ |

3122 18647·104·600·10·14. Malby & Sons, Lith.

ROYAL OBSERVATORY, GREENWICH.

# MAGNETIC DISTURBANCES.

1913.

## MAGNETIC DISTURBANCES in DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, recorded at the ROYAL OBSERVATORY, GREENWICH, in the Year 1913.

The following notes give a brief description of all magnetic movements (superposed on the ordinary diurnal movement) exceeding 3′ in Declination, 20γ in Horizontal Force, or 12γ 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; "fluctuations" 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 fluctuations the sign ± 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 0 to 24).

1913.

January $1^d$ $10^h$ to $16^h$ Loss of register in Dec. $10^h$ to $13^h$ Loss of register in H.F. and V.F. $14\frac{1}{2}^h$ to $16^h$ Loss of register in V.F.

$2^d$ $17\frac{1}{2}^h$ to $18\frac{3}{4}^h$ Irregular double wave in H.F. ( + 20γ to −24γ). $17\frac{3}{4}^h$ to $18\frac{1}{2}^h$ Wave in Dec. ( + 3′).

$3^d$ $0^h$ to $4^d$ $0^h$. See Plate I.

$4^d$ $18\frac{1}{4}^h$ to $19\frac{1}{2}^h$ Wave in Dec. ( − 7′): in H.F. small.

$9^d$ $2\frac{1}{4}^h$ to $3^h$ Wave in Dec. ( + 3′).

$10^d$ $13^h$ to $16^h$ Truncated wave in H.F. (−36γ). $16\frac{1}{4}^h$ to $18^h$ Truncated wave in H.F. (− 21γ). $16\frac{3}{4}^h$ to $18\frac{1}{2}^h$ Wave in Dec. ( − 7′). $20^h$ to $21\frac{1}{4}^h$ Wave in Dec. ( − 6′). $20\frac{1}{2}^h$ to $21\frac{1}{2}^h$ Wave in H.F. ( + 20γ).

$17^d$ $20^h$ to $21^h$ Wave in Dec. ( − 3′).

$18^d$ $15^h$ to $16\frac{3}{4}^h$ Wave in H.F ( − 25γ). $15\frac{3}{4}^h$ to $17\frac{1}{2}^h$ Wave in Dec. ( − 6′). $19\frac{1}{2}^h$ to $22^h$ Irregular double wave in H.F. ( − 25γ to + 30γ). $20^h$ to $22\frac{1}{2}^h$ Irregular wave in Dec. (− 19′). $18^d$ $23\frac{1}{2}^h$ to $19^d$ $1^h$ Triple-crested wave in Dec. ( − 4′). Double-crested wave in H.F. ( + 70γ).

$19^d$ $22^h$ to $23\frac{3}{4}^h$ Double wave in H.F. ( − 20γ to + 20γ).

$20^d$ $20^h$ to $20\frac{3}{4}^h$ Wave in Dec. (− 4′), followed till $21^h$ by a decrease ( − 4′). $20\frac{3}{4}^h$ to $22^h$ Wave in H.F. ( + 20γ).

$25^d$ $19\frac{3}{4}^h$ to $21\frac{1}{2}^h$ Double-crested wave in Dec. ( − 4′). $20^h$ to $21\frac{1}{4}^h$ Wave in H.F. ( + 35γ).

$28^d$ $19\frac{1}{2}^h$ to $20\frac{1}{2}^h$ Wave in Dec. ( − 3′).

$30^d$ $7^h$ to $9\frac{1}{2}^h$ Wave in H.F. ( − 36γ), with superposed fluctuations: sharp fluctuations also in Dec. $23^h$ to $24^h$ Wave in H.F. ( + 20γ).

$31^d$ $3^h$ to $4\frac{1}{4}^h$ Wave in Dec. ( + 3′). $18\frac{1}{2}^h$ to $20^h$ Wave in Dec. ( − 3′).

1913.

February $1^d\ 0^h$ to $1\frac{1}{2}^h$ Wave in H.F. ( $-20\gamma$). $0\frac{3}{4}^h$ to $1\frac{1}{2}^h$ Wave in Dec. ( $+4'$).

$9^d\ 16^h$ to $17\frac{1}{2}^h$ Wave in H.F. ( $-20\gamma$).

$10^d\ 23^h$ to $11^d\ 0\frac{1}{4}^h$ Wave in H.F. ( $+20\gamma$).

$12^d\ 5\frac{1}{4}^h$ to $7\frac{1}{2}^h$ Wave in H.F. ( $+23\gamma$). $12^d\ 22\frac{3}{4}^h$ to $13^d\ 1\frac{1}{4}^h$ Flat-crested wave in Dec. ( $-4'$). $12^d\ 22\frac{3}{4}^h$ to $13^d\ 0\frac{1}{4}^h$ Two successive waves in H.F. ( $+23\gamma$, $+25\gamma$).

$13^d\ 18\frac{1}{4}^h$ to $19\frac{3}{4}^h$ Wave in Dec. ( $-7'$), steep at commencement. $18\frac{1}{4}^h$ to $19^h$ Wave in H.F. ( $-26\gamma$).

$14^d\ 10^h$ to $11\frac{1}{2}^h$ Decrease in H.F. ( $-50\gamma$). $13^h$ to $15^h$ Sharp wave in H.F. ( $-70\gamma$). $13\frac{1}{2}^h$ to $15^h$ Double wave in Dec. ($+4'$ to $-8'$), the intermediate portion very steep. $13\frac{1}{2}^h$ to $14\frac{1}{2}^h$ Increase in V.F. ($+30\gamma$).

$15^d\ 0\frac{1}{2}^h$ to $2\frac{1}{2}^h$ Irregular wave in Dec. ( $+7'$). $0\frac{1}{2}^h$ to $3^h$ Irregular double-crested wave in H.F. ( $+35\gamma$). $0\frac{3}{4}^h$ to $2^h$ Decrease in V.F. ($-26\gamma$). $13\frac{3}{4}^h$ to $14\frac{3}{4}^h$ Wave in H.F. ($-20\gamma$). $19^h$ to $20\frac{1}{2}^h$ Irregular double-crested wave in Dec. ( $-6'$): truncated wave in H.F. ( $+25\gamma$).

$16^d\ 19\frac{1}{4}^h$ to $21\frac{1}{4}^h$ Flat-crested wave in Dec. ($-5'$). $21^h$ to $22\frac{1}{4}^h$ Irregular double-crested wave in H.F. ($+25\gamma$).

$17^d\ 16^h$ to $17\frac{3}{4}^h$ Flat crested wave in H.F. ($-20\gamma$). $16\frac{1}{4}^h$ to $17\frac{1}{2}^h$ Truncated wave in Dec. ($-4'$). $19\frac{3}{4}^h$ to $21^h$ Double-crested wave in Dec. ( $-5'$): wave in H.F. ( $+27\gamma$).

$19^d\ 21^h$ to $22\frac{3}{4}^h$ Double-crested wave in Dec. ( $-6'$): in H.F. small.

$22^d\ 20^h$ to $21^h$ Wave in Dec. ( $-4'$). $22\frac{1}{2}^h$ to $23\frac{3}{4}^h$ Wave in Dec. ( $-3'$).

$25^d\ 2\frac{1}{2}^h$ to $3\frac{3}{4}^h$ Truncated wave in Dec. ($+3'$). $25^d\ 23\frac{3}{4}^h$ to $26^d\ 0\frac{1}{2}^h$ Waves in Dec. ($+4'$) and H.F. ( $+27\gamma$).

$26^d\ 9\frac{1}{4}^h$ to $10\frac{1}{2}^h$ Truncated in Dec. ( $+3'$): wave in H.F. ( $-23\gamma$). $20\frac{1}{2}^h$ to $21\frac{1}{2}^h$ Double-crested wave in Dec. ( $-5'$): wave in H.F. ( $+27\gamma$).

March $7^d\ 2\frac{1}{4}^h$ to $3\frac{1}{2}^h$ Wave in Dec. ( $+4'$).

$8^d\ 20\frac{3}{4}^h$ to $22^h$ Rounded wave in Dec. ( $-4'$) followed till $0^h$ by a wave ( $-5'$).

$11^d\ 23^h$ to $12^d\ 0\frac{1}{2}^h$ Double wave in Dec. ( $+3'$ to $-3'$): wave in H.F. ( $+20\gamma$).

$14^d\ 0^h$ to $15^d\ 0^h$. See Plate I.

$15^d\ 11\frac{1}{2}^h$ to $12\frac{1}{2}^h$ Wave in H.F. ( $-30\gamma$). $19\frac{1}{4}^h$ to $21^h$ Two successive waves in Dec. ( $-4'$, $-4'$): small double wave in H.F. $15^d\ 23\frac{1}{2}^h$ to $16^d\ 1^h$ Truncated wave in H.F. ( $+20\gamma$).

$16^d\ 0^h$ to $1\frac{1}{4}^h$ Wave in Dec. ( $-6'$). $16\frac{1}{4}^h$ to $16\frac{1}{2}^h$ Sharp decrease in H.F. ( $-35\gamma$). $16\frac{1}{2}^h$ to $17\frac{3}{4}^h$ Wave in Dec. ( $-5'$). $19^h$ to $20^h$ Irregular double-crested wave in Dec. ( $-5'$). $19\frac{1}{2}^h$ to $20^h$ Sharp wave in H.F. ($+25\gamma$). $21\frac{1}{2}^h$ to $23\frac{1}{2}^h$ Double wave in Dec. ($+7'$ to $-4'$). $22^h$ to $22\frac{1}{4}^h$ Sharp wave in V.F. ($+15\gamma$), followed till $23^h$ by a decrease ( $-12\gamma$).

$17^d\ 0^h$ to $1\frac{3}{4}^h$ Rounded wave in H.F. ( $+37\gamma$). $0\frac{1}{4}^h$ to $2^h$ Wave in Dec. ( $-7'$). $1\frac{1}{2}^h$ to $4^h$ Slow wave in Dec. ( $-3'$). $17\frac{3}{4}^h$ to $19\frac{3}{4}^h$ Irregular double-crested wave in Dec. ( $-7'$). $18\frac{1}{4}^h$ to $19\frac{3}{4}^h$ Double-crested wave in H.F. ( $+35\gamma$).

$21^d\ 4\frac{1}{2}^h$ to $6^h$ Wave in Dec. ( $+4'$): in H.F. small. $18\frac{1}{2}^h$ to $20^h$ Wave in Dec. ( $-6'$). $20\frac{1}{2}^h$ to $21\frac{1}{2}^h$ Wave in Dec. ( $+3'$).

$22^d\ 1\frac{3}{4}^h$ to $2\frac{3}{4}^h$ Wave in Dec. ( $+3'$).

$23^d\ 0\frac{1}{4}^h$ to $2\frac{1}{4}^h$ Double wave in Dec. ( $-3'$ to $+3'$). $13\frac{1}{2}^h$ to $15^h$ Two successive waves in Dec. ( $+3'$, $+3'$). $14\frac{1}{4}^h$ to $15\frac{3}{4}^h$ Double wave in H.F. ( $+26\gamma$ to $-22\gamma$).

1913.

March $24^d$ $0\frac{1}{4}^h$ to $1\frac{1}{4}^h$ Wave in H.F. ( $+27\gamma$).

$29^d$ $16^h$ to $16\frac{1}{2}^h$ Decrease in H.F. ( $-20\gamma$). $16\frac{1}{4}^h$ to $16\frac{3}{4}^h$ Decrease in Dec. ( $-5'$).

$30^d$ $3^h$ to $4\frac{3}{4}^h$ Wave in Dec. ( $+5'$). $3^h$ to $3\frac{1}{2}^h$ Wave in H.F. ( $-21\gamma$). $21\frac{3}{4}^h$ to $22^h$ Sharp decrease in Dec. ( $-5'$). $21\frac{3}{4}^h$ to $23^h$ Wave in H.F. ( $+30\gamma$), steep at commencement.

$31^d$ $22\frac{1}{4}^h$ to $24^h$ Truncated wave in Dec. ( $-6'$): in H.F. small.

April $1^d$ $0^h$ to $6\frac{3}{4}^h$ Decrease in Dec. ( $-5'$). $3\frac{1}{2}^h$ to $5\frac{1}{4}^h$ Wave in Dec. ( $+4'$): in H.F. small. $19\frac{3}{4}^h$ to $21^h$ Truncated wave in Dec. ( $-5'$): in H.F. small.

$5^d$ $0\frac{1}{4}^h$ to $1\frac{1}{4}^h$ Wave in Dec. ( $-3'$).

$8^d$ $19\frac{3}{4}^h$ Sudden increase in H.F. ( $+33\gamma$), partly returning ( $-17\gamma$) by $20^h$.

$9^d$ $5^h$ to $10^d$ $5^h$ See Plate II.

$10^d$ $16\frac{1}{4}^h$ to $17\frac{3}{4}^h$ Double wave in H.F. ( $-20\gamma$ to $+20\gamma$), the intermediate portion very steep. $16\frac{3}{4}^h$ to $17\frac{1}{2}^h$ Wave in Dec. ( $-6'$), steep at commencement. $20^h$ to $21^h$ Wave in Dec. ( $+3'$). $20\frac{1}{4}^h$ to $21\frac{3}{4}^h$ Wave in H.F. ( $+25\gamma$).

$12^d$ $15^h$ to $15\frac{3}{4}^h$ Sharp wave in H.F. ( $-28\gamma$). $18^h$ to $18\frac{1}{2}^h$ Sharp decrease in Dec. ( $-11'$). $18^h$ to $18\frac{3}{4}^h$ Sharp wave in H.F. ( $-29\gamma$). $19^h$ to $22^h$ Slow wave in Dec. ( $+5'$). $22\frac{1}{4}^h$ to $24^h$ Double wave in Dec. ( $-7'$ to $+4'$), the second portion double-crested. $12^d$ $23^h$ to $13^d$ $0\frac{1}{2}^h$ Wave in H.F. ( $+32\gamma$). $12^d$ $23^h$ to $13^d$ $1^h$ Wave in V.F. ( $-13\gamma$).

$13^d$ $2^h$ to $3^h$ Rounded wave in Dec. ( $+4'$).

$14^d$ $17\frac{1}{4}^h$ to $17\frac{3}{4}^h$ Decrease in H.F. ( $-20\gamma$).

$15^d$ $2\frac{1}{2}^h$ to $3\frac{1}{4}^h$ Wave in Dec. ( $-3'$). $15^d$ $22^h$ to $16^d$ $0\frac{1}{2}^h$ Irregular double wave in Dec. ( $-5'$ to $+5'$). $15^d$ $22\frac{1}{2}^h$ to $16^d$ $0\frac{1}{4}^h$ Flat-crested wave in H.F. ( $-20\gamma$).

$16^d$ $14\frac{1}{2}^h$ to $14\frac{3}{4}^h$ Increase in H.F. ( $+25\gamma$). $17\frac{1}{2}^h$ to $18\frac{1}{2}^h$ Wave in Dec. ( $-3'$). $20\frac{1}{2}^h$ to $22\frac{3}{4}^h$ Irregular double-crested wave in H.F. ( $+35\gamma$). $20\frac{3}{4}^h$ to $22\frac{1}{4}^h$ Double wave in Dec. ( $+4'$ to $-4'$), the intermediate portion very steep.

$17^d$ $22\frac{1}{2}^h$ to $24^h$ Irregular wave in Dec. ( $-7'$). $17^d$ $23\frac{1}{4}^h$ to $18^d$ $0\frac{1}{2}^h$ Irregular wave in H.F. ( $+20\gamma$).

$23^d$ $5\frac{1}{4}^h$ to $7\frac{1}{4}^h$ Wave in Dec. ( $+5'$).

$24^d$ $21^h$ to $22^h$ Wave in Dec. ( $-3'$).

$27^d$ $12\frac{1}{2}^h$ to $13\frac{3}{4}^h$ Irregular wave in H.F. ( $+21\gamma$).

$28^d$ $1\frac{1}{4}^h$ to $3^h$ Flat-crested wave in Dec. ( $+3'$).

May $4^d$ $15\frac{3}{4}^h$ to $16\frac{3}{4}^h$ Truncated wave in H.F. ( $-29\gamma$), followed till $18\frac{3}{4}$ by a double wave ( $-42\gamma$ to $+28\gamma$). $17^h$ to $20\frac{1}{2}^h$ Double-crested wave in Dec. ( $-8'$). $17\frac{1}{4}^h$ to $18^h$ Increase in V.F. ( $+14\gamma$).

$5^d$ $0^h$ to $1^h$ Waves in Dec. ( $+3'$) and H.F. ( $+20\gamma$). $2^h$ to $4\frac{1}{2}^h$ Wave in Dec. ( $+12'$), steep at commencement. $2\frac{1}{4}^h$ to $5\frac{1}{2}^h$ Irregular double-crested wave in H.F. ( $+33\gamma$). $2\frac{1}{2}^h$ to $3^h$ Decrease in V.F. ( $-20\gamma$). $5^d$ $22^h$ to $6^d$ $2^h$ Triple wave in Dec. ( $-4'$, $+4'$, $-5'$). $5^d$ $23^h$ to $6^d$ $1^h$ Double wave in H.F. ( $-20\gamma$ to $+25\gamma$). $5^d$ $23\frac{1}{2}^h$ to $6^d$ $2^h$ Wave in V.F. ( $-24\gamma$).

1913.

May

$6^d$ $3\frac{1}{4}^h$ to $5^h$ Wave in H.F. ( $-$ 22$\gamma$). $8\frac{1}{4}^h$ to $9\frac{1}{2}^h$ Wave in H.F. ( $-$ 24$\gamma$). $15^h$ to $17\frac{1}{4}^h$ Two successive waves in H.F. ( $-$ 26$\gamma$, $-$22$\gamma$): in Dec. small. $20^h$ to $21\frac{1}{4}^h$ Wave in H.F. ( $-$ 20$\gamma$). $21^h$ to $22\frac{1}{4}^h$ Wave in Dec. ( $-$ 5′). $6^d$ $23\frac{3}{4}^h$ to $7^d$ $3^h$ Two successive irregular waves in Dec. ( + 4′, + 8′), the second double-crested.

$7^d$ $0\frac{1}{2}^h$ to $2^h$ Irregular wave in H.F. (+23$\gamma$), followed till $3\frac{1}{2}^h$ by a wave ( + 20$\gamma$). $1\frac{1}{2}^h$ to $2^h$ Decrease in V.F. ( $-$ 14$\gamma$). $18\frac{1}{2}^h$ to $19\frac{1}{2}^h$ Wave in H.F. ( + 20$\gamma$). $19\frac{1}{2}^h$ to $20\frac{1}{2}^h$ Wave in Dec. ( $-$ 3′). $22\frac{1}{2}^h$ to $24^h$ Double-crested wave in Dec ( + 5′).

$9^d$ $23^h$ to $24^h$ Truncated wave in H.F. ( + 20$\gamma$).

$13^d$ $3\frac{1}{2}^h$ to $5^h$ Wave in Dec. ( + 4′).

$27^d$ $13\frac{1}{4}^h$ to $15\frac{1}{4}^h$ Loss of Dec., H.F., and V.F. Registers.

June

$1^d$ $6^h$ to $2^d$ $6^h$ See Plate II.

$4^d$ $20\frac{1}{2}^h$ to $21\frac{3}{4}^h$ Wave in Dec. ( $-$ 3′) : in H.F. small.

$19^d$ $17^h$ to $19\frac{3}{4}^h$ Irregular triple-crested wave in H.F. (+34$\gamma$). $20^h$ to $22\frac{1}{2}^h$ Double-crested wave in Dec. ($-$3′).

$21^d$ $17\frac{3}{4}^h$ to $19^h$ Truncated wave in H.F. ( $-$ 22$\gamma$).

$23^d$ $11\frac{3}{4}^h$ to $13\frac{1}{4}^h$ Truncated wave in H.F. ( $-$ 22$\gamma$).

$26^d$ $13\frac{1}{2}^h$ to $15^h$ Wave in H.F. ( $-$ 23$\gamma$).

$28^d$ $21\frac{1}{4}^h$ to $21\frac{1}{2}^h$ Sharp decrease in Dec. ( $-$ 5′).

$29^d$ $3\frac{1}{4}^h$ to $5\frac{1}{4}^h$ Wave in Dec. ( + 6′).

July

$1^d$ $14^h$ to $14\frac{3}{4}^h$ Irregular wave in H.F. ( $-$ 20$\gamma$). $19\frac{1}{4}^h$ to $20\frac{1}{2}^h$ Wave in Dec. ( $-$ 3′).

$3^d$ $16^h$ to $4^d$ $8^h$ Imperfect register of Dec. and H.F.

$10^d$ $17\frac{1}{2}^h$ to $18^h$ Wave in H.F. ( + 20$\gamma$).

$12^d$ $12^h$ to $13^h$ Wave in H.F. ( + 20$\gamma$). $13\frac{3}{4}^h$ to $16^h$ Very irregular double wave in H.F. ( $-$ 23$\gamma$ to + 21$\gamma$). $17^h$ to $19\frac{3}{4}^h$ Irregular triple-crested wave in H.F. ( $-$ 40$\gamma$). $18\frac{3}{4}^h$ to $20\frac{1}{4}^h$ Wave in Dec. ( $-$ 6′).

$13^d$ $3\frac{1}{4}^h$ to $4\frac{1}{2}^h$ Wave in Dec. (+ 4′). $15^h$ to $21^h$ Loss of Dec., H.F., and V.F. Registers. $13^d$ $23\frac{3}{4}^h$ to $14^d$ $0\frac{3}{4}^h$ Irregular wave in Dec. ( $-$ 4′) : in H.F. small.

$14^d$ $18^h$ to $19\frac{1}{2}^h$ Wave in H.F. ( + 24$\gamma$).

$15^d$ $15\frac{3}{4}^h$ to $18^h$ Irregular double wave in H.F. ( + 20$\gamma$ to $-$ 20$\gamma$).

$16^d$ $20^h$ to $17^d$ $10^h$ Loss of H.F. Register.

$20^d$ $2\frac{1}{2}^h$ to $4^h$ Wave in Dec. ( + 3′).

$21^d$ $4\frac{3}{4}^h$ to $6\frac{1}{4}^h$ Wave in Dec. ( + 3′).

$24^d$ $15^h$ to $16\frac{1}{2}^h$ Wave in H.F. ( + 20$\gamma$).

$28^d$ $11\frac{1}{4}^h$ to $16^h$ Loss of Dec. and H.F. Registers.

1913.

August $6^d$ $22^h$ to $7^d$ $9^h$ Loss of Dec., H.F. and V.F. Registers.

$9^d$ $14\frac{3}{4}^h$ to $15\frac{1}{2}^h$ Wave in H.F. ( + 20γ).

$10^d$ $11\frac{3}{4}^h$ to $13^h$ Wave in H.F. ( − 24γ), followed by a loss of register until $14\frac{3}{4}^h$.

$11^d$ $11\frac{1}{2}^h$ to $13\frac{1}{4}^h$ Wave in H.F. ( − 35γ). $17^h$ to $18^h$ Small double wave in H.F. ( + 16γ to − 16γ). $23\frac{1}{4}^h$ to $24^h$ Wave in H.F. (+ 20γ).

$12^d$ $21\frac{1}{2}^h$ to $22^h$ Decrease in Dec. ( − 6′). $21\frac{3}{4}^h$ to $22\frac{3}{4}^h$ Wave in H.F. ( + 25γ).

$13^d$ $3\frac{1}{4}^h$ to $5\frac{3}{4}^h$ Wave in Dec. ( + 8′).

$15^d$ $17\frac{1}{2}^h$ to $18\frac{3}{4}^h$ Wave in H.F. ( − 25γ).

$24^d$ $0^h$ to $1^h$ Wave in Dec. ( + 4′).

$28^d$ $17^h$ to $18^h$ Wave in H.F. ( + 30γ).

September $6^d$ $1^h$ to $2\frac{1}{4}^h$ Wave in Dec. ( + 4′). $13^h$ to $15^h$ Irregular wave in H.F. ( − 30γ) followed till $16\frac{1}{2}^h$ by a truncated wave ( − 24γ). $17\frac{1}{4}^h$ to $18\frac{1}{4}^h$ Wave in H.F. ( − 21γ). $17\frac{1}{2}^h$ to $19^h$ Wave in Dec. ( − 5′). $21\frac{1}{2}^h$ to $23\frac{1}{4}^h$ Truncated wave in Dec. ( − 4′).

$8^d$ $0^h$ to $1\frac{1}{4}^h$ Wave in Dec. ( + 3′), followed till $4\frac{1}{2}^h$ by a triple wave (+ 4′, − 4′, + 6′). $2\frac{1}{4}^h$ to $4^h$ Irregular double wave in H.F. ( + 20γ to − 20γ). $4\frac{1}{4}^h$ to $6^h$ Wave in H.F. ( − 24γ). $6\frac{1}{4}^h$ to $8^h$ Wave in H.F. ( − 27γ). $6\frac{3}{4}^h$ to $8\frac{1}{4}^h$ Wave in Dec. ( + 4′). $8\frac{1}{4}^h$ to $10^h$ Wave in H.F. ( − 35γ). $11^h$ to $12\frac{1}{4}^h$ Wave in H.F. ( − 37γ). $13\frac{1}{2}^h$ to $14\frac{1}{4}^h$ Decrease in Dec. ( − 7′): wave in H.F. ( − 25γ). $20^h$ to $21^h$ Wave in Dec. ( − 3′). $8^d$ $23\frac{3}{4}^h$ to $9^d$ $1^h$ Wave in Dec. ( + 11′).

$9^d$ $0^h$ to $1\frac{1}{4}^h$ Wave in H.F. ( + 30γ). $0^h$ to $1^h$ Decrease in V.F. ( − 24γ). $4^h$ to $6^h$ Wave in Dec. ( + 8′): double wave in H.F. ( − 40γ to + 15γ). $9\frac{1}{4}^h$ to $11^h$ Wave in H.F. ( − 34γ). $12\frac{1}{2}^h$ to $13^h$ Increase in H.F. ( + 35γ). $17^h$ to $18^h$ Wave in Dec. (− 3′). $21^h$ to $22\frac{1}{4}^h$ Wave in Dec. ( − 4′).

$10^d$ $18\frac{3}{4}^h$ to $20\frac{3}{4}^h$ Irregular double-crested wave in Dec. ( − 6′), steep at commencement. $23\frac{1}{2}^h$ to $24^h$ Wave in Dec. ( − 4′).

$12^d$ $18\frac{1}{4}^h$ to $19\frac{1}{2}^h$ Double-crested wave in H.F. ( − 3′).

$19^d$ $21\frac{3}{4}^h$ to $23^h$ Wave in H.F. ( + 20γ). $22^h$ to $23\frac{1}{2}^h$ Truncated wave in Dec. ( − 4′).

$22^d$ $17^h$ to $18^h$ Wave in Dec. ( − 4′). $23\frac{1}{4}^h$ to $24^h$ Decrease in Dec. ( − 6′): small wave in H.F.

$23^d$ $0^h$ to $1\frac{1}{4}^h$ Wave in Dec. ( + 7′). $12\frac{1}{2}^h$ to $13\frac{1}{4}^h$ Wave in H.F. ( − 20γ).

$30^d$ $18^h$ to $19\frac{1}{4}^h$ Double crested wave in Dec. ( − 5′), steep at commencement.

October $4^d$ $21\frac{1}{4}^h$ to $23^h$ Wave in H.F. ( + 30γ).

$5^d$ $1\frac{1}{2}^h$ to $4^h$ Irregular wave in Dec. ( − 8′). $4\frac{1}{2}^h$ to $5\frac{3}{4}^h$ Wave in H.F. ( − 30γ). $4\frac{3}{4}^h$ to $6\frac{1}{4}^h$ Wave in Dec. ( + 9′).

1913.

October 6^d^ $1\frac{1}{2}^h$ to $7\frac{1}{2}^h$ Quadruple wave in Dec. ( $-4'$, $+5'$, $-8'$, $+7'$). $1\frac{3}{4}^h$ to $3^h$ Wave in H.F. ( $-25\gamma$). $2\frac{3}{4}^h$ to $3\frac{1}{2}^h$ Decrease in V.F. ( $-15\gamma$). $5^h$ to $6\frac{1}{2}^h$ Decrease in H.F. ( $-60\gamma$).

$7^d$ $1^h$ to $2\frac{1}{4}^h$ Wave in H.F. ( $-30\gamma$). $1\frac{1}{4}^h$ to $2\frac{3}{4}^h$ Wave in Dec. ( $+11'$). $13\frac{3}{4}^h$ to $15\frac{3}{4}^h$ Wave in H.F. ( $-34\gamma$). $14\frac{3}{4}^h$ to $16^h$ Wave in Dec. ( $-3'$). $18\frac{1}{2}^h$ to $20^h$ Wave in Dec. ( $-11'$). $19^h$ to $20^h$ Wave in H.F. ( $+40\gamma$).

$8^d$ $2^h$ to $5\frac{1}{4}^h$ Irregular double wave in Dec. ( $-5'$ to $+5'$). $6\frac{3}{4}^h$ to $7\frac{1}{2}^h$ Decrease in H.F. ( $-36\gamma$). $13^h$ to $15\frac{1}{2}^h$ Double wave in H.F. ( $+18\gamma$ to $-18\gamma$). $18\frac{3}{4}^h$ to $22^h$ Irregular double-crested wave in Dec. ( $-8'$). $19^h$ to $21\frac{1}{2}^h$ Irregular wave in H.F. ( $+48\gamma$).

$9^d$ $15^h$ to $16^h$ Wave in Dec. ( $-3'$). $16\frac{3}{4}^h$ to $17\frac{3}{4}^h$ Wave in Dec. ( $-9'$), steep at commencement: double wave in H.F. ( $-23\gamma$ to $+30\gamma$). $9^d$ $22\frac{1}{2}^h$ to $10^d$ $1^h$. Double wave in Dec. ( $+5'$ to $-4'$).

$10^d$ $8\frac{1}{4}^h$ to $9\frac{1}{4}^h$ Decrease in H.F. ( $-40\gamma$). $11\frac{1}{2}^h$ to $12\frac{1}{2}^h$ Wave in H.F. ( $-30\gamma$). $15\frac{3}{4}^h$ to $17\frac{1}{4}^h$ Truncated wave in H.F. ( $-30\gamma$). $16\frac{3}{4}^h$ to $17\frac{1}{4}^h$ Wave in Dec. ( $-3'$).

$12^d$ $20^h$ to $21\frac{1}{4}^h$ Wave in Dec. ( $-7'$).

$13^d$ $17^h$ to $18^h$ Wave in Dec. ( $-5'$).

$16^d$ $21^h$ to $22\frac{1}{4}^h$ Wave in Dec. ( $+3'$).

$18^d$ $17\frac{3}{4}^h$ to $18\frac{1}{2}^h$ Decrease in Dec. ( $-6'$): in H.F. ( $-50\gamma$). $22^h$ to $22\frac{3}{4}^h$ Wave in H.F. ( $-27\gamma$).

$20^d$ $17\frac{3}{4}^h$ to $18\frac{3}{4}^h$ Wave in Dec. ( $-5'$).

$25^d$ $22\frac{1}{2}^h$ to $24^h$ Truncated wave in Dec. ( $-3'$).

$30^d$ $22\frac{3}{4}^h$ to $31^d$ $1^h$ Double wave in Dec. ( $-3'$ to $+4'$).

$31^d$ $0\frac{1}{4}^h$ to $1\frac{1}{4}^h$ Wave in H.F. ( $+33\gamma$). $0\frac{1}{2}^h$ to $1^h$ Decrease in V.F. ( $-13\gamma$)

November $2^d$ $4\frac{1}{2}^h$ to $6\frac{1}{2}^h$ Slow wave in Dec. ( $-3'$). $14^h$ to $15\frac{1}{2}^h$ Wave in Dec. ( $-5'$). $18^h$ to $19^h$ Wave in Dec. ( $-3'$). $21^h$ to $22\frac{1}{2}^h$ Double-crested wave in Dec. ( $-7'$). $22^h$ to $24^h$ Two successive waves in H.F. ( $+20\gamma$ and $+28\gamma$). $2^d$ $23^h$ to $3^d$ $0\frac{1}{2}^h$ Wave in Dec. ( $-5'$).

$3^d$ $1\frac{1}{4}^h$ to $2^h$ Wave in Dec. ( $+4'$). $3\frac{1}{4}^h$ to $5\frac{1}{2}^h$ Wave in Dec. ( $+8'$). $11\frac{3}{4}^h$ to $15^h$ Slow wave in H.F. ( $-30\gamma$).

$7^d$ $1\frac{1}{4}^h$ to $2^h$ Wave in Dec. ( $+3'$). $15^h$ to $17^h$ Wave in H.F. ( $-41\gamma$). $15\frac{1}{4}^h$ to $16\frac{3}{4}^h$ Wave in Dec. ( $-4'$). $7^d$ $23\frac{3}{4}^h$ to $8^d$ $0\frac{1}{2}^h$ Wave in Dec. ( $+4'$).

$8^d$ $0^h$ to $1^h$ Wave in H.F. ( $+30\gamma$). $1^h$ to $2^h$ Wave in Dec ( $+4'$). $20\frac{3}{4}^h$ to $21\frac{1}{4}^h$ Wave in H.F. ( $+25\gamma$).

$10^d$ $12\frac{1}{2}^h$ to $15^h$ Loss of Dec., H.F. and V.F. Registers.

$13^d$ $23^h$ to $14^d$ $11\frac{1}{2}^h$ Loss of H.F. Register.

$14^d$ $0\frac{1}{4}^h$ to $5\frac{1}{2}^h$ Partial loss of Dec. and V.F. Registers.

$28^d$ $17\frac{3}{4}^h$ to $18\frac{3}{4}^h$ Wave in Dec. ( $-5'$). $21\frac{1}{4}^h$ to $22^h$ Wave in Dec. ( $-3'$). $21\frac{1}{2}^h$ to $22\frac{1}{2}^h$ Wave in H.F. ( $+40\gamma$).

1913.

December $1^d$ $3\frac{1}{4}^h$ to $4\frac{3}{4}^h$ Irregular double-crested wave in Dec. ( + 4′).

$4^d$ $18\frac{1}{2}^h$ to $21^h$ Two successive waves in H.F. ( − 50γ and − 39γ). $19^h$ to $19\frac{1}{2}^h$ Sharp decrease in Dec. ( − 14′), and increase ( + 8′).

$7^d$ $21^h$ to $22\frac{1}{4}^h$ Wave in H.F. ( + 36γ).

$9^d$ $18\frac{1}{2}^h$ to $19\frac{1}{4}^h$ Wave in H.F. ( − 20γ). $18\frac{3}{4}^h$ to $19\frac{1}{2}^h$ Wave in Dec. ( − 4′).

$25^d$ $20\frac{1}{2}^h$ to $21^h$ Sharp decrease in Dec. ( − 9′), and increase ( + 6′). $20\frac{1}{2}^h$ to $22\frac{1}{4}^h$ Wave in H.F. ( − 28γ).

$26^d$ $1\frac{1}{2}^h$ to $2\frac{3}{4}^h$ Wave in Dec. ( + 9′). $1\frac{3}{4}^h$ to $3^h$ Wave in H.F. ( + 30γ). $15\frac{3}{4}^h$ to $16\frac{3}{4}^h$ Truncated wave in Dec. ( − 4′).

$27^d$ $16\frac{3}{4}^h$ to $18\frac{3}{4}^h$ Irregular double-crested wave in Dec. ( − 5′). $21\frac{3}{4}^h$ to $22\frac{1}{2}^h$ Wave in H.F. ( + 20γ).

$30^d$ $9^h$ to $12^h$ Loss of H.F. register.

ROYAL OBSERVATORY, GREENWICH.

# RESULTS

OF

# METEOROLOGICAL OBSERVATIONS.

1913.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Lowest. | Daily Range. | Mean of 24 Hourly Values. | Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Jan. 1 | ... | 29·772 | 47·3 | 39·2 | 8·1 | 43·2 | + 4·6 | 41·9 | 40·3 | 2·9 | 5·1 | 1·7 | 90 | 55·1 | 31·0 | 46·90 | 0·013 | wP : mP : mP |
| 2 | ... | 29·778 | 48·7 | 32·1 | 16·6 | 39·8 | + 1·4 | 38·6 | 37·0 | 2·8 | 8·2 | 0·4 | 90 | 76·0 | 25·5 | 46·69 | 0·067 | mP : mP : mP, mN |
| 3 | ... | 29·712 | 48·8 | 37·3 | 11·5 | 44·2 | + 5·9 | 43·0 | 41·6 | 2·6 | 5·5 | 0·0 | 91 | 62·0 | 26·2 | 46·43 | 0·000 | mP : wP : wP |
| 4 | ... | 29·721 | 50·4 | 46·0 | 4·4 | 47·9 | + 9·6 | 45·8 | 43·5 | 4·4 | 6·7 | 3·0 | 86 | 65·4 | 42·3 | 46·21 | 0·005 | wP |
| 5 | ... | 29·717 | 51·4 | 36·2 | 15·2 | 46·5 | + 8·3 | 45·0 | 43·4 | 3·1 | 7·5 | 1·5 | 90 | 61·1 | 29·0 | 46·26 | 0·142 | wP : wP, wN : mP |
| 6 | Greatest Dec. S. | 29·914 | 48·1 | 36·2 | 11·9 | 41·9 | + 3·8 | 40·9 | 39·7 | 2·2 | 5·2 | 0·9 | 93 | 72·0 | 29·0 | 46·33 | 0·305 | vP, vN : mP |
| 7 | New | 29·930 | 50·5 | 43·1 | 7·4 | 45·8 | + 7·8 | 44·0 | 41·9 | 3·9 | 5·6 | 2·6 | 86 | 73·9 | 36·2 | 46·29 | 0·000 | wP |
| 8 | ... | 29·833 | 46·8 | 41·1 | 5·7 | 43·7 | + 5·8 | 42·5 | 41·1 | 2·6 | 4·1 | 1·8 | 90 | 58·0 | 36·1 | 46·21 | 0·000 | wP |
| 9 | ... | 29·789 | 48·0 | 39·3 | 8·7 | 43·7 | + 5·8 | 42·7 | 41·5 | 2·2 | 4·0 | 0·7 | 92 | 72·0 | 30·0 | 46·21 | 0·000 | wP : wP : mP |
| 10 | ... | 29·787 | 39·5 | 33·9 | 5·6 | 36·8 | − 1·1 | 36·5 | 36·1 | 0·7 | 2·9 | 0·2 | 98 | 42·9 | 26·5 | 46·11 | 0·000 | wP : mP : mP |
| 11 | Apogee | 29·506 | 43·0 | 33·1 | 9·9 | 36·4 | − 1·5 | 36·0 | 35·4 | 1·0 | 3·2 | 0·2 | 96 | 41·3 | 33·1 | 45·82 | 0·212 | wP : wP : sN, mP |
| 12 | ... | 29·494 | 43·0 | 32·0 | 11·0 | 38·9 | + 1·0 | 37·1 | 34·7 | 4·2 | 7·0 | 0·2 | 86 | 51·3 | 24·3 | 45·49 | 0·050 | mP : sP : sP |
| 13 | In Equator | 29·625 | 36·0 | 26·2 | 9·8 | 31·6 | − 6·4 | 30·7 | 28·6 | 3·0 | 4·0 | 0·0 | 87 | 38·0 | 18·2 | 45·12 | 0·064 | sP : sP : sP, sN |
| 14 | ... | 29·521 | 42·0 | 30·6 | 11·4 | 36·8 | − 1·2 | 35·0 | 32·5 | 4·3 | 6·1 | 0·6 | 85 | 68·0 | 25·0 | 44·63 | 0·004 | mP |
| 15 | First Quarter | 29·241 | 48·1 | 37·1 | 11·0 | 42·2 | + 4·1 | 40·7 | 38·9 | 3·3 | 8·2 | 0·5 | 88 | 75·5 | 33·3 | 44·24 | 0·216 | wP, vN : vN, vP : ... |
| 16 | ... | 29·261 | 46·3 | 34·1 | 12·2 | 40·6 | + 2·3 | 39·2 | 37·4 | 3·2 | 7·2 | 1·2 | 89 | 77·8 | 28·1 | 44·06 | 0·256 | ... : wP, vN |
| 17 | ... | 29·265 | 45·1 | 35·7 | 9·4 | 40·6 | + 2·1 | 39·6 | 38·4 | 2·2 | 5·7 | 0·7 | 92 | 68·2 | 28·0 | 43·97 | 0·071 | wP : wN, mP : mP |
| 18 | ... | 29·491 | 45·9 | 31·3 | 14·6 | 38·7 | + 0·1 | 37·5 | 35·9 | 2·8 | 5·6 | 0·0 | 91 | 70·5 | 24·0 | 43·93 | 0·003 | mP |
| 19 | ... | 29·504 | 45·9 | 32·1 | 13·8 | 39·4 | + 0·7 | 38·3 | 36·9 | 2·5 | 4·1 | 1·6 | 91 | 53·0 | 24·0 | 43·80 | 0·139 | mP : vP, sN |
| 20 | Greatest Dec. N. | 29·055 | 48·0 | 39·9 | 8·1 | 42·8 | + 4·0 | 41·3 | 39·5 | 3·3 | 6·2 | 2·2 | 88 | 75·4 | 33·3 | 43·80 | 0·137 | wP : vN, wP : mP, sN |
| 21 | ... | 29·220 | 42·3 | 36·1 | 6·2 | 40·1 | + 1·3 | 38·8 | 37·1 | 3·0 | 5·4 | 0·9 | 90 | 44·0 | 28·9 | 43·60 | 0·035 | vP, wN : mP : mP |
| 22 | Full | 29·860 | 38·5 | 32·0 | 6·5 | 33·9 | − 4·9 | 33·1 | 31·7 | 2·2 | 5·1 | 0·3 | 91 | 38·1 | 25·1 | 43·62 | 0·265 | mP : sP : sP, ssN |
| 23 | Perigee | 29·672 | 52·1 | 37·0 | 15·1 | 48·0 | + 9·1 | 45·8 | 43·4 | 4·6 | 8·0 | 0·0 | 85 | 58·8 | 36·0 | 43·49 | 0·112 | wP |
| 24 | ... | 29·608 | 50·6 | 46·1 | 4·5 | 48·3 | + 9·4 | 45·9 | 43·3 | 5·0 | 7·0 | 4·1 | 83 | 59·7 | 40·2 | 43·41 | 0·000 | wP |
| 25 | ... | 29·671 | 50·8 | 37·3 | 13·5 | 44·7 | + 5·6 | 42·5 | 39·9 | 4·8 | 8·0 | 1·9 | 84 | 51·3 | 34·2 | 43·72 | 0·007 | wP : mP : mP |
| 26 | In Equator | 30·111 | 43·1 | 28·3 | 14·8 | 35·2 | − 4·1 | 33·0 | 29·5 | 5·7 | 11·2 | 1·9 | 79 | 77·0 | 21·3 | 44·06 | 0·000 | mP |
| 27 | ... | 29·932 | 42·3 | 28·1 | 14·2 | 34·9 | − 4·6 | 33·3 | 30·8 | 4·1 | 8·7 | 1·2 | 84 | 78·8 | 20·1 | 43·91 | 0·002* | wP : mP : sP |
| 28 | ... | 29·724 | 44·3 | 34·6 | 9·7 | 39·5 | − 0·1 | 38·8 | 37·9 | 1·6 | 2·6 | 0·2 | 94 | 51·0 | 30·9 | 43·60 | 0·179 | mP : wP : wP, mN |
| 29 | Last Quarter | 29·680 | 44·1 | 40·2 | 3·9 | 42·1 | + 2·4 | 41·9 | 41·7 | 0·4 | 0·7 | 0·0 | 98 | 46·8 | 39·6 | 43·31 | 0·058 | wP : mP : mP, wN |
| 30 | ... | 29·488 | 49·3 | 41·1 | 8·2 | 44·0 | + 4·3 | 43·4 | 42·7 | 1·3 | 3·9 | 0·0 | 95 | 56·9 | 33·5 | 43·39 | 0·197 | vP, wN : mP : wP, wN |
| 31 | ... | 29·282 | 50·2 | 35·9 | 14·3 | 41·1 | + 1·4 | 38·0 | 34·1 | 7·0 | 11·5 | 1·7 | 76 | 78·5 | 29·5 | 43·52 | 0·115 | vN, wP : mP : mP |
| Means | ... | 29·618 | 46·1 | 35·9 | 10·2 | 41·1 | + 2·5 | 39·7 | 37·9 | 3·2 | 5·9 | 1·0 | 89·0 | 61·2 | 29·8 | 44·78 | Sum 2·654 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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.

* Rainfall (Column 17). The amount entered on January 27 is derived from frost.

The mean reading of the *Barometer* for the month was 29in·618, being 0in·176 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 52°·1 on January 23; the lowest in the month was 26°·2 on January 13; and the range was 25°·9.
The mean of all the highest daily readings in the month was 46°·1, being 3°·0 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 35°·9, being 2°·2 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 10°·2, being 0°·8 *greater* than the average for the 65 years, 1841–1905.
The mean for the month was 41°·1, being 2°·5 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Jan. 1 | 0·4 | 7·9 | SSW : SW | SW : W : WSW | 1·8 | 0·10 | 282 | p.-cl : p.-cl : 10,sc,s,n,slt.-r | 10, sh.-r : 10 : 0, d, slt.-m |
| 2 | 4·6 | 7·9 | WSW : SW : SSW | SSW : S : SSE | 0·5 | 0·00 | 196 | 0,d,ho.-fr : 0,slt.-m,ho.-fr : 1, th.-cl | 1,ci.-s,th.-cl : p.-cl : 10, r |
| 3 | 1·5 | 7·9 | S | SSW : SW | 2·6 | 0·15 | 267 | p.-cl : th.-cl : 9, cu.-s | p.-cl, cu : 9 |
| 4 | 0·2 | 7·9 | SW : SSW | SSW : S | 5·0 | 0·53 | 412 | p.-cl, w : 10, sc, s, w | 9, w : 10, m.-r : 10 |
| 5 | 0·0 | 7·9 | S : SSW | SSW : W : SW | 9·2 | 0·67 | 473 | 10, r : 10, oc.-r : 10, slt. r, w | 9, ci.-s, s, st.-w : 0, ho.-fr |
| 6 | 2·5 | 8·0 | SSW : SW | SW | 1·3 | 0·06 | 252 | p.-cl, r : 10, r : 7, cu.-s, n, s, r | 7, slt.-sh : p.-cl : p.-cl |
| 7 | 2·4 | 8·0 | SW | SW : SSW : S | 3·9 | 0·23 | 330 | p.-cl : p.-cl, cu | 8, cu, n : 10, n : 10, oc.-m.-r |
| 8 | 1·7 | 8·0 | S : SSE | SE : SSE | 2·0 | 0·14 | 226 | p.-cl : p.-cl : 8, n | p.-cl : 10 : 10 |
| 9 | 4·7 | 8·1 | SSE : SE | SSE : SE | 2·0 | 0·07 | 199 | p.-cl, d : p.-cl,ci.-s,ci.-cu,cu | 1, ci.-s : 0 : 0, ho.-fr |
| 10 | 0·0 | 8·1 | ESE | ESE : SE | 1·8 | 0·18 | 266 | p.-cl,ho.-fr : 10, slt.-f : 10, slt.-f | 10, s : 10, s |
| 11 | 0·0 | 8·1 | ESE : SE | SE : Variable | 4·5 | 0·41 | 332 | 10 : 10, slt.-r : 10, oc.-slt.-r | 10, s, slt.-r, w : 10, sc, n, r, w : 10, r |
| 12 | 4·6 | 8·1 | W | WNW : W | 4·6 | 0·22 | 364 | 9, r : p.-cl,ho.-fr : 1, slt.-m | 3, cu, slt.-m : 0,slt.-m,ho.-fr : 0, ho.-fr |
| 13 | 0·8 | 8·2 | WSW : Calm | Calm : SE : ESE | 2·0 | 0·03 | 168 | 0, ho.-fr : 0,ho.-fr,slt.-f : 1, ho.-fr, f | p.-cl,f,ho.-fr : p.-cl, ho.-fr : 9, ho.-fr, r |
| 14 | 0·9 | 8·2 | Variable : SW : Calm | SE : ESE | 1·2 | 0·05 | 195 | 9 : p.-cl, slt.-f, ho.-fr : 8,cu.-s,s,m.-r | p.-cl,s,oc.-slt.-r : 10 : 10, oc.-th.-r |
| 15 | 3·2 | 8·3 | SE : S : SW | SW : SSW : S | 5·3 | 0·28 | 333 | 10, slt.-r : 10, fq.-r : p.-cl, r | p.-cl, ci.-s, cu, sq : 9, r, sq |
| 16 | 4·1 | 8·3 | SW : SSW | SSW : SSE : SE | 3·5 | 0·13 | 275 | p.-cl,oc.-r : p.-cl,ho.-fr : 3, ci, ci.-s | p.-cl : 10, fq.-r : 10, fq.-th.-r |
| 17 | 1·9 | 8·3 | Calm : W | W : WSW : SSW | 2·0 | 0·12 | 281 | 10, fq.-r : 10, slt.-r : 9,s,fq.-r,so.-ha | 7,ci,ci.-s,cu : p.-cl, r : p.-cl,lu.-ha,lu.-co |
| 18 | 2·3 | 8·4 | SSW : Calm : WSW | W : WSW | 1·6 | 0·05 | 231 | p.-cl : f, ho.-fr : 3, ci.-s, s, f | p.-cl, cu.-s, s : 9, lu.-ha : 0, d |
| 19 | 0·0 | 8·4 | WSW : SSW : S | S : SW : SSW | 4·5 | 0·19 | 298 | 1,th.-cl, ho.-fr : p.-cl : 10, ci.-s,ci.-cu | 10, fq.-r : 10, c.-r : p.-cl |
| 20 | 1·6 | 8·5 | SSW : SW | SW : SSW | 3·3 | 0·36 | 384 | p.-cl : 10, li.-shs : 10, fq.-r | 9,fq.-r,hy.-sh : p.-cl, shs.-r : p.-cl,oc.-slt.-r |
| 21 | 0·0 | 8·5 | SSW : W : NNW | NNW : N | 7·1 | 0·28 | 357 | p.-cl,slt.-sh : 10,oc.-slt.-r : 10, n, s, glm, oc.-slt.-r | 10,n,s,glm,m.-r : 10, w : 10 |
| 22 | 0·0 | 8·6 | N : Calm | Calm : SE | 1·8 | 0·04 | 196 | p.-cl : th.-cl, ho.-fr, lu.-ha : s, slt.-f, ho.-fr | s, ho.-fr : 10, sn, sl : 10, sl, r |
| 23 | 0·0 | 8·6 | S : WSW : W | W : WSW | 6·5 | 0·75 | 538 | 10, sl, r : 10, r : 10, sc, n, w | 10, w : 9, w : p.-cl |
| 24 | 0·0 | 8·7 | WSW : SW | SW : WSW | 6·9 | 0·67 | 507 | 9 : 10 : 10, oc.-m.-r | 10, oc.-m.-r : 10, w : 10, w |
| 25 | 0·6 | 8·7 | W | N : NE | 3·0 | 0·18 | 325 | 10 : p.-cl,sh.-r : p.-cl | 9, n : 10 |
| 26 | 5·1 | 8·8 | NE : Calm | ESE : SE | 0·8 | 0·02 | 173 | p.-cl,ho.-fr : 1, ho.-fr : 1, ci.-s, ci.-cu | 2, cu, cu.-s : 0, ho.-fr : p.-cl, ho.-fr |
| 27 | 4·5 | 8·8 | SE : SSE | SSE : SE : ESE | 0·2 | 0·00 | 160 | p.-cl,ho.-fr : 0, ho.-fr : 1, ci, ci.-s | 5,ci.-s,so.-ha : 10 : 10 |
| 28 | 0·0 | 8·9 | ESE : SE | ESE : Calm | 0·3 | 0·01 | 169 | 10 : 10, s : 10, m.-r | 10, slt.-r : 10, fq.-r : 10, r |
| 29 | 0·0 | 8·9 | Calm | Calm | 0·0 | 0·00 | 76 | 10, r, f : 10, slt.-r, slt.-f : 10,fq.-th.-r, slt.-f | 10, fq.-th.-r, slt.-f : 10, slt.-r, slt.-f |
| 30 | 0·0 | 9·0 | Calm | SW | 10·0 | 0·58 | 294 | 10, r, f : 10, slt.-f : 10, s | 10, s, n, glm : 10, m.-r, w : 10, r, st.-w |
| 31 | 7·0 | 9·0 | W | W : WSW | 11·0 | 1·20 | 641 | 9, hy.-sh, fq.-r, st.-w : 1, w | 1, cu, w : 1, w : 0, w |
| Means | 1·8 | 8·4 | ... | ... | ... | 0·25 | 297 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 39°·7, being 2°·5 *higher* than
The mean *Temperature of the Dew Point* for the month was 37°·9, being 2°·6 *higher* than
The mean *Degree of Humidity* for the month was 89·0, being 1·0 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·228, being 0in·022 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·6, being 0gr·2 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 548 grains, being 6 grains *less* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·8.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·211. The maximum daily amount of *Sunshine* was 7·0 hours on January 31.

The highest reading of the *Solar Radiation Thermometer* was 78°·8 on January 27; and the lowest reading of the *Terrestrial Radiation Thermometer* was 18°·2 on January 13.

The *Proportions of Wind* referred to the cardinal points were N. 2, E. 4, S. 12, and W. 9. Four days were calm.

The *Greatest Pressure of the Wind* in the month was 11·0 lbs. on the square foot on January 31. The mean daily *Horizontal Movement of the Air* for the month was 297 miles; the greatest daily value was 641 miles on January 31; and the least daily value was 76 miles on January 29.

*Rain* (0in·005 or over) fell on 21 days in the month, amounting to 2in·654, as measured by gauge No. 6 partly sunk below the ground; being 0in·773 *greater* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | TEMPERATURE. Of the Air. Lowest. | TEMPERATURE. Of the Air. Daily Range. | TEMPERATURE. Of the Air. Mean of 24 Hourly Values. | TEMPERATURE. Of the Air. Excess above Average of 65 Years. | TEMPERATURE. Of Evaporation. Mean of 24 Hourly Values. | TEMPERATURE. Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Difference between the Air Temperature and Dew Point Temperature. Greatest. | Difference between the Air Temperature and Dew Point Temperature. Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | TEMPERATURE. Of Radiation. Lowest on the Grass. | TEMPERATURE. Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Feb. 1 | ... | 29·467 | 44·1 | 35·1 | 9·0 | 38·5 | − 1·1 | 37·2 | 35·4 | 3·1 | 5·5 | 0·7 | 89 | 51·0 | 27·6 | 43·60 | 0·229 | mP : mP, ssN |
| 2 | Greatest Dec. S. | 29·553 | 45·8 | 33·3 | 12·5 | 40·4 | + 0·9 | 38·5 | 36·1 | 4·3 | 9·3 | 1·2 | 85 | 69·1 | 27·6 | 43·45 | 0·178 | mP : mP, ssN : mP |
| 3 | ... | 29·857 | 52·3 | 45·7 | 6·6 | 49·2 | + 9·7 | 46·2 | 43·0 | 6·2 | 9·3 | 3·4 | 79 | 71·9 | 39·4 | 43·25 | 0·000 | wP |
| 4 | ... | 30·051 | 55·0 | 44·5 | 10·5 | 49·5 | +10·0 | 46·1 | 42·5 | 7·0 | 12·1 | 2·1 | 77 | 84·0 | 35·7 | 43·39 | 0·000 | wP : mP : mP |
| 5 | ... | 29·877 | 48·3 | 43·9 | 4·4 | 46·1 | + 6·5 | 43·8 | 41·2 | 4·9 | 10·4 | 1·7 | 84 | 56·6 | 31·1 | 43·72 | 0·000 | wP : mP : mP |
| 6 | New | 29·767 | 52·2 | 39·9 | 12·3 | 46·9 | + 7·3 | 44·8 | 42·5 | 4·4 | 8·6 | 1·9 | 85 | 77·0 | 33·1 | 44·08 | 0·011 | mP |
| 7 | Apogee | 29·755 | 52·6 | 44·4 | 8·2 | 49·7 | +10·2 | 47·9 | 46·0 | 3·7 | 8·4 | 2·1 | 88 | 58·5 | 37·0 | 44·08 | 0·065 | wP : wP : wP, wwN |
| 8 | ... | 30·108 | 49·3 | 41·1 | 8·2 | 44·7 | + 5·4 | 40·4 | 35·4 | 9·3 | 15·3 | 4·2 | 70 | 80·1 | 32·0 | 44·51 | 0·000 | wP : mP : mP |
| 9 | In Equator | 30·236 | 52·0 | 43·2 | 8·8 | 47·5 | + 8·4 | 45·9 | 44·1 | 3·4 | 7·2 | 0·6 | 89 | 58·0 | 34·8 | 44·70 | 0·073 | wP |
| 10 | ... | 30·263 | 53·5 | 38·7 | 14·8 | 46·1 | + 7·2 | 43·5 | 40·5 | 5·6 | 12·5 | 0·4 | 82 | 75·8 | 28·0 | 44·71 | 0·050 | wP, wwN : mP : sP |
| 11 | ... | 30·372 | 53·2 | 32·1 | 21·1 | 40·3 | + 1·5 | 38·3 | 35·7 | 4·6 | 11·9 | 0·5 | 84 | 73·0 | 23·5 | 44·81 | 0·000 | vP, wwN : mP |
| 12 | ... | 30·479 | 48·0 | 30·2 | 17·8 | 38·2 | − 0·6 | 37·7 | 37·0 | 1·2 | 3·0 | 0·0 | 96 | 60·3 | 23·0 | 44·70 | 0·004* | sP : mP |
| 13 | ... | 30·374 | 42·0 | 34·4 | 7·6 | 37·6 | − 1·4 | 37·1 | 36·4 | 1·2 | 3·4 | 0·0 | 96 | 66·1 | 29·2 | 44·42 | 0·001* | mP |
| 14 | First Quarter | 30·249 | 38·2 | 30·2 | 8·0 | 35·5 | − 3·8 | 35·1 | 34·5 | 1·0 | 1·9 | 0·0 | 96 | 42·2 | 28·1 | 44·22 | 0·003* | mP |
| 15 | ... | 30·083 | 39·8 | 35·4 | 4·4 | 37·4 | − 2·0 | 37·0 | 36·4 | 1·0 | 3·5 | 0·2 | 96 | 40·1 | 35·4 | 44·01 | 0·071 | mP : vP |
| 16 | Greatest Dec. N. | 30·048 | 46·0 | 33·1 | 12·9 | 38·7 | − 0·8 | 35·6 | 31·5 | 7·2 | 16·4 | 0·8 | 76 | 86·0 | 25·9 | 43·63 | 0·000 | mP |
| 17 | ... | 30·020 | 42·0 | 32·9 | 9·1 | 38·0 | − 1·6 | 35·7 | 32·6 | 5·4 | 7·9 | 2·3 | 81 | 59·6 | 30·0 | 43·61 | 0·020 | mP : mP : mP,mN |
| 18 | ... | 29·973 | 38·4 | 32·1 | 6·3 | 34·2 | − 5·3 | 31·1 | 25·7 | 8·5 | 13·2 | 4·4 | 71 | 85·8 | 26·7 | 43·22 | 0·000 | vN,mP : mP : mP |
| 19 | ... | 29·943 | 40·0 | 28·9 | 11·1 | 33·8 | − 5·7 | 30·8 | 25·4 | 8·4 | 11·0 | 3·8 | 70 | 83·2 | 24·1 | 42·90 | 0·000 | mP : mP : sP |
| 20 | ... | 29·929 | 36·2 | 31·1 | 5·1 | 33·7 | − 5·8 | 30·7 | 25·2 | 8·5 | 9·9 | 5·3 | 70 | 50·0 | 21·9 | 42·52 | 0·000 | mP : sP : sP |
| 21 | Perigee : Full | 30·118 | 43·3 | 33·1 | 10·2 | 38·2 | − 1·4 | 34·9 | 30·4 | 7·8 | 11·3 | 2·0 | 73 | 71·7 | 23·0 | 42·20 | 0·000 | sP : vP : sP |
| 22 | In Equator | 30·280 | 42·1 | 27·8 | 14·3 | 35·1 | − 4·6 | 33·3 | 30·4 | 4·7 | 10·9 | 0·0 | 82 | 73·1 | 14·5 | 42·02 | 0·022 | vP, vN : vP : mP |
| 23 | ... | 30·136 | 48·3 | 24·2 | 24·1 | 35·4 | − 4·4 | 31·8 | 26·2 | 9·2 | 17·5 | 3·1 | 68 | 92·7 | 10·0 | 41·99 | 0·003* | mP |
| 24 | ... | 29·777 | 48·6 | 29·2 | 19·4 | 39·4 | − 0·6 | 35·5 | 30·4 | 9·0 | 15·7 | 3·3 | 71 | 86·3 | 15·8 | 41·77 | 0·000 | wP : mP : mP |
| 25 | ... | 29·659 | 49·0 | 36·1 | 12·9 | 42·5 | + 2·4 | 39·3 | 35·4 | 7·1 | 12·1 | 2·9 | 77 | 85·3 | 22·2 | 41·59 | 0·000 | mP : vP : mP |
| 26 | ... | 29·586 | 53·0 | 41·1 | 11·9 | 45·1 | + 4·9 | 42·9 | 40·4 | 4·7 | 9·9 | 1·5 | 84 | 101·1 | 32·1 | 41·69 | 0·051 | wP, sN : wP : mP, vN |
| 27 | Last Quarter | 29·611 | 52·0 | 38·1 | 13·9 | 44·1 | + 3·8 | 41·7 | 38·9 | 5·2 | 13·6 | 1·1 | 81 | 84·6 | 30·2 | 41·90 | 0·028 | vP, ssN : mP : mP, sN |
| 28 | ... | 30·034 | 42·0 | 36·8 | 5·2 | 39·5 | − 0·8 | 36·8 | 33·3 | 6·2 | 8·8 | 3·8 | 79 | 71·4 | 32·9 | 42·21 | 0·003 | mP : mP : sP |
| Means | ... | 29·986 | 46·7 | 35·6 | 11·1 | 40·9 | + 1·4 | 38·6 | 35·4 | 5·5 | 10·0 | 1·9 | 81·4 | 71·2 | 27·7 | 43·32 | Sum 0·812 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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.

* Rainfall (Column 17). The amounts entered on February 12, 13, 14 and 23, are derived from fog or frost.

The mean reading of the *Barometer* for the month was $29^{in}\cdot986$, being $0^{in}\cdot184$ *higher* than the average for the 65 years, 1841–1905.

**TEMPERATURE OF THE AIR.**

The highest in the month was 55°·0 on February 4; the lowest in the month was 24°·2 on February 23; and the range was 30°·8.
The mean of all the highest daily readings in the month was 46°·7, being 1°·5 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 35°·6, being 1°·4 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 11°·1, being 0°·1 *greater* than the average for the 65 years, 1841–1905.
The mean for the month was 40°·9, being 1°·4 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Feb. 1 | 0·0 | 9·1 | WSW : SW | Calm : N : Variable | 1·6 | 0·09 | 237 | 0, ho.-fr : p.-cl, m, ho.-fr : 10, s | 10, s, n, c.-r : 10, fq.-r |
| 2 | 0·8 | 9·2 | W : WSW : SW | SW : W | 8·6 | 0·67 | 511 | p.-cl, ho.-fr : th.-cl : 8, ci.-s, s, n | 10, ci.-s, s, n, r, w : p.-cl, w : p.-cl |
| 3 | 0·4 | 9·2 | W : WSW | WSW : W | 8·0 | 1·12 | 632 | 10, w : 10, cu.-s, s, w | 10, oc.-slt.-r, w : 10, w : 9, w |
| 4 | 1·3 | 9·3 | WSW : W | W : WSW : SW | 5·1 | 0·66 | 478 | p.-cl, w : 7, cu, n, w | 8, cu.-s, n, w : p.-cl : p.-cl, d |
| 5 | 0·0 | 9·3 | SW | SW : WSW | 3·3 | 0·21 | 331 | p.-cl : 10 : 10, s, n | 10, s, n : p.-cl : 9 |
| 6 | 0·5 | 9·4 | WNW : Calm : SW | SW | 5·1 | 0·46 | 378 | 9 : 10 : 10, cu.-s, n, sh.-r | 9, ci.-s, s, n : 9, w : 9, shs.-r, w |
| 7 | 0·0 | 9·4 | WSW : SW | SW : WSW | 20·0 | 1·62 | 636 | p.-cl : p.-cl : 10, s, n, sc, slt.-r, w | 10, sc, n, slt.-sh, st.-w : 10, slt.-r, g : p.-cl, st.-w |
| 8 | 6·3 | 9·5 | W : WNW | W : SW | 9·9 | 0·79 | 499 | 9, slt.-sh, st.-w : p.-cl, w : 0, w | 5, ci.-s : 9, ci.-s, s : 1 |
| 9 | 0·0 | 9·5 | SW | WSW : SW | 6·6 | 0·54 | 406 | p.-cl, w : 10, slt.-r, w : 10, oc.-slt.-r, w | 10, n : 10 : 10, r |
| 10 | 2·1 | 9·6 | SW : Calm | SW : Calm | 0·1 | 0·00 | 127 | p.-cl, r : 10, s, th.-cl | 2, th.-cl : p.-cl : 9, cu.-s |
| 11 | 3·6 | 9·7 | Calm | Calm | 0·0 | 0·00 | 79 | 1, slt.-f, ho.-fr : 0, slt.-f, ho.-fr : 1, th.-cl, slt.-f | 1 : 0, f : 0, f, ho.-fr |
| 12 | 0·0 | 9·7 | Calm | Calm | 0·1 | 0·00 | 66 | tk.-f, ho.-fr : tk.-f : 10, f | 10, s, n : 10, slt.-f : 10, f |
| 13 | 0·0 | 9·8 | Calm | WSW : Calm : W | 0·1 | 0·00 | 146 | 10, f : 10, slt.-f : 10, s, slt.-f | p.-cl, slt.-f, so.-ha : 1, th.-cl, slt.-f, ho.-fr : f, ho.-fr |
| 14 | 0·0 | 9·8 | Calm : NNE | Calm | 0·6 | 0·00 | 116 | tk.-f : tk.-f : 10, f | 10, s, slt.-f : 10, s : 10 |
| 15 | 0·0 | 9·9 | Calm | Calm : ENE : ESE | 0·2 | 0·00 | 124 | 10 : 10, s : 10, s, oc.-m.-r | 10, s, slt.-r : 10, r : 10 |
| 16 | 6·7 | 10·0 | E : ENE | E : ENE | 3·3 | 0·13 | 266 | p.-cl : th.-cl : 6, ci, ci.-s | 3, ci, ci.-s : p.-cl, lu.-co : p.-cl, ho.-fr |
| 17 | 0·1 | 10·0 | ENE : NE | NE : ENE : E | 7·7 | 0·56 | 444 | 10 : 10, sc, s, n | 9, sn : 10, slt.-sh, slt.-sn, w : 10, oc.-sn |
| 18 | 7·0 | 10·1 | E : ENE | E : ENE | 13·0 | 1·30 | 562 | 9 : 9 : 8, cu, cu.-s, st.-w | 4, cu, cu.-s, st.-w : 3, cu, w : p.-cl, w |
| 19 | 6·7 | 10·2 | E : ENE | E : ENE : NE | 7·3 | 0·77 | 452 | p.-cl : 9 : 7, cu, cu.-s, w | 3, cu, w : p.-cl, w : 10, cu.-s, s |
| 20 | 0·4 | 10·2 | NE : ENE | ENE : NE | 4·6 | 0·57 | 440 | 10 : 10, w | 9 : p.-cl : 10 |
| 21 | 2·6 | 10·3 | ENE : NE : E | E : ENE | 6·2 | 0·49 | 369 | 10 : 10 : 9, w | p.-cl, w : p.-cl : p.-cl, slt.-m, ho.-fr |
| 22 | 2·7 | 10·4 | E : Calm | ESE : SE | 1·2 | 0·04 | 169 | p.-cl, ho.-fr : 10, r : 9 | p.-cl, cu, cu.-s : 0, ho.-fr |
| 23 | 8·0 | 10·4 | Calm : SE : S | SSE : SE | 2·5 | 0·09 | 181 | 0, ho.-fr : 0 : 2, ci.-s, s | 3, ci.-s : 1, ci.-s, cu.-s, ho.-fr : th.-cl, h, slt.-f, ho.-fr |
| 24 | 2·9 | 10·5 | SSE : S | SSW : S : SSE | 2·3 | 0·16 | 264 | li.-cl, ho.-fr : p.-cl : 7, s | p.-cl, s, th.-cl : 0, ho.-fr |
| 25 | 1·9 | 10·6 | SSE : S : SSW | SSW : S | 3·0 | 0·18 | 251 | p.-cl, ho.-fr : p.-cl : 9 | 10, s, n : 9 : p.-cl, d |
| 26 | 1·7 | 10·6 | S : Calm : SSW | S : Calm | 0·2 | 0·01 | 141 | 10 : 10, r : 9, ci.-s, cu | 9, slt.-sh : 10, sh.-r : 10, slt.-r |
| 27 | 2·0 | 10·7 | Calm : NNW | NNW : NW : NNE | 5·5 | 0·34 | 274 | 10, slt.-m : 10, sh.-r : 8, cu, cu.-s | 8, slt.-sh : 10 : 10, oc.-slt.-r, w |
| 28 | 0·4 | 10·7 | N : NNE | NNE : NE | 3·7 | 0·22 | 240 | 10, oc.-slt.-r : 10, oc.-slt.-r : 9, cu.-s, s | 10, cu, s, n, oc.-slt.-r : 10, s, n : 10 |
| Means | 2·1 | 9·9 | ... | ... | ... | 0·39 | 315 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 38°·6, being 0°·9 *higher* than the average for the 65 years, 1841–1905.
The mean *Temperature of the Dew Point* for the month was 35°·4, being the *same* as the average for the 65 years, 1841–1905.
The mean *Degree of Humidity* for the month was 81·4, being 4·1 *less* than the average for the 65 years, 1841–1905.
The mean *Elastic Force of Vapour* for the month was 0in·207, being the *same* as the average for the 65 years, 1841–1905.
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·4, being the *same* as the average for the 65 years, 1841–1905.
The mean *Weight of a Cubic Foot of Air* for the month was 554 grains, being 1 grain *greater* than the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 7·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·210. The maximum daily amount of *Sunshine* was 8·0 hours on February 23.

The highest reading of the *Solar Radiation Thermometer* was 101°·1 on February 26; and the lowest reading of the *Terrestrial Radiation Thermometer* was 10°·0 on February 23.

The *Proportions of Wind* referred to the cardinal points were N. 3, E. 6, S. 5, and W. 8. Six days were calm.

The *Greatest Pressure of the Wind* in the month was 20·0 lbs. on the square foot on February 7. The mean daily *Horizontal Movement of the Air* for the month was 315 miles; the greatest daily value was 636 miles on February 7; and the least daily value was 66 miles on February 12.

*Rain* (0in·005 or over) fell on 11 days in the month, amounting to 0in·812, as measured by gauge No. 6 partly sunk below the ground; being 0in·668 *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Mar. 1 | Greatest Dec. S. | 30·093 | 42·7 | 34·8 | 7·9 | 37·8 | − 2·6 | 35·0 | 31·2 | 6·6 | 10·7 | 3·2 | 77 | 64·7 | 30·0 | 42·32 | 0·000 | mP |
| 2 | ... | 29·906 | 52·4 | 37·8 | 14·6 | 44·3 | + 3·9 | 40·9 | 37·0 | 7·3 | 13·1 | 2·5 | 75 | 92·6 | 33·2 | 42·49 | 0·030 | wP, vN : mP : mP |
| 3 | ... | 29·825 | 53·0 | 43·6 | 9·4 | 49·2 | + 8·7 | 46·7 | 44·0 | 5·2 | 6·9 | 3·3 | 83 | 72·0 | 38·2 | 42·59 | 0·041 | wP : wP : vP, vN |
| 4 | ... | 29·808 | 54·6 | 38·2 | 16·4 | 47·7 | + 7·0 | 45·8 | 43·7 | 4·0 | 5·9 | 2·0 | 87 | 83·0 | 28·7 | 42·90 | 0·000 | mP : wP |
| 5 | ... | 29·893 | 58·3 | 44·7 | 13·6 | 50·9 | +10·0 | 46·5 | 41·9 | 9·0 | 18·1 | 2·9 | 73 | 112·5 | 37·6 | 43·31 | 0·002 | wP: mP : mP |
| 6 | Apogee | 29·836 | 59·0 | 46·0 | 13·0 | 50·6 | + 9·6 | 47·3 | 43·8 | 6·8 | 12·7 | 3·5 | 78 | 126·9 | 39·0 | 43·78 | 0·139 | wP : wP : wP, ssN |
| 7 | ... | 29·791 | 50·1 | 40·8 | 9·3 | 44·6 | + 3·6 | 41·0 | 36·8 | 7·8 | 13·1 | 4·0 | 73 | 94·8 | 35·1 | 44·08 | 0·000 | wP : mP : mP |
| 8 | New | 30·071 | 45·7 | 33·4 | 12·3 | 39·7 | − 1·4 | 36·6 | 32·6 | 7·1 | 13·7 | 3·2 | 76 | 86·9 | 26·7 | 44·27 | 0·033 | mP : sP, ssN : ssN, sP |
| 9 | In Equator | 30·304 | 49·3 | 33·3 | 16·0 | 42·4 | + 1·4 | 39·7 | 36·4 | 6·0 | 9·9 | 3·4 | 80 | 79·0 | 26·0 | 44·53 | 0·000 | vP : mP |
| 10 | ... | 30·183 | 51·9 | 46·4 | 5·5 | 48·2 | + 7·3 | 46·5 | 44·6 | 3·6 | 7·1 | 0·4 | 88 | 63·0 | 43·9 | 44·02 | 0·146 | wP : wP : mP |
| 11 | ... | 30·115 | 56·2 | 39·1 | 17·1 | 48·0 | + 7·0 | 44·6 | 40·9 | 7·1 | 12·5 | 1·7 | 77 | 95·5 | 28·7 | 44·13 | 0·000 | wP : mP : mP |
| 12 | ... | 30·065 | 55·0 | 29·0 | 26·0 | 42·1 | + 1·0 | 39·7 | 36·7 | 5·4 | 12·4 | 2·0 | 82 | 103·2 | 19·7 | 44·39 | 0·000 | mP |
| 13 | ... | 29·824 | 55·7 | 36·1 | 19·6 | 45·0 | + 3·7 | 42·5 | 39·6 | 5·4 | 12·2 | 0·7 | 81 | 90·3 | 27·1 | 44·32 | 0·000 | mP |
| 14 | ... | 29·654 | 54·3 | 43·1 | 11·2 | 48·8 | + 7·3 | 47·1 | 45·2 | 3·6 | 6·7 | 1·7 | 88 | 82·0 | 39·3 | 44·42 | 0·129 | wP : wP : wP, vN |
| 15 | First Quarter | 29·845 | 49·1 | 37·6 | 11·5 | 43·5 | + 1·8 | 39·0 | 33·6 | 9·9 | 18·2 | 3·8 | 68 | 104·0 | 31·0 | 44·52 | 0·000 | wP : mP : mP |
| 16 | Greatest Dec. N. | 29·576 | 47·6 | 39·0 | 8·6 | 42·6 | + 0·7 | 40·1 | 37·1 | 5·5 | 11·3 | 1·2 | 82 | 84·2 | 37·0 | 44·56 | 0·406 | vP, ssN : mP, wwN : vP, ssN |
| 17 | ... | 29·208 | 46·4 | 35·0 | 11·4 | 40·1 | − 1·9 | 38·2 | 35·7 | 4·4 | 9·9 | 1·7 | 85 | 73·2 | 28·3 | 44·52 | 0·230 | wP, vN : vP, ssN : sP |
| 18 | ... | 29·510 | 44·3 | 28·2 | 16·1 | 35·3 | − 6·7 | 31·8 | 26·3 | 9·0 | 15·1 | 5·1 | 68 | 89·7 | 18·9 | 44·40 | 0·000 | vP : vP : mP |
| 19 | ... | 28·948 | 52·2 | 37·0 | 15·2 | 45·1 | + 3·2 | 40·7 | 35·6 | 9·5 | 17·8 | 1·9 | 70 | 96·5 | 29·4 | 44·03 | 0·223 | wP, wN : vP, ssN : sP |
| 20 | ... | 29·235 | 56·0 | 41·3 | 14·7 | 45·4 | + 3·5 | 41·8 | 37·6 | 7·8 | 16·7 | 3·9 | 75 | 114·2 | 34·1 | 43·82 | 0·130 | wP : vP, ssN |
| 21 | Perigee | 29·344 | 53·6 | 39·3 | 14·3 | 44·8 | + 2·9 | 42·1 | 38·9 | 5·9 | 11·7 | 1·8 | 80 | 98·1 | 33·0 | 43·87 | 0·306 | ... : wP, vN |
| 22 | In Equator : Full | 29·297 | 56·8 | 41·4 | 15·4 | 47·2 | + 5·2 | 44·3 | 41·1 | 6·1 | 10·3 | 2·9 | 80 | 113·2 | 33·7 | 43·93 | 0·116 | wP : wP : wP, ssN |
| 23 | ... | 29·297 | 51·8 | 39·9 | 11·9 | 45·5 | + 3·3 | 42·5 | 39·1 | 6·4 | 9·8 | 3·1 | 78 | 103·8 | 30·8 | 44·06 | 0·090 | vP, ssN : vP, vN : mP |
| 24 | . | 29·823 | 46·7 | 36·0 | 10·7 | 41·1 | − 1·3 | 39·2 | 36·8 | 4·3 | 8·2 | 1·2 | 85 | 63·9 | 26·0 | 44·20 | 0·020 | wP : mP, sN : mP |
| 25 | ... | 30·103 | 46·7 | 29·0 | 17·7 | 38·5 | − 4·2 | 35·9 | 32·5 | 6·0 | 10·2 | 0·4 | 79 | 98·0 | 19·9 | 44·22 | 0·004 | mP, wN : wP : mP |
| 26 | ... | 29·786 | 50·3 | 35·3 | 15·0 | 41·9 | − 1·1 | 39·4 | 36·3 | 5·6 | 14·8 | 1·0 | 82 | 99·0 | 25·9 | 44·12 | 0·125 | mP : mP : vP, vN |
| 27 | ... | 29·490 | 55·1 | 39·7 | 15·4 | 44·6 | + 1·3 | 42·4 | 39·8 | 4·8 | 13·9 | 1·2 | 84 | 98·5 | 27·0 | 44·01 | 0·066 | vN, mP : mP : mP |
| 28 | Greatest Dec. S. | 29·267 | 52·9 | 39·1 | 13·8 | 45·1 | + 1·4 | 42·7 | 39·9 | 5·2 | 9·4 | 2·0 | 82 | 97·5 | 28·0 | 44·12 | 0·166 | vP, vN : wP, vN : mP |
| 29 | Last Quarter | 29·371 | 56·7 | 38·1 | 18·6 | 46·7 | + 2·6 | 44·0 | 40·9 | 5·8 | 11·4 | 1·1 | 81 | 113·0 | 28·2 | 44·21 | 0·021 | wP : wP, wN : wP |
| 30 | ... | 29·537 | 57·0 | 44·3 | 12·7 | 49·5 | + 5·0 | 45·7 | 41·7 | 7·8 | 10·5 | 5·2 | 75 | 107·5 | 37·6 | 44·38 | 0·000 | wP : wP : mP |
| 31 | ... | 29·627 | 49·8 | 40·2 | 9·6 | 44·2 | − 0·7 | 42·9 | 41·4 | 2·8 | 5·0 | 2·4 | 90 | 59·7 | 31·8 | 44·59 | 0·000 | mP |
| Means | ... | 29·698 | 52·0 | 38·3 | 13·7 | 44·5 | + 2·6 | 41·7 | 38·3 | 6·2 | 11·6 | 2·4 | 79·4 | 92·3 | 30·8 | 43·97 | Sum 2·423 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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·698, being 0in·048 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 59°·0 on March 6; the lowest in the month was 28°·2 on March 18; and the range was 30°·8.
The mean of all the highest daily readings in the month was 52°·0, being 2°·2 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 38°·3, being 3°·2 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 13°·7, being 1°·0 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 44°·5, being 2°·6 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Mar. 1 | 0·0 | 10·8 | Calm : SSE : S | SSW : S | 1·7 | 0·12 | 205 | 10 : 10, s, n | 10, s, n : 10 |
| 2 | 5·5 | 10·9 | SSW : SW : W | W : WSW | 4·4 | 0·58 | 443 | 9, oc.-r : p.-cl, w | 8, cu, cu.-s, n, slt.-sh, w : 1 : 9, slt.-r |
| 3 | 0·0 | 11·0 | SW : WSW | WSW : WNW : N | 14·8 | 1·62 | 677 | 10, oc.-slt.-r, w : 10, w : 10, sc, s, st.-w | 10, sc, st.-w : 10, slt.-r, st.-w : 10, w |
| 4 | 0·1 | 11·0 | WSW : SW | WSW | 12·9 | 1·51 | 597 | 1 : p.-cl : 10, sc, n, st.-w | 10, sc, n, st.-w : 10, st.-w : 10, oc.-slt.-r, st.-w |
| 5 | 7·7 | 11·1 | SW : WSW : W | WSW : SW | 9·7 | 0·87 | 525 | 9, oc.-slt.-r, st.-w : p.-cl : 4, w | 2, cu : 0 : p.-cl, d |
| 6 | 6·6 | 11·1 | SW : WSW | WSW | 10·7 | 1·29 | 587 | 10, w : 9 : p.-cl, ci.-s, cu | 3, ci.-s, cu, w : p.-cl, cu, cu.-s, w : 10, fq.-r, st.-w |
| 7 | 3·1 | 11·2 | W : WSW | W : WSW | 6·1 | 0·58 | 423 | p.-cl, w : th.-cl, w : 5, cu, th.-cl, so.-ha, w | 9, so.-ha : 10, s, n : 10 |
| 8 | 4·2 | 11·3 | NW : W | NNW : NW : N | 9·2 | 0·40 | 350 | 1, ho.-fr : p.-cl : 4, cu, n | p.-cl, shs.-r, sn, sqs : p.-cl : 0, slt.-m |
| 9 | 0·0 | 11·4 | WSW : SW : W | WSW | 5·7 | 0·47 | 426 | p.-cl, ho.-fr : 10 : 10 | 10, oc.-slt.-r, w : 10, w : 10, w |
| 10 | 0·0 | 11·4 | W : WSW | W : SW | 5·2 | 0·39 | 399 | 10, w : 9 : 10, m.-r | 10, s, n, m.-r : 10, m.-r |
| 11 | 1·6 | 11·5 | SW : WSW : W | W : NW : NNE | 5·4 | 0·43 | 391 | 10 : 9, w : 10, s, n | 8, cu, cu.-s, s : 0 |
| 12 | 9·1 | 11·6 | Calm : SSE : S | SSW : Calm | 1·3 | 0·05 | 147 | 0, ho.-fr : 0 : 1, cu | 4, cu, th.-cl : th.-cl : 10, th.-cl, slt.-f |
| 13 | 3·3 | 11·6 | N : Calm | Calm : WSW : SW | 2·5 | 0·09 | 204 | 9 : 1, f : 4, f | 7, cu : 2, m : 10 |
| 14 | 0·2 | 11·7 | SW | SW : WSW : W | 10·8 | 1·27 | 628 | 10, r, w : 10, oc.-slt.-r, w : 10, sc, s, n, slt.-r, w | 10, sc, s, st.-w : 10, r, st.-w : p.-cl, fq.-r, w |
| 15 | 8·8 | 11·8 | WSW : SW : W | W : WSW : SW | 13·0 | 1·61 | 688 | 1 : p.-cl, w : 7, cu, cu.-s, st.-w | 4, cu, st.-w : 1, w : p.-cl, g |
| 16 | 0·5 | 11·8 | SW : WSW | WSW : Variable : SW | 25·3 | 1·30 | 564 | 10, hy.-r, g : 10, fq.-r, w : 9, s, so.-ha, w | 9, s, so.-ha, oc.-slt.-r, w : 10, r : 10, r, lu.-ha |
| 17 | 2·5 | 11·9 | SW : W : WNW | WNW : NW : N | 14·5 | 1·17 | 565 | 10, fq.-r, st.-w : 10, oc.-r, g : 9, n, slt.-sn, w | 8, t.-sm, oc.-r, sn, hl : p.-cl : 9 |
| 18 | 5·3 | 11·9 | N : Calm | WSW : SW : SSW | 2·0 | 0·11 | 220 | p.-cl : 0, h, ho.-fr : s, h | 5, th.-cl, h, so.-ha : p.-cl, so.-ha, lu.-co : 8, ho.-fr, lu.-co |
| 19 | 4·8 | 12·0 | SSW : SW : W | W : WSW | 22·5 | 2·52 | 845 | 9, st.-w : 10, r, st.-w : 9, sc, oc.-r, hy.-sh, st.-w | p.-cl, sh.-r, hl, g : p.-cl, st.-w : 1, w |
| 20 | 6·9 | 12·1 | WSW | WSW : SW | 12·5 | 1·18 | 592 | 1, w : 1 : 6, cu, st.-w | 8, shs.-r, st.-w : p.-cl, sh.-r, st.-w : v, sh.-r, w |
| 21 | 2·8 | 12·2 | WSW : SW | SW : WSW | 9·4 | 0·88 | 492 | p.-cl : 9, oc.-r, hy.-sh, t : 8, shs.-r, w, t | 6, sh.-r, w : p.-cl, shs.-r, w : p.-cl |
| 22 | 3·5 | 12·2 | SW : SSW : SE | SSE : SSW : SW | 23·2 | 1·03 | 471 | p.-cl : 10 : 9, sh.-r | 8, cu : 10, hl, l, t, st.-w : 10, slt.-r, g |
| 23 | 3·8 | 12·3 | SW | SW : WSW | 13·0 | 0·80 | 431 | 10, sh.-r, st.-w : p.-cl : 8, slt.-r | 9, cu, s, n, slt.-r : p.-cl : 1 |
| 24 | 0·3 | 12·3 | WSW : N : NE | NE : Calm | 1·1 | 0·06 | 182 | 0, ho.-fr : p.-cl : 10, oc.-slt.-r | 10, oc.-slt.-r : p.-cl : p.-cl |
| 25 | 0·6 | 12·4 | Calm : ENE : E | ESE : E | 1·7 | 0·14 | 208 | 0, m, ho.-fr : p.-cl : 10, slt.-sh. | 9, s, n : 10 : 9 |
| 26 | 1·8 | 12·5 | E : ENE | ESE : E : NE | 3·6 | 0·23 | 277 | li.-cl, ho.-fr : p.-cl : 8, ci.-s, ci.-cu | 8, ci.-s, s, so.-ha : 10, slt.-r : 10, r |
| 27 | 3·5 | 12·6 | N : W : WSW | WSW : SSW : SSE | 0·5 | 0·01 | 189 | 10, r : 10 : 9 | 7, cu.-s, s : p.-cl, ho.-fr : p.-cl, ho.-fr |
| 28 | 1·8 | 12·6 | SE : SSE | S : SSW : SSE | 4·0 | 0·30 | 293 | 9 : 10, oc.-slt.-r | 9, r, slt.-sh : p.-cl : p.-cl |
| 29 | 1·5 | 12·7 | SE : ENE | ESE : S : SSW | 5·8 | 0·41 | 328 | p.-cl : 10 : 9, slt.-r | p.-cl, th.-r, w : 1, w |
| 30 | 2·5 | 12·7 | S : SSW : SW | SW : WSW | 6·0 | 0·58 | 391 | p.-cl, w : 9, w : 10, cu.-s, s, w | 9, cu.-s, n : p.-cl : 10, th.-cl |
| 31 | 0·0 | 12·8 | Calm | Calm : S : SW | 0·1 | 0·00 | 108 | 10 : 10, slt.-f : 10, s, slt.-f | 10, s, glm : 9 : th.-cl |
| Means | 3·0 | 11·8 | ... | ... | ... | 0·71 | 414 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 41°·7, being 2°·3 *higher* than
The mean *Temperature of the Dew Point* for the month was 38°·3, being 2°·0 *higher* than
The mean *Degree of Humidity* for the month was 79·4, being 1·1 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·231, being 0in·017 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·7, being 0gr·2 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 546 grains, being 3 grains *less* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 7·4.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·252. The maximum daily amount of *Sunshine* was 9·1 hours on March 12.

The highest reading of the *Solar Radiation Thermometer* was 126°·9 on March 6; and the lowest reading of the *Terrestrial Radiation Thermometer* was 18°·9 on March 18.

The *Proportions of Wind* referred to the cardinal points were N. 3, E. 2, S. 9, and W. 14. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 25·3 lbs. on the square foot on March 16. The mean daily *Horizontal Movement of the Air* for the month was 414 miles; the greatest daily value was 845 miles on March 19; and the least daily value was 108 miles on March 31.

*Rain* (0in·005 or over) fell on 18 days in the month, amounting to 2in·423, as measured by gauge No. 6 partly sunk below the ground; being 0in·903 *greater* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Apr. 1 | ... | 29·641 | 53·0 | 37·2 | 15·8 | 43·4 | − 1·9 | 41·1 | 38·4 | 5·0 | 13·5 | 1·4 | 82 | 101·9 | 29·0 | 44·72 | 0·160 | wP, mN : mP : vP, ssN |
| 2 | Apogee | 29·858 | 55·2 | 33·0 | 22·2 | 44·1 | − 1·6 | 40·9 | 37·2 | 6·9 | 12·7 | 2·0 | 76 | 108·0 | 25·0 | 44·82 | 0·000 | mP : wP : mP |
| 3 | ... | 29·917 | 55·0 | 36·3 | 18·7 | 45·2 | − 0·8 | 41·4 | 37·0 | 8·2 | 18·5 | 2·0 | 73 | 119·1 | 26·3 | 44·79 | 0·043 | wP : vP : vP, vN |
| 4 | ... | 29·828 | 51·2 | 40·4 | 10·8 | 45·1 | − 1·1 | 43·0 | 40·6 | 4·5 | 6·8 | 2·6 | 84 | 72·8 | 39·0 | 44·90 | 0·108 | vN, wP : mP : wP |
| 5 | In Equator | 29·658 | 52·6 | 42·1 | 10·5 | 46·2 | − 0·1 | 43·9 | 41·3 | 4·9 | 8·4 | 0·9 | 84 | 101·2 | 41·9 | 44·91 | 0·023 | wP : mP : ... |
| 6 | New | 29·601 | 55·0 | 41·0 | 14·0 | 46·4 | + 0·1 | 42·3 | 37·7 | 8·7 | 16·1 | 3·1 | 72 | 112·6 | 38·6 | 45·09 | 0·000 | ... : wP, vN : wP |
| 7 | ... | 29·678 | 51·1 | 39·5 | 11·6 | 43·1 | − 3·2 | 38·5 | 33·0 | 10·1 | 17·4 | 4·8 | 67 | 108·9 | 34·6 | 45·21 | 0·001 | wP : mP, mN : mP |
| 8 | ... | 29·901 | 51·3 | 34·9 | 16·4 | 42·4 | − 3·7 | 38·8 | 34·4 | 8·0 | 12·8 | 3·2 | 74 | 96·0 | 28·2 | 45·21 | 0·000 | mP |
| 9 | .. | 29·952 | 47·0 | 38·2 | 8·8 | 42·2 | − 3·8 | 38·9 | 34·9 | 7·3 | 11·0 | 3·5 | 76 | 85·2 | 27·6 | 45·22 | 0·000 | mP : mP : sP |
| 10 | ... | 29·828 | 49·4 | 38·1 | 11·3 | 43·9 | − 2·0 | 42·1 | 39·9 | 4·0 | 7·0 | 2·1 | 86 | 68·6 | 33·0 | 45·20 | 0·123 | mP : mP : ssN, mP |
| 11 | ... | 29·692 | 44·0 | 34·1 | 9·9 | 39·0 | − 6·8 | 37·2 | 34·9 | 4·1 | 10·4 | 2·3 | 86 | 64·0 | 32·9 | 45·23 | 0·374 | vP : vP, ssN : ssN, mP |
| 12 | Greatest Dec. N. | 29·701 | 44·1 | 33·2 | 10·9 | 38·0 | − 7·9 | 34·0 | 28·6 | 9·4 | 14·6 | 2·0 | 68 | 109·8 | 25·2 | 45·20 | 0·040 | vN, vP : mP : sP |
| 13 | ... | 29·941 | 45·8 | 29·0 | 16·8 | 37·4 | − 8·7 | 33·4 | 27·8 | 9·6 | 15·2 | 3·7 | 68 | 109·2 | 17·9 | 44·92 | 0·000 | sP : mP : wP |
| 14 | First Quarter | 29·905 | 48·6 | 33·4 | 15·2 | 41·6 | − 4·8 | 38·8 | 35·2 | 6·4 | 11·6 | 1·1 | 80 | 91·5 | 23·9 | 44·70 | 0·060 | wP : mP : mP, ssN |
| 15 | ... | 29·759 | 52·6 | 42·8 | 9·8 | 47·4 | + 0·6 | 44·2 | 40·6 | 6·8 | 10·9 | 2·4 | 78 | 78·6 | 37·0 | 44·59 | 0·000 | mP |
| 16 | ... | 29·352 | 57·9 | 37·8 | 20·1 | 48·2 | + 1·0 | 44·9 | 41·3 | 6·9 | 16·2 | 2·2 | 77 | 106·9 | 27·1 | 44·71 | 0·250 | wP, wwN : vN, wP : sP |
| 17 | ... | 29·396 | 55·9 | 31·2 | 24·7 | 43·0 | − 4·6 | 39·1 | 34·4 | 8·6 | 15·2 | 1·6 | 72 | 127·9 | 23·2 | 45·01 | 0·052 | mP : vP, ssN : ssN, sP |
| 18 | Perigee : In Equator | 29·439 | 54·1 | 35·3 | 18·8 | 45·2 | − 2·8 | 42·9 | 40·3 | 4·9 | 11·1 | 1·2 | 83 | 97·8 | 28·0 | 45·11 | 0·092 | mP : vP, sN : wP |
| 19 | ... | 29·374 | 57·0 | 40·8 | 16·2 | 49·7 | + 1·4 | 45·2 | 40·4 | 9·3 | 21·1 | 1·9 | 71 | 124·1 | 33·1 | 45·20 | 0·050 | wP : sN, vP : mP |
| 20 | Full | 29·744 | 58·2 | 38·0 | 20·2 | 46·8 | − 1·7 | 41·9 | 36·4 | 10·4 | 21·6 | 2·5 | 68 | 106·2 | 30·1 | 45·53 | 0·000 | mP : mP : ... |
| 21 | ... | 29·711 | 61·2 | 43·0 | 18·2 | 51·2 | + 2·5 | 48·7 | 46·1 | 5·1 | 11·3 | 1·7 | 83 | 122·0 | 38·7 | 45·69 | 0·053 | ... : wP |
| 22 | ... | 29·874 | 64·2 | 47·7 | 16·5 | 54·6 | + 5·9 | 52·2 | 49·9 | 4·7 | 11·3 | 0·6 | 84 | 127·2 | 40·0 | 45·93 | 0·008 | wP, wN : wP, ssN : wP |
| 23 | ... | 29·866 | 63·8 | 41·1 | 22·7 | 52·1 | + 3·5 | 46·4 | 40·6 | 11·5 | 21·2 | 2·8 | 66 | 128·1 | 29·9 | 46·49 | 0·000 | wP |
| 24 | ... | 29·535 | 67·2 | 33·1 | 34·1 | 51·1 | + 2·5 | 46·8 | 42·3 | 8·8 | 20·2 | 0·5 | 72 | 127·3 | 24·0 | 46·92 | 0·000 | mP : wP : mP |
| 25 | Greatest Dec. S. | 29·326 | 59·0 | 40·1 | 18·9 | 49·3 | + 0·7 | 46·1 | 42·7 | 6·6 | 17·1 | 1·2 | 78 | 127·0 | 36·9 | 47·21 | 0·173 | wP : wP : vP, ssN |
| 26 | ... | 29·339 | 57·2 | 39·1 | 18·1 | 49·1 | + 0·5 | 45·4 | 41·4 | 7·7 | 12·3 | 1·6 | 75 | 105·5 | 32·1 | 47·53 | 0·094 | mN, wP : wP, vN : wP |
| 27 | ... | 29·299 | 62·6 | 50·5 | 12·1 | 56·1 | + 7·4 | 51·7 | 47·5 | 8·6 | 13·2 | 4·3 | 73 | 102·8 | 46·9 | 47·75 | 0·047 | wP : wP, wN : wP |
| 28 | Last Quarter | 29·600 | 62·8 | 47·0 | 15·8 | 54·9 | + 6·1 | 52·5 | 50·2 | 4·7 | 9·8 | 2·8 | 84 | 98·8 | 40·0 | 48·02 | 0·087 | wP, wN : wP : wP, wN |
| 29 | ... | 29·776 | 64·9 | 42·0 | 22·9 | 54·1 | + 5·1 | 50·2 | 46·4 | 7·7 | 16·0 | 0·6 | 75 | 136·0 | 32·1 | 48·40 | 0·265 | wP : ... : vP, vN |
| 30 | Apogee | 29·661 | 58·7 | 47·3 | 11·4 | 52·3 | + 3·2 | 49·5 | 46·7 | 5·6 | 12·0 | 0·4 | 82 | 122·6 | 37·9 | 48·61 | 0·126 | wP : mP |
| Means | ... | 29·672 | 55·4 | 38·9 | 16·4 | 46·8 | − 0·5 | 43·4 | 39·6 | 7·2 | 13·9 | 2·1 | 76·6 | 106·3 | 32·0 | 45·76 | Sum 2·229 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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·672, being 0in·076 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 67°·2 on April 24 ; the lowest in the month was 29°·0 on April 13 ; and the range was 38°·2.
The mean of all the highest daily readings in the month was 55°·4, being 1°·8 *lower* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 38°·9, being 0°·1 *lower* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 16°·4, being 1°·8 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 46°·8, being 0°·5 *lower* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Apr. 1 | 2·7 | 12·9 | S : SSE : SW | W : WSW : WNW | 2·5 | 0·19 | 303 | p.-cl : 9, slt.-r : 10, n, slt.-r | p.-cl, cu, cu.-s : 10, r |
| 2 | 4·1 | 12·9 | WSW : SW : SSW | SSW : S : SSE | 2·2 | 0·22 | 274 | 1, ho.-fr : p.-cl, slt.-sh : 7, cu, cu.-s | 9, cu : p.-cl, cu : p.-cl |
| 3 | 8·3 | 13·0 | SSE : SE : E | E : ENE : NE | 6·5 | 0·60 | 385 | 1, ho.-fr : 1, cu, w | 6, ci.-s, ci.-cu, s, w : 10, slt.-r, w : 10, fq.-th.-r, w |
| 4 | 0·0 | 13·1 | NE | NE | 7·7 | 0·99 | 562 | 10, slt.-r, w : 10, slt.-r : 10, s, n, w | 10, s, n, w : 10, w |
| 5 | 3·3 | 13·1 | NE | NE | 9·6 | 1·08 | 581 | 10, fq.-th.-r, w : 10, n, w | 8, sc, w : p.-cl, w : 10 |
| 6 | 7·0 | 13·2 | NE | NE : NNE | 8·7 | 1·19 | 564 | 9, w : p.-cl, w : 6, cu, s, w | 4, ci.-s, cu, w : 10, w : 10, w |
| 7 | 4·1 | 13·3 | N : NNE | NE | 9·8 | 1·30 | 558 | 10, w : 9, w : p.-cl, cu, n, sh.-r, w | p.-cl, cu, cu.-s, st.-w : 9, cu, cu.-s, w : 9, w |
| 8 | 4·3 | 13·3 | NNE : NE | N : NNE : NE | 5·8 | 0·44 | 333 | p.-cl : p.-cl : 9, cu, n | 8, cu, n : 8, cu, cu.-s, w : 10 |
| 9 | 0·0 | 13·4 | N : NNE : NE | NNE : N : WSW | 2·8 | 0·23 | 258 | 10 : 10, n | 10, s, n : p.-cl : 10, s |
| 10 | 0·0 | 13·4 | WSW : W : NW | NW : N : NE | 2·2 | 0·26 | 318 | 10 : 10, slt.-r : 10, n, oc.-th.-r | 10, n, s, th.-r : 10, oc.-slt.-r |
| 11 | 0·0 | 13·5 | NNE : NE : Calm | SSE : SE : NW | 6·9 | 0·17 | 228 | 10 : 10 : 10, n, s, slt.-sn, m.-r | 10, n, s, m.-r, slt.-sn, sl : 10, r, sn, sl : 9, sh.-r, w |
| 12 | 4·3 | 13·6 | NNE : NE | NE : NNE : N | 9·2 | 0·70 | 402 | 10, r, w : p.-cl, cu, n, w | 9, cu, cu.-s, n : 10, cu, n, s : 9 |
| 13 | 6·7 | 13·7 | Calm : N : NNE | NE : Calm : S | 0·7 | 0·03 | 126 | p.-cl, ho.-fr : p.-cl, cu, n | 7, cu, s : p.-cl : p.-cl, ho.-fr |
| 14 | 0·0 | 13·7 | SSW | SSW : SW | 4·7 | 0·33 | 335 | 9 : 10 : 10, s, n, oc.-slt.-r | 9, cu, cu.-s : 10, r |
| 15 | 1·0 | 13·8 | SW | SW : SSW | 5·1 | 0·52 | 395 | 10 : p.-cl, cu, cu.-s : 9, cu, cu.-s, s | 10, s, n : 9, cu, n, s, so.-ha : 10, s, lu.-ha, lu.-co, w |
| 16 | 3·7 | 13·8 | SW : SSW | W : NW : SW | 9·0 | 1·37 | 591 | 10, r, w : 10, c.-r, w : 10, sc, r, st.-w | 8, cu.-s, n, r, w : p.-cl, cu, w, d : 1, ho.-fr |
| 17 | 8·8 | 13·9 | SW : Calm : WSW | W : WSW | 9·5 | 0·25 | 313 | 2, ho.-fr : cu : 5, cu | 7, cu, n, shs.-r, sl, w : p.-cl, sh.-r, hl, w : th.-cl, lu.-ha |
| 18 | 0·2 | 13·9 | WSW : SW | SW : SSW | 5·5 | 0·54 | 427 | 1 : p.-cl, li.-shs : 9, li.-shs | 9, s, so.-ha, fq.-shs, sl : 10, fq.-r : 10, slt.-r, w |
| 19 | 5·9 | 14·0 | SW : WSW : W | W : WNW : WSW | 15·8 | 1·18 | 620 | 10, oc.-shs, w : 10, shs.-r : p.-cl, cu, n, shs.-r, st.-w | 6, cu, w, st.-w : 8, cu, th.-cl, slt.-sh, w : th.-cl |
| 20 | 10·0 | 14·1 | WSW : W : WNW | W : SSW : S | 2·2 | 0·17 | 269 | 0 : 0 : 3, cu, h | 2, cu, th.-cl, h : 1, cu, th.-cl, so.-ha : 10, r |
| 21 | 0·5 | 14·1 | SE : SSE | SSE : SE : E | 1·8 | 0·14 | 197 | 10, slt.-r : 10, oc.-slt.-r : 10, th.-r | 9, shs.-r : 10, oc.-slt.-r : 10, slt.-r, slt.-f |
| 22 | 3·6 | 14·2 | E : ENE | E : ESE | 1·2 | 0·05 | 169 | 10, li.-shs : 10, oc.-m.-r : 9, cu, s, n | 8, cu, cu.-s, sh.-r : p.-cl : p.-cl, th.-cl |
| 23 | 11·8 | 14·3 | E : NE | E : SE : Calm | 2·2 | 0·11 | 187 | 1, th.-cl, d : 0 : 1, ci.-s, th.-cl | 2, ci, ci.-s : 0, d |
| 24 | 8·1 | 14·3 | Calm : ESE | ESE : SW | 1·4 | 0·08 | 166 | li.-cl, ho.-fr : 0, slt.-m, f : 1, ci | 2, ci, ci.-s, cu : p.-cl, ci, ci.-s, so.-ha : th.-cl, d |
| 25 | 4·0 | 14·4 | SSW : SW | SW : SSW | 6·0 | 0·57 | 402 | 10, li.-shs : 10, oc.-m.-r : 9, cu, n | 8, cu, cu.-s, so.-ha, w : p.-cl, r, w : 10, fq.-shs, sq |
| 26 | 2·5 | 14·5 | SW : SSW | SSW : SW | 10·6 | 1·23 | 544 | p.-cl, r : p.-cl : 8, ci, ci.-s, cu, w | 10, slt.-r, w : 9, w : 10, shs.-r, w |
| 27 | 2·8 | 14·5 | SW : SSW | SSW | 9·2 | 1·13 | 537 | 10, w : p.-cl, w : 9, ci.-s, cu.-s, shs.-r, w | 10, s, n, shs.-r, w : p.-cl, cu, cu.-s, s, w : p.-cl, w |
| 28 | 1·0 | 14·6 | SSW : S | S : SSW : SW | 11·3 | 0·30 | 301 | p.-cl : 10, s, n, slt.-r | 9, cu, n, shs.-r : p.-cl, n, fq.-r, sq : th.-cl, m |
| 29 | 8·1 | 14·6 | SW : SE : ESE | ESE : Variable | 5·7 | 0·38 | 267 | th.-cl : li.-cl : 7, ci.-s, ci.-cu, cu | 5, ci, ci.-s, ci.-cu : p.-cl, w : 10, t.-sm, hy.-r |
| 30 | 3·2 | 14·7 | S : Calm : SW | W : SW : Calm | 2·8 | 0·14 | 223 | 1 : p.-cl : 8, cu, cu.-s, s | 9, oc.-slt.-r : 10, c.-r : 10, r |
| Means | 4·0 | 13·8 | ... | ... | ... | 0·53 | 361 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 43°·4, being 0°·5 *lower* than
The mean *Temperature of the Dew Point* for the month was 39°·6, being 0°·5 *lower* than
The mean *Degree of Humidity* for the month was 76·6, being 0·8 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·243, being 0in·005 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·8, being 0gr·1 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 543 grains, being the *same* as
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 7·8.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·290. The maximum daily amount of *Sunshine* was 11·8 hours on April 23.

The highest reading of the *Solar Radiation Thermometer* was 136°·0 on April 29; and the lowest reading of the *Terrestrial Radiation Thermometer* was 17°·9 on April 13.

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 6, S. 9, and W. 8. Two days were calm.

The *Greatest Pressure of the Wind* in the month was 15·8 lbs. on the square foot on April 19. The mean daily *Horizontal Movement of the Air* for the month was 361 miles; the greatest daily value was 620 miles on April 19; and the least daily value was 126 miles on April 13.

*Rain* (0in·005 or over) fell on 20 days in the month, amounting to 2in·229, as measured by gauge No. 6 partly sunk below the ground; being 0in·663 *greater* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| May 1 | ... | 29·731 | 62·2 | 44·0 | 18·2 | 50·5 | + 1·2 | 46·6 | 42·5 | 8·0 | 17·3 | 0·0 | 75 | 122·1 | 34·6 | 48·95 | 0·000 | mP |
| 2 | In Equator | 29·705 | 61·1 | 39·6 | 21·5 | 47·8 | − 1·7 | 44·9 | 41·8 | 6·0 | 17·3 | 0·0 | 81 | 108·9 | 31·0 | 49·11 | 0·006 | wP : mP : mP, wwN |
| 3 | ... | 29·501 | 60·0 | 40·1 | 19·9 | 48·9 | − 0·9 | 45·1 | 41·0 | 7·9 | 15·2 | 0·0 | 74 | 129·5 | 29·2 | 49·16 | 0·060 | wP : wP : wP, vN |
| 4 | ... | 29·226 | 53·3 | 42·2 | 11·1 | 46·9 | − 3·1 | 44·7 | 42·2 | 4·7 | 9·8 | 0·0 | 85 | 103·0 | 42·4 | 49·21 | 0·271 | vN, vP : wN, wP : vP, ssN |
| 5 | ... | 29·439 | 62·6 | 45·2 | 17·4 | 51·2 | + 0·9 | 48·7 | 46·1 | 5·1 | 10·8 | 0·0 | 83 | 126·0 | 34·5 | 49·36 | 0·191 | vN, wP : mP : wP |
| 6 | New | 29·410 | 61·4 | 40·1 | 21·3 | 48·8 | − 1·7 | 46·4 | 43·8 | 5·0 | 12·9 | 0·4 | 82 | 125·8 | 32·5 | 49·40 | 0·026 | wP : ... : mP |
| 7 | ... | 29·496 | 59·0 | 36·3 | 22·7 | 47·6 | − 3·1 | 44·2 | 40·4 | 7·2 | 13·1 | 1·7 | 77 | 129·6 | 28·7 | 49·41 | 0·013 | mP : vP, ssN : mP |
| 8 | ... | 29·461 | 54·0 | 44·7 | 9·3 | 49·8 | − 1·2 | 46·7 | 43·4 | 6·4 | 11·9 | 2·6 | 79 | 72·0 | 39·6 | 49·41 | 0·063 | wP : wP, vN : mP |
| 9 | Greatest Dec. N. | 29·448 | 57·5 | 47·6 | 9·9 | 51·3 | + 0·1 | 49·1 | 46·8 | 4·5 | 9·0 | 0·6 | 85 | 94·9 | 40·0 | 49·47 | 0·024 | wP : wP : mP |
| 10 | ... | 29·582 | 63·2 | 43·9 | 19·3 | 52·8 | + 1·3 | 48·9 | 45·0 | 7·8 | 15·7 | 0·0 | 75 | 114·8 | 33·3 | 49·54 | 0·038 | wP, wN : wP : wP |
| 11 | ... | 29·735 | 65·0 | 41·0 | 24·0 | 52·2 | + 0·4 | 48·8 | 45·3 | 6·9 | 14·8 | 0·4 | 78 | 138·6 | 30·0 | 49·72 | 0·034 | wP : vP, ssN : wP |
| 12 | ... | 29·786 | 61·0 | 42·8 | 18·2 | 52·3 | + 0·2 | 49·6 | 46·9 | 5·4 | 11·6 | 0·0 | 82 | 109·9 | 31·7 | 50·00 | 0·015 | wP |
| 13 | First Quarter | 29·898 | 68·0 | 49·8 | 18·2 | 57·4 | + 5·0 | 52·6 | 48·2 | 9·2 | 17·2 | 1·2 | 71 | 133·3 | 38·4 | 50·25 | 0·000 | wP |
| 14 | ... | 29·929 | 64·6 | 45·4 | 19·2 | 54·6 | + 2·0 | 50·4 | 46·4 | 8·2 | 15·2 | 1·5 | 73 | 107·2 | 34·0 | 50·54 | 0·000 | wP |
| 15 | ... | 29·930 | 60·1 | 43·1 | 17·0 | 50·2 | − 2·6 | 46·2 | 42·0 | 8·2 | 14·0 | 3·0 | 74 | 135·1 | 39·3 | 50·80 | 0·000 | wP |
| 16 | Perigee : In Equator | 29·799 | 65·2 | 43·3 | 21·9 | 51·7 | − 1·3 | 47·4 | 43·0 | 8·7 | 15·3 | 3·3 | 73 | 131·0 | 37·0 | 51·08 | 0·000 | wP : mP : mP |
| 17 | ... | 29·547 | 70·6 | 39·4 | 31·2 | 55·1 | + 2·0 | 48·3 | 41·8 | 13·3 | 26·0 | 0·5 | 61 | 125·1 | 31·1 | 51·21 | 0·000 | mP : sP : mP |
| 18 | ... | 29·640 | 60·0 | 43·7 | 16·3 | 50·5 | − 2·8 | 43·9 | 36·9 | 13·6 | 21·8 | 7·7 | 60 | 125·6 | 34·0 | 51·29 | 0·005 | mP : mP : ssN, sP |
| 19 | ... | 29·801 | 60·5 | 38·3 | 22·2 | 48·3 | − 5·2 | 43·2 | 37·6 | 10·7 | 19·4 | 3·0 | 67 | 132·0 | 27·2 | 51·51 | 0·008 | vP : sP, ssN : ssP |
| 20 | Full | 29·895 | 65·3 | 37·1 | 28·2 | 50·7 | − 3·1 | 47·4 | 43·9 | 6·8 | 17·0 | 1·4 | 78 | 120·0 | 27·0 | 51·49 | 0·000 | wP : wwP : vP |
| 21 | ... | 29·861 | 66·1 | 47·1 | 19·0 | 54·4 | + 0·2 | 50·1 | 45·9 | 8·5 | 17·0 | 2·3 | 73 | 134·3 | 40·3 | 51·52 | 0·000 | wwP : wP : mP |
| 22 | Greatest Dec. S. | 29·894 | 63·0 | 45·6 | 17·4 | 53·3 | − 1·3 | 48·4 | 43·5 | 9·8 | 17·6 | 2·4 | 70 | 128·1 | 39·3 | 51·71 | 0·000 | wP : mP : mP |
| 23 | ... | 29·963 | 71·8 | 52·5 | 19·3 | 59·0 | + 4·1 | 55·0 | 51·4 | 7·6 | 16·6 | 1·2 | 76 | 126·9 | 45·3 | 51·98 | 0·000 | wP : mP : mP |
| 24 | ... | 30·090 | 74·9 | 53·3 | 21·6 | 62·4 | + 7·1 | 57·3 | 53·0 | 9·4 | 19·4 | 2·8 | 73 | 138·0 | 42·0 | 52·40 | 0·000 | wP |
| 25 | ... | 30·088 | 81·2 | 50·3 | 30·9 | 65·5 | +10·0 | 59·4 | 54·4 | 11·1 | 24·0 | 1·6 | 68 | 142·8 | 37·6 | 53·02 | 0·000 | wP |
| 26 | ... | 30·002 | 83·5 | 52·2 | 31·3 | 67·5 | +11·7 | 61·0 | 55·8 | 11·7 | 24·4 | 2·3 | 66 | 149·5 | 39·3 | 53·73 | 0·000 | wP |
| 27 | ... | 29·849 | 84·1 | 53·2 | 30·9 | 66·8 | +10·8 | 61·2 | 56·7 | 10·1 | 24·0 | 2·1 | 71 | 143·2 | 42·0 | 54·50 | 0·033 | wP : vP, ssN : vP, ssN |
| 28 | Last Quarter : Apogee | 29·862 | 80·8 | 51·6 | 29·2 | 64·9 | + 8·7 | 57·8 | 51·9 | 13·0 | 25·5 | 3·9 | 63 | 144·0 | 37·6 | 55·28 | 0·000 | wP : wP : mP |
| 29 | ... | 29·712 | 81·4 | 57·1 | 24·3 | 66·4 | +10·0 | 60·8 | 56·3 | 10·1 | 21·4 | 2·8 | 70 | 139·6 | 47·7 | 55·81 | 0·000 | wP |
| 30 | In Equator | 29·538 | 79·5 | 50·1 | 29·4 | 65·0 | + 8·3 | 59·9 | 55·7 | 9·3 | 18·5 | 0·4 | 72 | 144·2 | 42·3 | 56·41 | 0·370 | vP, vN : wP : mP |
| 31 | ... | 29·724 | 62·3 | 45·2 | 17·1 | 54·4 | − 2·7 | 49·3 | 44·3 | 10·1 | 15·6 | 2·7 | 69 | 115·8 | 32·7 | 56·71 | 0·000 | wP : mP : mP |
| Means | ... | 29·727 | 66·6 | 45·3 | 21·2 | 54·8 | + 1·7 | 50·4 | 46·3 | 8·5 | 17·1 | 1·7 | 73·7 | 125·5 | 36·2 | 51·42 | Sum 1·157 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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·727, being 0in·067 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 84°·1 on May 27 ; the lowest in the month was 36°·3 on May 7 ; and the range was 47°·8.
The mean of all the highest daily readings in the month was 66°·6, being 2°·7 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 45°·3, being 1°·6 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 21°·2, being 1°·0 *greater* than the average for the 65 years, 1841–1905.
The mean for the month was 54°·8, being 1°·7 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | Osler's. General Direction. P.M. | Osler's. Pressure on the Square Foot. Greatest. | Osler's. Pressure on the Square Foot. Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | Clouds and Weather. P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| May 1 | 4·3 | 14·8 | W : WSW | WSW : SW | 2·3 | 0·08 | 218 | 10 : 9, cu, cu.-s, n | p.-cl, cu, cu.-s, n: p.-cl, cu.-s, d : 2, d |
| 2 | 3·9 | 14·8 | SW : WSW | Variable : SE : SW | 0·6 | 0·01 | 164 | 1, hy.-d : 10 : 8, cu, n | 9, cu, n : 10, cu.-s, fq.-th.-r : th.-cl |
| 3 | 5·9 | 14·9 | SW : SSW | SSW : SSE | 1·8 | 0·19 | 264 | li.-cl : p.-cl : 9, cu, n | 9, cu, n, s : 10, oc.-slt.-r : 10, r |
| 4 | 1·0 | 14·9 | Variable : NW : SW | ESE : E : ENE | 1·7 | 0·12 | 215 | 10, hy.-r : 10, slt.-sh : 10 | 9 : p.-cl : 10, r |
| 5 | 3·0 | 15·0 | NE : NNE | N : NE : ESE | 0·9 | 0·07 | 184 | 10, r : 10 : 9, cu, cu.-s, n | 9, cu, n : p.-cl : 1 |
| 6 | 1·5 | 15·1 | Calm : SSE : S | SSW : W | 3·3 | 0·20 | 252 | p.-cl : 9 : 7, cu, n | 9, oc.-shs : 1 |
| 7 | 7·4 | 15·1 | WSW : Calm : SW | SW : SSW : S | 3·2 | 0·25 | 273 | 0 : 0 : p.-cl, cu, n, sh.-r | p.-cl, cu, n, sh.-r: 9, cu.-s, n, sh.-r: 9, slt.-sh |
| 8 | 0·0 | 15·2 | SE : S : SSE | SSE : SE | 5·8 | 0·35 | 258 | 9 : 10, oc.-slt.-r : 10, n, s, fq.-r, w | 10, s, n, r, w : 10, slt.-sh |
| 9 | 0·5 | 15·2 | SE : SSE : S | SSW : S | 2·0 | 0·10 | 195 | 10, oc.-shs : 10, s, n, slt.-r | 10, s, n, oc.-slt.-r : 9, cu.-s, s, n |
| 10 | 7·1 | 15·3 | S : SSE : SSW | SSW : SW | 2·0 | 0·18 | 249 | p.-cl : p.-cl, r : 8, cu, cu.-s, so.-ha | 8, cu.-s : p.-cl, cu, s, so.-ha : 1, s, d |
| 11 | 8·9 | 15·3 | SSW : SW : S | SW : SSW | 2·8 | 0·15 | 241 | 1 : p.-cl : p.-cl, cu, oc.-shs | 7, cu, n, sh.-r: 4, cu, n : 1, d |
| 12 | 0·5 | 15·4 | S : E : SE | SSE : SE : E | 3·0 | 0·21 | 224 | p.-cl : 9 : 9, s, n, slt.-r | 10, s, n, fq.-r: 10, s, n, r : 10 |
| 13 | 8·1 | 15·4 | E : ENE | E : ENE : NE | 4·3 | 0·27 | 269 | 10 : 10 : 7, cu, s, n | 1, cu : 1 : 0 |
| 14 | 3·6 | 15·5 | NE : NNE | NE : ENE : NNE | 5·4 | 0·37 | 335 | 2, hy.-d : p.-cl : 8, cu, cu.-s | 8, cu, cu.-s, n : p.-cl : p.-cl, w |
| 15 | 7·3 | 15·5 | NNE : NE | NE | 8·3 | 1·01 | 559 | 10, w : 9, w : 8, cu, cu.-s, w | 7, ci.-s, cu, w: p.-cl, w : p.-cl |
| 16 | 8·9 | 15·6 | NE | NE | 3·8 | 0·43 | 370 | 10 : 10 : 5, cu, s, n | 1, cu, th.-cl : 1, th-cl |
| 17 | 11·3 | 15·6 | NE : N | NNW : NW : N | 3·8 | 0·14 | 218 | 1, th.-cl : 8 : 1, th.-cl | 1, th.-cl : p.-cl : 9 |
| 18 | 12·2 | 15·7 | N : NW : W | NW : WNW : W | 6·5 | 0·58 | 418 | p.-cl : p.-cl, cu, n, w | p.-cl, cu, n, oc.-slt.-r, hl, w : p.-cl, cu, cu.-s: p.-cl |
| 19 | 10·2 | 15·7 | W : WNW | WNW : NW : W | 4·5 | 0·26 | 290 | 1 : p.-cl : 8, cu, n | 8, cu, s, oc.-shs: p.-cl : p.-cl, d |
| 20 | 1·7 | 15·7 | WSW : SW | WSW : W | 3·7 | 0·21 | 278 | p.-cl : 9 : 9, n | 9, cu, n : 9, cu, cu.-s, n : p.-cl |
| 21 | 5·5 | 15·8 | WSW : SW | SW : WSW | 7·1 | 0·57 | 404 | 9 : 10 : 5, ci.-s, cu, n | 6, ci.-s, cu, s, so.-ha, w : 9, li.-shs : p.-cl |
| 22 | 8·1 | 15·8 | WSW : W : NW | W : WSW : SW | 4·0 | 0·41 | 376 | p.-cl : 0 : 5, cu, cu.-s | 8, cu, cu.-s, n: p.-cl, cu, cu.-s : 9 |
| 23 | 6·2 | 15·9 | SW : WSW : WNW | W : WNW | 2·5 | 0·33 | 341 | 10, oc.-slt.-r : 9 : 8, cu, cu.-s | 6, cu : p.-cl : p.-cl, d |
| 24 | 9·8 | 15·9 | WNW : W | WNW : NW : Variable | 1·7 | 0·17 | 248 | 10 : p.-cl : 3, cu, cu.-s | 8, cu : 4, cu : 0, m |
| 25 | 14·3 | 16·0 | WSW : Calm : SW | WSW : SW : Calm | 0·8 | 0·02 | 169 | 0 : 0 | 0 : 1, s : 0, d |
| 26 | 12·4 | 16·0 | Calm : S | SSW : Calm | 1·0 | 0·02 | 126 | 0, slt.-m : 1, th.-cl : 1, cu | 2, cu : 1, d |
| 27 | 7·6 | 16·1 | Calm | Variable | 1·6 | 0·04 | 150 | 1 : 5, cu, th.-cl, h | p.-cl, cu, n, t: p.-cl, l, t, sh.-r : p.-cl, t.-sm, r |
| 28 | 10·8 | 16·1 | N : W : SW | WSW : SW | 5·0 | 0·30 | 277 | 0, slt.-m : p.-cl : 4, ci, ci.-s, ci.-cu | 3, ci.-cu, cu, cu.-s, w : p.-cl, ci.-s, so.-ha: p.-cl, hy.-d |
| 29 | 1·3 | 16·1 | Calm : SW | SSW : SW : Calm | 1·4 | 0·08 | 147 | 10 : 9 : 9, t | 9, s, n : p.-cl : p.-cl, l, t |
| 30 | 13·1 | 16·2 | Variable : Calm : SW | SW : WSW | 6·0 | 0·49 | 322 | 9, t.-sm, r, sq : p.-cl : p.-cl, ci.-cu, cu, cu.-s | p.-cl, cu, w : p.-cl, w : 1, w |
| 31 | 5·7 | 16·2 | WSW : SW | SW | 2·5 | 0·27 | 298 | p.-cl : 9 : 9, cu, n, s | 8, cu, cu.-s, n: p.-cl : li.-cl |
| Means | 6·5 | 15·5 | ... | ... | ... | 0·25 | 269 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 50°·4, being 1°·4 *higher* than the average for the 65 years, 1841–1905.
The mean *Temperature of the Dew Point* for the month was 46°·3, being 1°·3 *higher* than the average for the 65 years, 1841–1905.
The mean *Degree of Humidity* for the month was 73·7, being 0·5 *less* than the average for the 65 years, 1841–1905.
The mean *Elastic Force of Vapour* for the month was $0^{\text{in}}\cdot315$, being $0^{\text{in}}\cdot016$ *greater* than the average for the 65 years, 1841–1905.
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was $3^{\text{grs}}\cdot5$, being $0^{\text{gr}}\cdot1$ *greater* than the average for the 65 years, 1841–1905.
The mean *Weight of a Cubic Foot of Air* for the month was 535 grains, being 3 grains *less* than the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·2.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·419. The maximum daily amount of *Sunshine* was 14·3 hours on May 25.

The highest reading of the *Solar Radiation Thermometer* was 149°·5 on May 26; and the lowest reading of the *Terrestrial Radiation Thermometer* was 27°·0 on May 20.

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 4, S. 8, and W. 11. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 8·3 lbs. on the square foot on May 15. The mean daily *Horizontal Movement of the Air* for the month was 269 miles; the greatest daily value was 559 miles on May 15; and the least daily value was 126 miles on May 26.

*Rain* ($0^{\text{in}}\cdot005$ or over) fell on 15 days in the month, amounting to $1^{\text{in}}\cdot157$, as measured by gauge No. 6 partly sunk below the ground; being $0^{\text{in}}\cdot758$ *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Lowest. | Daily Range. | Mean of 24 Hourly Values. | Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| June 1 | ... | 29·880 | 66·0 | 42·2 | 23·8 | 53·8 | − 3·6 | 49·8 | 45·9 | 7·9 | 18·1 | 1·1 | 75 | 136·3 | 28·9 | 56·93 | 0·002 | mP : wP : vP, mN |
| 2 | ... | 29·907 | 73·0 | 46·0 | 27·0 | 58·1 | + 0·3 | 52·0 | 46·5 | 11·6 | 21·2 | 1·1 | 66 | 148·6 | 31·9 | 56·95 | 0·000 | wP : vP : mP |
| 3 | ... | 29·883 | 79·1 | 45·2 | 33·9 | 60·3 | + 2·2 | 53·8 | 48·2 | 12·1 | 21·9 | 4·4 | 64 | 139·2 | 31·0 | 56·95 | 0·000 | wP : mP : mP |
| 4 | New | 29·827 | 71·0 | 50·9 | 20·1 | 60·7 | + 2·4 | 55·9 | 51·8 | 8·9 | 16·7 | 1·2 | 72 | 126·2 | 38·0 | 57·09 | 0·000 | mP : wP : mP |
| 5 | ... | 29·644 | 70·2 | 51·0 | 19·2 | 58·2 | − 0·2 | 53·9 | 50·0 | 8·2 | 17·4 | 2·6 | 75 | 134·0 | 37·0 | 57·34 | 0·000 | wP : wP : mP |
| 6 | Greatest Dec. N. | 29·686 | 66·1 | 48·8 | 17·3 | 54·3 | − 4·0 | 51·3 | 48·4 | 5·9 | 12·3 | 1·6 | 80 | 129·8 | 42·0 | 57·51 | 0·078 | vP, ssN : vP, ssN : mP |
| 7 | ... | 29·766 | 70·0 | 48·1 | 21·9 | 56·5 | − 1·7 | 51·5 | 46·9 | 9·6 | 20·7 | 1·5 | 70 | 139·0 | 35·4 | 57·50 | 0·038 | wP : wP : vP |
| 8 | ... | 29·779 | 68·5 | 46·4 | 22·1 | 54·8 | − 3·3 | 51·7 | 48·7 | 6·1 | 21·9 | 1·5 | 79 | 129·8 | 31·3 | 57·28 | 0·139 | wP : wP, sN : vP |
| 9 | ... | 29·931 | 68·0 | 43·1 | 24·9 | 54·2 | − 3·8 | 49·3 | 44·5 | 9·7 | 19·7 | 1·3 | 69 | 137·5 | 33·0 | 57·19 | 0·001 | mP : vP : mP |
| 10 | Perigee | 29·641 | 68·9 | 51·2 | 17·7 | 57·4 | − 0·7 | 52·3 | 47·6 | 9·8 | 17·5 | 4·8 | 70 | 135·9 | 46·9 | 56·94 | 0·000 | wP : wP : mP |
| 11 | First Quarter | 29·835 | 67·4 | 48·2 | 19·2 | 56·9 | − 1·3 | 50·5 | 44·6 | 12·3 | 19·3 | 2·1 | 64 | 137·2 | 41·9 | 56·95 | 0·000 | mP |
| 12 | In Equator | 29·901 | 67·3 | 50·2 | 17·1 | 56·9 | − 1·5 | 52·0 | 47·5 | 9·4 | 15·7 | 1·8 | 71 | 123·8 | 44·0 | 56·93 | 0·000 | mP |
| 13 | ... | 30·002 | 64·0 | 49·1 | 14·9 | 56·1 | − 2·4 | 53·0 | 50·1 | 6·0 | 11·2 | 1·0 | 80 | 105·2 | 36·9 | 57·02 | 0·000 | wP : mP : wP, wwN |
| 14 | ... | 30·154 | 70·7 | 51·6 | 19·1 | 58·5 | − 0·2 | 53·6 | 49·2 | 9·3 | 18·1 | 2·4 | 71 | 145·7 | 42·1 | 57·25 | 0·000 | wP, wwN : wP : wP |
| 15 | ... | 30·046 | 74·0 | 49·1 | 24·9 | 61·2 | + 2·4 | 54·4 | 48·5 | 12·7 | 25·3 | 2·3 | 63 | 143·1 | 36·4 | 57·32 | 0·000 | wP |
| 16 | ... | 29·890 | 82·0 | 47·1 | 34·9 | 65·0 | + 6·1 | 58·1 | 52·5 | 12·5 | 25·2 | 1·6 | 64 | 145·6 | 31·6 | 57·62 | 0·000 | wP |
| 17 | ... | 29·813 | 87·1 | 54·2 | 32·9 | 68·4 | + 9·4 | 62·3 | 57·5 | 10·9 | 22·5 | 1·3 | 67 | 144·7 | 43·5 | 58·00 | 0·000 | wP |
| 18 | Full : Greatest Dec. S. | 29·805 | 78·1 | 52·2 | 25·9 | 63·9 | + 4·7 | 58·3 | 53·6 | 10·3 | 21·2 | 2·6 | 70 | 148·7 | 44·8 | 58·48 | 0·000 | wP |
| 19 | ... | 29·843 | 73·0 | 51·9 | 21·1 | 60·8 | + 1·3 | 53·9 | 47·9 | 12·9 | 23·3 | 4·9 | 62 | 145·9 | 44·0 | 59·02 | 0·000 | wP : mP : sP |
| 20 | ... | 29·862 | 69·0 | 49·5 | 19·5 | 54·5 | − 5·4 | 52·0 | 49·6 | 4·9 | 16·2 | 0·0 | 83 | 141·3 | 41·1 | 59·36 | 0·414 | vP, ssN : sP, ssN : mP |
| 21 | ... | 29·901 | 67·3 | 43·8 | 23·5 | 56·4 | − 3·9 | 52·9 | 49·7 | 6·7 | 13·5 | 0·0 | 78 | 118·5 | 35·3 | 59·46 | 0·000 | mP : mP : wP |
| 22 | ... | 29·957 | 78·3 | 47·1 | 31·2 | 61·0 | + 0·4 | 56·0 | 51·7 | 9·3 | 19·7 | 1·6 | 72 | 138·9 | 37·1 | 59·30 | 0·000 | wP |
| 23 | ... | 29·879 | 66·0 | 52·4 | 13·6 | 57·4 | − 3·5 | 54·4 | 51·7 | 5·7 | 11·7 | 1·4 | 81 | 106·6 | 46·1 | 59·40 | 0·034 | wP : wP, ssN : wP |
| 24 | ... | 29·833 | 64·1 | 51·1 | 13·0 | 56·2 | − 5·0 | 50·6 | 45·4 | 10·8 | 16·0 | 4·3 | 67 | 111·5 | 45·0 | 59·39 | 0·000 | wP : mP : mP |
| 25 | Apogee | 29·864 | 67·3 | 49·3 | 18·0 | 57·4 | − 4·0 | 52·7 | 48·4 | 9·0 | 15·5 | 3·1 | 72 | 122·0 | 45·6 | 59·30 | 0·018 | vP, wN : mP : mP |
| 26 | In Equator : Last Quarter | 30·002 | 69·0 | 53·1 | 15·9 | 60·4 | − 1·1 | 54·1 | 48·6 | 11·8 | 17·3 | 5·4 | 65 | 123·8 | 42·9 | 59·18 | 0·002 | mP |
| 27 | ... | 30·039 | 68·2 | 53·2 | 15·0 | 58·7 | − 2·9 | 52·3 | 46·6 | 12·1 | 19·7 | 4·3 | 65 | 133·2 | 43·3 | 59·17 | 0·007 | mP : mP : sP |
| 28 | ... | 30·155 | 77·9 | 47·9 | 30·0 | 62·7 | + 1·1 | 55·8 | 49·9 | 12·8 | 19·8 | 4·4 | 63 | 141·6 | 36·8 | 59·30 | 0·000 | mP |
| 29 | ... | 30·140 | 79·5 | 51·6 | 27·9 | 66·5 | + 4·9 | 59·1 | 53·1 | 13·4 | 23·8 | 5·1 | 62 | 150·3 | 41·6 | 59·40 | 0·000 | wP |
| 30 | ... | 30·166 | 71·2 | 49·1 | 22·1 | 59·1 | − 2·4 | 54·6 | 50·6 | 8·5 | 16·2 | 2·4 | 74 | 137·1 | 37·9 | 59·62 | 0·000 | wP : mP : wP |
| Means | ... | 29·901 | 71·4 | 49·2 | 22·3 | 58·9 | − 0·5 | 53·7 | 49·2 | 9·7 | 18·6 | 2·4 | 70·5 | 134·0 | 39·1 | 58·11 | Sum 0·733 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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·901, being 0in·086 *higher* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 87°·1 on June 17; the lowest in the month was 42°·2 on June 1; and the range was 44°·9.
The mean of all the highest daily readings in the month was 71°·4, being 0°·7 *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 58°·9, being 0°·5 *lower* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| June 1 | 4·8 | 16·2 | Calm : NE : E | ESE : SE : Calm | 1·3 | 0·05 | 142 | p.-cl, m : p.-cl,th.-cl: 9, cu, s, so.-ha | 10, cu, s : 10 : 10, oc.-slt.-r |
| 2 | 13·6 | 16·3 | SW : WSW | SW : SSW | 1·6 | 0·14 | 237 | p.-cl : p.-cl,th.-cl: 3, cu | 5, cu,th.-cl : 1 : p.-cl |
| 3 | 12·9 | 16·3 | SSW : SW | SW : S | 1·0 | 0·06 | 178 | p.-cl : 4, cu, s, so.-ha | 5,cu,s,so.-ha: p.-cl, cu, s : 1, d |
| 4 | 4·7 | 16·3 | Calm : SSW | SW : S | 0·6 | 0·02 | 132 | p.-cl : p.-cl : 10, s, n | 10, s, n : p.-cl : p.-cl |
| 5 | 7·8 | 16·4 | S : SW | SW : WSW | 4·6 | 0·33 | 323 | 10 : p.-cl : 8, cu, n | 9, cu, n : p.-cl : p.-cl |
| 6 | 1·9 | 16·4 | SW : WSW | WSW : W | 4·8 | 0·60 | 416 | p.-cl : 10, fq.-r : 9, cu, s, n, slt.-r, w | 9, cu, n, oc.-slt.-r: 9, oc.-slt.-r, w: p.-cl |
| 7 | 8·0 | 16·4 | WSW : SW | W | 8·2 | 0·82 | 479 | 9 : 10, oc.-slt.-r, w: 9,cu,n,oc.-th.-r,w | 6, cu, n, w : 1, w : p.-cl |
| 8 | 3·6 | 16·4 | SW | SW : NW : W | 8·2 | 0·56 | 400 | p.-cl : 9 : 9, oc.-th.-r, w | 9, hy.-sh, oc.-th.-r, w : p.-cl : 1 |
| 9 | 7·1 | 16·4 | W : WSW | W : SW : WSW | 8·2 | 0·57 | 412 | 0 : th.-cl : p.-cl, ci, s, so.-ha, w | 6, cu, s,so.-ha, w: 10, slt.-sh, w : 9, w |
| 10 | 6·8 | 16·5 | WSW | WSW : W | 10·3 | 1·71 | 675 | 9, w : 10, st.-w : 9, cu, n, sc, st.-w | 8, cu, n, st.-w : p.-cl, cu, st.-w: 9, w |
| 11 | 9·0 | 16·5 | W : WNW | WNW : W | 4·9 | 0·56 | 429 | p.-cl : p.-cl : 8, cu, cu.-s | 8, cu, cu.-s : p.-cl : 10, w |
| 12 | 3·0 | 16·5 | W : NW : NNW | WSW : SW | 2·0 | 0·19 | 252 | p.-cl : 9 : 9, cu, cu.-s, n | 9, cu, n : 9, cu, cu.-s, n |
| 13 | 0·1 | 16·5 | WSW : W : Variable | Calm : ESE : SE | 1·0 | 0·09 | 174 | 9 : 9, cu, n, s | 10, s, n : 10 |
| 14 | 5·9 | 16·5 | SE | ESE : SE | 2·6 | 0·15 | 210 | 10 : 10 : 9, ci.-cu, s | 6,ci.-cu,li.-cl: 2 : p.-cl |
| 15 | 14·7 | 16·5 | ESE : E : ENE | SE : ESE : E | 2·9 | 0·24 | 233 | 9 : 0 | 0 : 0 : 1, s, hy.-d |
| 16 | 13·0 | 16·5 | ENE : Calm : ESE | ESE : SE : Calm | 1·2 | 0·07 | 146 | 0 : 0 : 2, ci | 2, ci, th.-cl : 3, ci, th.-cl : p.-cl |
| 17 | 8·5 | 16·6 | Calm : WNW | NW : WSW : W | 2·1 | 0·09 | 190 | 9 : 9 : 6, th.-cl | 5,cu.-s,th.-cl: p.-cl : p.-cl |
| 18 | 11·1 | 16·6 | WSW : W | W : WNW | 1·9 | 0·18 | 283 | 0 : p.-cl : 2, cu | 0 : p.-cl, ci.-cu, cu: 9, slt.-sh |
| 19 | 11·1 | 16·6 | WNW : NW | NW : WNW : W | 3·3 | 0·48 | 385 | 10 : p.-cl : 6, cu, n | 6, ci, cu : p.-cl, ci, cu : p.-cl |
| 20 | 3·3 | 16·6 | WSW : WNW : NW | Variable : Calm | 0·7 | 0·04 | 156 | 9, r, hy.-sh : 9, cu, n | 9, cu, n : p.-cl, fq.-r : p.-cl, slt.-m |
| 21 | 5·6 | 16·6 | Calm : ENE | E : SE : SW | 0·1 | 0·00 | 97 | p.-cl : p.-cl, f : 8, cu, cu.-s | 9, cu.-s, s : 2, th.-cl : th.-cl |
| 22 | 8·3 | 16·6 | SW : Calm | WSW : W : SW | 1·4 | 0·06 | 172 | th.-cl : 1, m : 5, cu | 8, cu, n, s : p.-cl, ci, cu, s: p.-cl, ci.-s |
| 23 | 1·1 | 16·6 | SW : WSW | W : WSW | 2·0 | 0·24 | 302 | 9 : 9 | 9, th.-r : 9 : p.-cl |
| 24 | 0·5 | 16·6 | W : WNW | WNW : NW | 3·3 | 0·47 | 396 | 9 : 10 : 9, cu, n, s | 10, cu, n, s : 9 |
| 25 | 3·9 | 16·6 | WNW : N | NNE : NE | 5·1 | 0·51 | 364 | 9, oc.-slt.-r : 9, cu, n | p.-cl, sh.-r, w: p.-cl, cu, w : p.-cl |
| 26 | 6·3 | 16·5 | NNE : NW : N | NW : N | 2·9 | 0·23 | 271 | 10 : p.-cl, th.-cl: 7, cu | 8, ci.-cu, cu, cu.-s: p.-cl, so.-ha : 9, slt.-sh |
| 27 | 6·6 | 16·5 | ... : ... : N | NNE | 3·3 | 0·48 | 356 | p.-cl, slt.-r: th.-cl : 8, cu, cu.-s, n | 8, cu, n : p.-cl, cu : 1, s |
| 28 | 6·4 | 16·5 | N : WNW : W | NNW : N | 5·0 | 0·36 | 311 | p.-cl : 10 : 9, ci, cu | 6, cu : p.-cl, cu, w : 8 |
| 29 | 12·3 | 16·5 | NNW : NNE : N | N : NE : SE | 3·0 | 0·34 | 303 | 9 : p.-cl : 2, cu | 1, cu : 1, ci.-s, ci.-cu: 1, s |
| 30 | 2·3 | 16·5 | Calm : NE | E : SE : SSE | 0·8 | 0·03 | 130 | p.-cl : 9 : 8, cu, s, n, so.-ha | 9, cu, cu.-s : p.-cl, cu.-s : th.-cl |
| Means | 6·8 | 16·5 | ... | ... | ... | 0·32 | 285 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 53°·7, being 1°·2 *lower* than
The mean *Temperature of the Dew Point* for the month was 49°·2, being 1°·7 *lower* than
The mean *Degree of Humidity* for the month was 70·5, being 3·1 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·345, being 0in·028 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·9, being 0gr·3 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 533 grains, being 2 grains *greater* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·413. The maximum daily amount of *Sunshine* was 14·7 hours on June 15.

The highest reading of the *Solar Radiation Thermometer* was 150°·3 on June 29; and the lowest reading of the *Terrestrial Radiation Thermometer* was 28°·9 on June 1.

The *Proportions of Wind* referred to the cardinal points were N. 6, E. 3, S. 5, and W. 13. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 10·3 lbs. on the square foot on June 10. The mean daily *Horizontal Movement of the Air* for the month was 285 miles; the greatest daily value was 675 miles on June 10; and the least daily value was 97 miles on June 21.

*Rain* (0in·005 or over) fell on 7 days in the month, amounting to 0in·733, as measured by gauge No. 6 partly sunk below the ground; being 1in·305 *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| July 1 | ... | 30·165 | 70·0 | 49·1 | 20·9 | 58·5 | − 3·0 | 54·2 | 50·3 | 8·2 | 17·9 | 1·4 | 74 | 139·9 | 37·9 | 59·79 | 0·000 | wP : mP : mP |
| 2 | ... | 30·082 | 72·1 | 51·1 | 21·0 | 59·5 | − 2·1 | 55·3 | 51·6 | 7·9 | 19·0 | 1·9 | 75 | 137·4 | 46·0 | 59·97 | 0·047 | wP : mP : wP, vN. |
| 3 | Greatest Dec. N. | 29·902 | 68·9 | 54·3 | 14·6 | 59·5 | − 2·3 | 56·1 | 53·1 | 6·4 | 13·0 | 2·0 | 80 | 130·1 | 52·7 | 59·95 | 0·012 | wP : mP : mP |
| 4 | New | 29·794 | 68·9 | 53·2 | 15·7 | 58·6 | − 3·5 | 56·0 | 53·7 | 4·9 | 12·6 | 1·2 | 83 | 123·7 | 48·0 | 59·99 | 0·099 | wP |
| 5 | ... | 29·760 | 66·9 | 51·3 | 15·6 | 57·2 | − 5·1 | 53·7 | 50·5 | 6·7 | 13·5 | 0·6 | 78 | 110·9 | 51·3 | 60·02 | 0·046 | wP |
| 6 | Perigee | 29·563 | 60·1 | 50·9 | 9·2 | 54·5 | − 7·9 | 53·5 | 52·5 | 2·0 | 9·3 | 0·0 | 93 | 80·1 | 49·1 | 60·00 | 0·352 | wP : vP, ssN : vP, wN |
| 7 | ... | 29·705 | 66·0 | 49·1 | 16·9 | 53·5 | − 8·9 | 50·4 | 47·3 | 6·2 | 16·6 | 0·2 | 79 | 144·6 | 40·0 | 59·77 | 0·163 | wP : vP, ssN : mP |
| 8 | ... | 29·863 | 64·8 | 46·2 | 18·6 | 54·1 | − 8·3 | 48·8 | 43·6 | 10·5 | 20·2 | 2·7 | 68 | 128·6 | 33·5 | 59·43 | 0·000 | mP : sP : vP |
| 9 | In Equator | 29·829 | 69·2 | 47·6 | 21·6 | 55·6 | − 6·8 | 52·2 | 49·0 | 6·6 | 17·0 | 1·9 | 79 | 137·1 | 39·9 | 59·21 | 0·002 | wP |
| 10 | First Quarter | 29·665 | 66·2 | 53·5 | 12·7 | 56·3 | − 6·2 | 54·5 | 52·8 | 3·5 | 9·3 | 0·8 | 88 | 122·0 | 48·6 | 59·09 | 0·822 | wP, wwN : vP, vN : vN, mP |
| 11 | ... | 29·777 | 68·2 | 53·1 | 15·1 | 59·9 | − 2·8 | 56·3 | 53·2 | 6·7 | 13·7 | 1·3 | 79 | 115·8 | 47·0 | 59·15 | 0·000 | wP : mP : wP |
| 12 | ... | 29·831 | 75·8 | 50·2 | 25·6 | 62·3 | − 0·6 | 57·2 | 52·8 | 9·5 | 17·3 | 0·2 | 72 | 128·6 | 39·2 | 59·18 | 0·000 | wP |
| 13 | ... | 29·838 | 73·0 | 53·0 | 20·0 | 60·5 | − 2·6 | 56·6 | 53·2 | 7·3 | 15·4 | 0·8 | 77 | 131·7 | 42·7 | 59·31 | 0·000 | wP |
| 14 | ... | 29·734 | 69·2 | 51·2 | 18·0 | 60·5 | − 2·8 | 58·1 | 56·0 | 4·5 | 9·9 | 1·2 | 86 | 106·5 | 42·1 | 59·60 | 0·042 | wP |
| 15 | ... | 29·699 | 61·6 | 53·1 | 8·5 | 57·6 | − 5·8 | 56·7 | 55·9 | 1·7 | 3·0 | 0·0 | 94 | 73·2 | 53·2 | 59·70 | 0·209 | vP, vN : wP |
| 16 | Greatest Dec. S. | 29·812 | 67·0 | 55·3 | 11·7 | 60·5 | − 2·9 | 57·5 | 54·9 | 5·6 | 9·3 | 0·4 | 82 | 106·9 | 49·0 | 59·70 | 0·015 | wP |
| 17 | ... | 29·858 | 73·8 | 52·1 | 21·7 | 62·2 | − 1·2 | 58·3 | 55·0 | 7·2 | 13·5 | 1·0 | 78 | 126·0 | 44·9 | 59·70 | 0·002 | wP |
| 18 | Full | 29·883 | 69·0 | 56·8 | 12·2 | 61·4 | − 1·9 | 58·3 | 55·6 | 5·8 | 12·0 | 0·2 | 82 | 112·0 | 50·0 | 59·62 | 0·081 | wP, wN : wP : wP |
| 19 | ... | 29·909 | 64·0 | 52·9 | 11·1 | 58·1 | − 5·1 | 55·2 | 52·6 | 5·5 | 7·3 | 0·8 | 82 | 90·9 | 45·8 | 59·62 | 0·171 | wP |
| 20 | ... | 29·934 | 69·0 | 52·6 | 16·4 | 60·0 | − 3·2 | 53·2 | 47·2 | 12·8 | 18·8 | 3·0 | 63 | 139·0 | 44·2 | 59·72 | 0·000 | wP : wP : ... |
| 21 | ... | 29·939 | 65·9 | 48·7 | 17·2 | 57·2 | − 6·0 | 52·9 | 48·9 | 8·3 | 13·0 | 3·1 | 73 | 103·2 | 40·2 | 59·59 | 0·000 | wP : mP : wP |
| 22 | Apogee | 29·888 | 67·0 | 52·6 | 14·4 | 57·0 | − 6·1 | 53·6 | 50·6 | 6·4 | 16·5 | 1·2 | 79 | 132·0 | 47·3 | 59·51 | 0·054 | wP : mP |
| 23 | In Equator | 29·859 | 59·2 | 51·1 | 8·1 | 54·5 | − 8·5 | 51·6 | 48·8 | 5·7 | 8·4 | 3·0 | 81 | 87·1 | 44·5 | 59·44 | 0·000 | wP |
| 24 | ... | 29·954 | 71·3 | 51·7 | 19·6 | 59·9 | − 3·0 | 55·7 | 52·0 | 7·9 | 17·5 | 1·4 | 76 | 142·9 | 43·0 | 59·41 | 0·000 | wP |
| 25 | ... | 29·994 | 70·3 | 51·1 | 19·2 | 58·6 | − 4·1 | 55·0 | 51·8 | 6·8 | 15·0 | 1·6 | 78 | 145·7 | 44·7 | 59·23 | 0·000 | wP |
| 26 | Last Quarter | 30·014 | 66·0 | 53·1 | 12·9 | 57·9 | − 4·6 | 55·4 | 53·2 | 4·7 | 10·4 | 1·4 | 84 | 109·0 | 52·2 | 59·27 | 0·000 | wP |
| 27 | ... | 30·073 | 62·5 | 52·1 | 10·4 | 56·8 | − 5·6 | 55·0 | 53·4 | 3·4 | 6·7 | 0·2 | 88 | 86·8 | 53·0 | 59·35 | 0·004 | wwP : wP : wP |
| 28 | ... | 30·023 | 74·2 | 52·4 | 21·8 | 60·8 | − 1·5 | 57·2 | 54·1 | 6·7 | 17·1 | 1·4 | 79 | 141·1 | 45·0 | 59·52 | 0·000 | wP |
| 29 | ... | 29·928 | 73·0 | 50·1 | 22·9 | 59·5 | − 2·8 | 56·0 | 52·9 | 6·6 | 19·7 | 0·0 | 79 | 138·2 | 42·3 | 59·67 | 0·000 | wP |
| 30 | Greatest Dec. N. | 29·851 | 64·6 | 52·5 | 12·1 | 57·9 | − 4·4 | 54·9 | 52·3 | 5·6 | 9·1 | 0·8 | 82 | 107·6 | 45·8 | 59·71 | 0·000 | wP |
| 31 | ... | 29·853 | 75·0 | 52·4 | 22·6 | 62·3 | + 0·1 | 58·0 | 54·4 | 7·9 | 18·7 | 1·2 | 76 | 148·0 | 45·7 | 59·79 | 0·000 | wP |
| Means | ... | 29·870 | 68·2 | 51·8 | 16·4 | 58·5 | − 4·2 | 55·1 | 52·0 | 6·4 | 13·6 | 1·2 | 79·6 | 120·2 | 45·4 | 59·58 | Sum 2·121 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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 29$^{\text{in}}$·870, being 0$^{\text{in}}$·071 *higher* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 75°·8 on July 12; the lowest in the month was 46°·2 on July 8; and the range was 29°·6.
The mean of all the highest daily readings in the month was 68°·2, being 6°·0 *lower* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 51°·8, being 1°·5 *lower* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 16°·4, being 4°·5 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 58°·5, being 4°·2 *lower* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| July 1 | 4·5 | 16·5 | Calm : E : ENE | NE : ENE : E | 1·4 | 0·06 | 184 | p.-cl : 10 : 10, cu, s, n | 7, cu, s, so.-ha: p.-cl, so.-ha : 9 |
| 2 | 2·9 | 16·5 | ENE : NE | NNE | 3·0 | 0·25 | 283 | 9 : 9 | p.-cl, cu : 9, slt.-r : 10, oc.-r |
| 3 | 2·9 | 16·5 | NNE | NNE : N : NNW | 3·3 | 0·31 | 297 | 10, oc.-slt.-r : 10, sc, n, oc.-slt.-r | p.-cl, cu, n : 9, cu, cu.-s, n: p.-cl |
| 4 | 0·6 | 16·4 | N | NNE : NE | 1·2 | 0·06 | 199 | p.-cl : 9 : 10, s, th.-cl | 9, cu, cu.-s, s: 10 : 10, r |
| 5 | 0·1 | 16·4 | NE : Calm | WSW : SW | 0·9 | 0·03 | 166 | 10 : 10 : 9, s, n | 10, s, n, oc.-slt.-r : 10, fq.-r |
| 6 | 0·0 | 16·4 | WSW : Calm : Variable | NE : ESE : Calm | 1·2 | 0·01 | 106 | 10, oc.-r : 10, s, n | 10, cu, n, s, r : 10, oc.-r |
| 7 | 6·5 | 16·4 | ENE : NE : NNE | NE | 2·5 | 0·11 | 196 | 10 : p.-cl : p.-cl, cu, n | 10, s, n, r : p.-cl : p.-cl |
| 8 | 4·9 | 16·4 | NNE : N : NW | N : Calm | 2·0 | 0·14 | 212 | 9 : 10 : 8, ci.-s, cu, so.-ha | p.-cl, cu : p.-cl, cu : 9 |
| 9 | 3·3 | 16·3 | Calm : WSW : SW | SW : SSW : Calm | 1·6 | 0·09 | 199 | 9 : p.-cl : 9, cu, cu.-s | 9, cu, cu.-s, s : 9 slt.-sh : 10, slt.-sh |
| 10 | 0·0 | 16·3 | Calm : SW | E : NNE : N | 0·7 | 0·01 | 107 | 10 : 10 : 10, s, n, oc.-th.-r | 10, n, l, t, hy.-r: 10, n, slt.-r : 10 |
| 11 | 3·5 | 16·3 | NNW : N : Calm | N : Calm | 0·1 | 0·00 | 109 | 9 : 9 : 5, cu, cu.-s, h | 9, cu, cu.-s, n: 9, cu, cu.-s, n, glm: p.-cl |
| 12 | 2·5 | 16·2 | SSW : Calm : WSW | WSW : SW | 1·0 | 0·06 | 208 | p.-cl, m : 9 : 8, cu, cu.-s | 8, cu, cu.-s, n : p.-cl : 1 |
| 13 | 1·8 | 16·2 | SW : WSW | SW : W : WSW | 0·6 | 0·02 | 202 | p.-cl : 10 : 10, n | 9, cu, n p.-cl : 1 |
| 14 | 1·4 | 16·2 | SW : WSW : Calm | Variable | 0·4 | 0·00 | 114 | 1 : 9 : 9, s, n | 9, oc.-slt.-r : 10, oc.-slt.-r : 10 |
| 15 | 0·0 | 16·1 | N | N : NNE | 1·8 | 0·16 | 265 | 10, r : 10, oc.-r : 10, sc, s, fq.-r | 10, r : 10, fq.-r : 10, slt.-r |
| 16 | 1·5 | 16·1 | N | Calm : SW : W | 0·5 | 0·01 | 159 | 10, slt.-r : p.-cl : 9, s, n, glm | 10, s, n, glm, sh.-r: 10 : 8 |
| 17 | 1·2 | 16·1 | WSW : W | W : WSW | 2·1 | 0·12 | 284 | 9 : 9, cu, n, s | 8, cu, s : 9 : 10, slt.-r |
| 18 | 0·3 | 16·0 | WSW : W | N : NNW : NW | 2·1 | 0·15 | 291 | 10, fq.-th.-r: 10, slt.-r : 9, s, n, slt.-r | 9, s, n : 10, s, n : p.-cl |
| 19 | 0·0 | 16·0 | NW : W : Calm | NNW : NNE : N | 1·0 | 0·02 | 186 | 9 : 10 : 10, s, n, r, slt.-m | 9, fq.-shs : 10 |
| 20 | 9·7 | 15·9 | NNW : N | NNE : N | 2·1 | 0·13 | 249 | 9 : p.-cl : 7, cu | 5, cu : 1 |
| 21 | 0·3 | 15·9 | NW : WNW : NNW | NW : W : SW | 2·1 | 0·08 | 233 | p.-cl : 9 : 10, cu.-s, s | 9, cu, cu.-s, n : 9 |
| 22 | 1·7 | 15·8 | W : N : NE | NNE : N | 2·8 | 0·20 | 292 | 10, slt.-sh : 10, r : 9, cu, n, th.-r | p.-cl, cu.-s, n: 9, cu.-s, n, s : 9 |
| 23 | 0·3 | 15·8 | WNW : N | N : NNE | 8·0 | 0·63 | 417 | 9 : 10, w : 10, s, oc.-slt.-r, w | 10, sc, s, th.-r, w: 9 : p.-cl |
| 24 | 8·3 | 15·8 | NE | NE : SE | 1·7 | 0·16 | 268 | p.-cl : 10 : 6, cu, cu.-s | 4, cu : p.-cl, d : 1, cu.-s, d |
| 25 | 5·8 | 15·7 | NE | NE : E | 1·9 | 0·18 | 275 | 9 : 10 : 8, cu, s, n | 7, cu, cu.-s, n: p.-cl : 9 |
| 26 | 1·0 | 15·7 | NE : NNE | NNE : ESE : NE | 1·2 | 0·10 | 219 | 9 : 10 : 10, n | 9, cu, n, s : p.-cl : 10 |
| 27 | 0·2 | 15·6 | NE | NE : ENE : E | 0·6 | 0·03 | 191 | 10, oc.-th.-r: 10 : 10, cu, n, slt.-r | 10, cu, s, n : 9, cu.-s, n : 10 |
| 28 | 9·4 | 15·6 | E : ENE : NE | ESE : E : SE | 0·2 | 0·00 | 144 | 10 : 10 : p.-cl, s, th.-cl | 1, ci, ci.-s, ci.-cu: 1 : p.-cl, slt.-m |
| 29 | 11·3 | 15·5 | Calm : SE : ESE | E : ESE | 1·5 | 0·07 | 168 | 10, m : 9 : 1, li.-cl | 0 : 0 : p.-cl |
| 30 | 0·0 | 15·5 | E | ESE : E : ENE | 2·0 | 0·20 | 269 | p.-cl : 10 : 10, s, n | 10, cu, n, s : 9 : p.-cl |
| 31 | 8·6 | 15·4 | NE : ENE | E : NE | 3·3 | 0·22 | 295 | 10 : 10 : 6, cu, n, s | 1, li.-cl : 0 : p.-cl |
| Means | 3·0 | 16·0 | ... | ... | ... | 0·12 | 219 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 55°·1, being 2°·8 *lower* than
The mean *Temperature of the Dew Point* for the month was 52°·0, being 1°·8 *lower* than
The mean *Degree of Humidity* for the month was 79·6, being 6·8 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·388, being 0in·027 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·3, being 0gr·3 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 533 grains, being 6 grains *greater* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 8·2.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·190. The maximum daily amount of *Sunshine* was 11·3 hours on July 29.

The highest reading of the *Solar Radiation Thermometer* was 148°·0 on July 31; and the lowest reading of the *Terrestrial Radiation Thermometer* was 33°·5 on July 8.

The *Proportions of Wind* referred to the cardinal points were N. 11, E. 9, S. 2, and W. 5. Four days were calm.

The *Greatest Pressure of the Wind* in the month was 8·0 lbs. on the square foot on July 23. The mean daily *Horizontal Movement of the Air* for the month was 219 miles; the greatest daily value was 417 miles on July 23; and the least daily value was 106 miles on July 6.

*Rain* (0in·005 or over) fell on 13 days in the month, amounting to 2in·121, as measured by gauge No. 6 partly sunk below the ground; being 0in·278 *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (Corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Aug. 1 | ... | 30·017 | 71·5 | 53·4 | 18·1 | 59·8 | − 2·4 | 56·2 | 53·0 | 6·8 | 15·6 | 2·0 | 79 | 144·0 | 45·0 | 59·98 | 0·000 | wP |
| 2 | New | 30·077 | 69·0 | 51·9 | 17·1 | 58·7 | − 3·4 | 54·8 | 51·3 | 7·4 | 14·2 | 1·0 | 76 | 151·0 | 40·0 | 60·09 | 0·000 | wP |
| 3 | Perigee | 29·991 | 75·2 | 50·2 | 25·0 | 60·2 | − 1·9 | 55·6 | 51·6 | 8·6 | 19·3 | 0·2 | 73 | 140·2 | 36·0 | 60·28 | 0·000 | wP |
| 4 | ... | 29·900 | 70·0 | 49·0 | 21·0 | 57·0 | − 5·1 | 53·8 | 50·8 | 6·2 | 14·2 | 1·0 | 80 | 140·2 | 36·9 | 60·27 | 0·000 | wP, wwN : wP, wwN : wP |
| 5 | In Equator | 29·857 | 67·3 | 50·0 | 17·3 | 56·4 | − 5·7 | 50·1 | 44·3 | 12·1 | 22·0 | 4·6 | 64 | 151·3 | 37·5 | 60·32 | 0·000 | wP : mP : vP |
| 6 | ... | 29·806 | 66·2 | 48·7 | 17·5 | 56·4 | − 5·8 | 51·1 | 46·2 | 10·2 | 17·8 | 3·6 | 69 | 126·2 | 36·6 | 60·32 | 0·000 | wP : mP : mP |
| 7 | ... | 29·871 | 69·7 | 46·1 | 23·6 | 55·3 | − 6·9 | 50·6 | 46·2 | 9·1 | 21·7 | 0·8 | 71 | 115·2 | 37·6 | 60·30 | 0·092 | wP : vP, vN : vP, ssN |
| 8 | ... | 29·740 | 65·6 | 48·0 | 17·6 | 56·0 | − 6·3 | 52·9 | 50·0 | 6·0 | 14·1 | 0·4 | 80 | 118·9 | 35·6 | 60·20 | 0·000 | wP |
| 9 | First Quarter | 29·626 | 68·0 | 45·4 | 22·6 | 55·5 | − 6·8 | 51·4 | 47·5 | 8·0 | 18·6 | 0·0 | 75 | 113·1 | 33·9 | 60·02 | 0·000 | wP : mP : mP |
| 10 | ... | 29·694 | 72·1 | 49·3 | 22·8 | 58·9 | − 3·4 | 53·3 | 48·3 | 10·6 | 21·4 | 1·2 | 68 | 130·3 | 39·5 | 59·98 | 0·000 | wP : ... : ... |
| 11 | ... | 29·763 | 74·6 | 54·2 | 20·4 | 61·4 | − 1·0 | 57·2 | 53·8 | 7·6 | 15·0 | 2·0 | 76 | 120·0 | 43·7 | 59·92 | 0·044 | ... : wP |
| 12 | Greatest Dec. S. | 29·917 | 68·0 | 51·1 | 16·9 | 57·6 | − 4·9 | 54·6 | 51·9 | 5·7 | 13·2 | 1·2 | 82 | 121·6 | 40·3 | 60·00 | 0·000 | wP |
| 13 | ... | 29·934 | 69·0 | 53·5 | 15·5 | 59·2 | − 3·3 | 56·0 | 53·1 | 6·1 | 17·2 | 0·9 | 81 | 111·0 | 41·5 | 60·10 | 0·050 | wP : mP, wN : wP |
| 14 | ... | 29·876 | 72·7 | 57·1 | 15·6 | 62·4 | − 0·1 | 57·1 | 52·6 | 9·8 | 19·9 | 1·1 | 71 | 123·6 | 49·5 | 60·13 | 0·025 | wP : mP : wP |
| 15 | ... | 29·918 | 66·8 | 57·2 | 9·6 | 60·8 | − 1·6 | 58·2 | 55·9 | 4·9 | 10·7 | 0·8 | 84 | 94·0 | 54·0 | 60·20 | 0·017 | wP |
| 16 | Full | 29·931 | 75·0 | 53·9 | 21·1 | 63·1 | + 0·8 | 58·0 | 53·7 | 9·4 | 21·4 | 1·0 | 72 | 126·0 | 48·0 | 60·38 | 0·000 | wP |
| 17 | ... | 29·981 | 72·9 | 51·7 | 21·2 | 62·1 | 0·0 | 57·5 | 53·6 | 8·5 | 18·6 | 0·6 | 74 | 135·8 | 41·2 | 60·52 | 0·000 | wP |
| 18 | ... | 30·017 | 65·1 | 55·0 | 10·1 | 58·1 | − 3·8 | 54·3 | 50·9 | 7·2 | 15·2 | 1·0 | 77 | 108·3 | 49·7 | 60·59 | 0·000 | wP |
| 19 | Apogee: In Equator | 29·959 | 62·1 | 53·0 | 9·1 | 56·9 | − 4·8 | 52·8 | 49·1 | 7·8 | 12·7 | 3·7 | 75 | 98·3 | 50·9 | 60·60 | 0·000 | wP : mP : mP |
| 20 | ... | 29·949 | 70·0 | 53·6 | 16·4 | 59·3 | − 2·2 | 53·7 | 48·7 | 10·6 | 20·4 | 3·5 | 68 | 123·9 | 42·0 | 60·61 | 0·000 | wP : mP : wP |
| 21 | ... | 29·948 | 80·0 | 49·2 | 30·8 | 64·2 | + 2·9 | 57·1 | 51·2 | 13·0 | 25·0 | 1·6 | 63 | 133·1 | 37·9 | 60·62 | 0·000 | wP : wP : vP |
| 22 | ... | 29·817 | 73·0 | 57·6 | 15·4 | 64·7 | + 3·6 | 60·7 | 57·4 | 7·3 | 11·4 | 2·4 | 77 | 127·2 | 49·2 | 60·51 | 0·000 | wP |
| 23 | ... | 29·694 | 70·4 | 52·8 | 17·6 | 60·5 | − 0·4 | 56·7 | 53·4 | 7·1 | 15·9 | 1·9 | 78 | 120·0 | 41·3 | 60·60 | 0·357 | wP : wP, wN : wP |
| 24 | ... | 29·840 | 73·2 | 49·5 | 23·7 | 58·4 | − 2·4 | 53·8 | 49·7 | 8·7 | 20·3 | 2·5 | 73 | 127·8 | 38·2 | 60·75 | 0·008 | wP : wP, ssN : wP |
| 25 | Last Quarter | 30·045 | 76·5 | 45·0 | 31·5 | 60·1 | − 0·6 | 54·3 | 49·2 | 10·9 | 22·1 | 0·6 | 67 | 133·4 | 32·5 | 60·61 | 0·000 | wP |
| 26 | ... | 30·083 | 76·4 | 47·7 | 28·7 | 61·4 | + 0·7 | 55·8 | 51·0 | 10·4 | 21·5 | 0·8 | 69 | 125·2 | 32·1 | 60·52 | 0·000 | wP |
| 27 | Greatest Dec. N. | 30·007 | 75·3 | 57·1 | 18·2 | 64·3 | + 3·7 | 59·1 | 54·8 | 9·5 | 18·5 | 1·5 | 71 | 122·9 | 53·1 | 60·44 | 0·262 | wP, wN : wP : wP |
| 28 | ... | 29·835 | 79·2 | 56·2 | 23·0 | 66·8 | + 6·4 | 60·6 | 55·7 | 11·1 | 25·0 | 0·6 | 68 | 130·2 | 47·4 | 60·62 | 0·000 | wP |
| 29 | ... | 29·634 | 71·4 | 53·3 | 18·1 | 61·5 | + 1·2 | 60·0 | 58·7 | 2·8 | 6·4 | 0·0 | 91 | 103·0 | 43·6 | 60·60 | 0·212 | wP : wP, vN : wP, wN |
| 30 | ... | 29·563 | 74·0 | 55·1 | 18·9 | 63·9 | + 3·8 | 61·7 | 59·9 | 4·0 | 10·3 | 0·0 | 88 | 109·0 | 45·9 | 60·81 | 0·032 | wwP : wwP : mP |
| 31 | New | 29·712 | 64·7 | 57·1 | 7·6 | 60·6 | + 0·7 | 59·6 | 58·8 | 1·8 | 3·7 | 0·6 | 94 | 71·8 | 56·0 | 60·80 | 0·570 | wP, wN : wP : wP, wN |
| Means | ... | 29·871 | 71·1 | 52·0 | 19·1 | 60·0 | − 1·6 | 55·8 | 52·0 | 8·0 | 16·9 | 1·4 | 75·3 | 122·5 | 42·5 | 60·38 | Sum 1·669 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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·871, being 0in·088 *higher* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 80°·0 on August 21; the lowest in the month was 45°·0 on August 25; and the range was 35°·0.
The mean of all the highest daily readings in the month was 71°·1, being 1°·6 *lower* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 52°·0, being 1°·0 *lower* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 19°·1, being 0°·6 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 60°·0, being 1°·6 *lower* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Aug. 1 | 5·7 | 15·4 | NE : ENE | ENE : SE : ESE | 1·6 | 0·18 | 261 | p.-cl : 10 : 10 | p.-cl,cu,cu.-s: 1 : 1 |
| 2 | 5·2 | 15·3 | E : ENE : NE | E : SE : ESE | 0·7 | 0·04 | 180 | p.-cl : 10 : 10, cu, n | p.-cl, ci.-cu, cu : 0, hy.-d |
| 3 | 11·4 | 15·3 | Calm : ENE : E | E : ESE : Calm | 0·9 | 0·04 | 156 | 9 : 9 : 2, cu | 1 : 0, d |
| 4 | 2·0 | 15·2 | Variable : Calm : ENE | ENE : NE | 2·0 | 0·20 | 259 | p.-cl : p.-cl : 9, ci.-s, ci.-cu, n | 10, cu, n, s : 10, s, n : 9 |
| 5 | 7·4 | 15·2 | NE : NNE | NE : NNE : SSE | 1·6 | 0·08 | 208 | 10 : 9 : 4, cu | 6 : p.-cl, n : p.-cl |
| 6 | 7·9 | 15·1 | Calm : N : NNE | NNE : NE : ENE | 1·6 | 0·10 | 192 | 10, slt.-sh : p.-cl, cu : 5, cu | 7, cu, n : 1 : p.-cl |
| 7 | 1·2 | 15·1 | Calm : WSW | WSW : SW | 1·0 | 0·02 | 142 | 9 : 10 : 9, cu, s, n | 10, cu, n, s, r : 10, r : 9, r, l, t |
| 8 | 3·7 | 15·0 | Calm : E | ESE : SE : Calm | 1·5 | 0·05 | 148 | 10 : 10 : 9, cu, cu.-s | 9, ci, cu, n : p.-cl : p.-cl, hy.-d |
| 9 | 3·4 | 15·0 | Calm | W | 1·3 | 0·07 | 176 | p.-cl, m : 9, slt.-m : 7, cu, s, so.-ha | 6, cu, s, so.-ha: p.-cl, ci.-s, cu: p.-cl, d |
| 10 | 7·7 | 14·9 | W : NW | NW : W : SW | 1·0 | 0·06 | 211 | p.-cl : 1, cu : 7, cu | 9 : p.-cl : p.-cl |
| 11 | 0·9 | 14·8 | WSW | WSW : SW | 1·5 | 0·15 | 279 | 9, li.-shs : 9, cu, n | 9, cu, cu.-s : p.-cl |
| 12 | 0·4 | 14·8 | Calm : NE : ENE | NE : ESE : Calm | 0·5 | 0·01 | 149 | p.-cl : 10 : 9, n | 9, cu, cu.-s, n: p.-cl : p.-cl |
| 13 | 0·1 | 14·7 | SW : WSW : W | WNW : W : WSW | 3·1 | 0·11 | 249 | 10 : 10, slt.-sh : 10, s | 10, s, n, r : 10, s, n, fq.-shs: 10 |
| 14 | 2·5 | 14·7 | NW : NNW : N | N : NNW : Calm | 1·9 | 0·10 | 205 | 10 : p.-cl : 8, s | 9, s, n : 10, oc.-th.-r : 10, fq.-th.-r |
| 15 | 0·0 | 14·6 | Calm : SE | Variable : Calm | 0·1 | 0·00 | 92 | 10, oc.-slt.-r : 10, cu, n, s | 10, cu, n, s : p.-cl, glm : 10, n |
| 16 | 3·9 | 14·5 | Calm | N : NE : Calm | 0·1 | 0·00 | 94 | 10 : p.-cl : 6, cu, h, glm | 8, cu, n : 9 : 9 |
| 17 | 11·3 | 14·5 | Calm : ENE : E | E : SE : ENE | 1·3 | 0·08 | 165 | 10 : p.-cl : p.-cl, cu | 2, cu : 1, cu : p.-cl, d |
| 18 | 0·7 | 14·4 | NE | NE | 2·3 | 0·26 | 305 | 9 : 10 : 9, cu, cu.-s | 10, cu, n, s : 10 |
| 19 | 0·1 | 14·3 | NE | NE : NNE | 1·0 | 0·06 | 209 | 10 : 10 : 9, n, s, m.-r | 10, n, s : 10 |
| 20 | 5·2 | 14·3 | NE : NNE : N | NNE : Calm : WSW | 1·1 | 0·02 | 179 | 10 : 10 : 8, cu, n | 3, li.-cl : li.-cl, h : th.-cl, h, d |
| 21 | 11·1 | 14·2 | WSW : W | W : WSW | 1·7 | 0·08 | 254 | 0, h : th.-cl : 3, ci, ci.-s | 6, ci, ci.-s, cu: p.-cl, ci, ci.-s, cu: 9, s |
| 22 | 1·7 | 14·2 | SW : WSW | SW | 8·0 | 0·61 | 423 | 9, s : 9, li.-cl, s, w: 9, cu, s, sc, w | 9, cu, cu.-s, w: p.-cl, w : 1, ci.-cu |
| 23 | 4·9 | 14·1 | SW : WSW | W : WSW | 2·1 | 0·15 | 300 | 9 : 10, n, s, r | p.-cl, cu, s, n : p.-cl, hy.-d |
| 24 | 6·5 | 14·1 | SW : WSW : W | W : NW : WSW | 2·6 | 0·15 | 279 | p.-cl : 8 : p.-cl, cu, shs.-r | 8, cu, n, s : p.-cl, sh.-r : p.-cl, hy.-d |
| 25 | 12·2 | 14·0 | Calm : WSW | WSW : SSW | 0·5 | 0·00 | 139 | th.-cl : 1 : 2, ci, cu | 5, cu : 3, cu, s : 1, d |
| 26 | 9·5 | 13·9 | Calm : NE : E | ESE : E | 1·4 | 0·05 | 160 | 1, th.-cl : 1 : 4, cu, th.-cl | 3, cu, th.-cl : 10, ci.-s, cu, s: 10, s |
| 27 | 4·1 | 13·9 | ENE : NE | E : ENE | 2·3 | 0·14 | 256 | 10, r : 10, c.-r : 8, oc.-slt.-r | 4, ci, ci.-s, ci.-cu: 9, cu : p.-cl |
| 28 | 9·8 | 13·8 | ENE : E | ESE : Calm | 1·4 | 0·08 | 209 | 9 : 10 : 1, cu, li.-cl | 1, ci, ci.-cu, so.-ha: th.-cl : li.-cl |
| 29 | 1·6 | 13·8 | Calm : ENE : Variable | ESE : Calm | 0·4 | 0·00 | 119 | p.-cl : 8 : 9, cu, n, l, t, r | 10, oc.-r : 10, fq.-r, slt.-m: 1, slt.-m |
| 30 | 0·8 | 13·7 | Calm : Variable | Calm : Variable : NNE | 0·2 | 0·00 | 86 | 1, f : 1, f : p.-cl, th.-cl, n | 10, s, n : 10, oc.-r : 9, slt.-m |
| 31 | 0·0 | 13·6 | NNE : N | NNE | 1·0 | 0·02 | 189 | 10, m.-r : 10, oc.-r : 10, n, fq.-r | 10, n, fq.-r : 10, n, fq.-r : 10, oc.-slt.-r |
| Means | 4·6 | 14·5 | ... | ... | ... | 0·09 | 202 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 55°·8, being 1°·7 *lower* than
The mean *Temperature of the Dew Point* for the month was 52°·0, being 2°·0 *lower* than
The mean *Degree of Humidity* for the month was 75·3, being 1·0 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·388, being 0in·030 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·3, being 0gr·3 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 531 grains, being 3 grains *greater* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·6.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·317. The maximum daily amount of *Sunshine* was 12·2 hours on August 25.

The highest reading of the *Solar Radiation Thermometer* was 151°·3 on August 5; and the lowest reading of the *Terrestrial Radiation Thermometer* was 32°·1 on August 26.

The *Proportions of Wind* referred to the cardinal points were N. 6, E. 8, S. 2, and W. 7. Eight days were calm.

The *Greatest Pressure of the Wind* in the month was 8·0 lbs. on the square foot on August 22. The mean daily *Horizontal Movement of the Air* for the month was 202 miles; the greatest daily value was 423 miles on August 22; and the least daily value was 86 miles on August 30.

*Rain* (0in·005 or over) fell on 11 days in the month, amounting to 1in·669, as measured by gauge No. 6 partly sunk below the ground; being 0in·675 *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Difference. Greatest. | Difference. Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Sept. 1 | Perigee | 29.783 | 58.7 | 54.4 | 4.3 | 55.9 | − 3.9 | 55.2 | 54.6 | 1.3 | 3.5 | 0.0 | 95 | 66.6 | 54.1 | 60.93 | 0.514 | wwP, wwN : wP |
| 2 | In Equator | 29.831 | 63.0 | 54.9 | 8.1 | 57.6 | − 2.1 | 57.1 | 56.7 | 0.9 | 2.3 | 0.2 | 97 | 76.0 | 54.0 | 60.75 | 0.058 | wwP : wwP : ... |
| 3 | ... | 29.912 | 67.8 | 53.5 | 14.3 | 59.5 | − 0.1 | 57.1 | 55.0 | 4.5 | 9.5 | 1.6 | 86 | 110.8 | 52.0 | 60.57 | 0.001 | ... : wwP : ... |
| 4 | ... | 29.889 | 68.0 | 59.4 | 8.6 | 61.8 | + 2.3 | 59.2 | 57.0 | 4.8 | 11.0 | 2.1 | 84 | 106.3 | 55.0 | 60.50 | 0.000 | ... : wwP : ... |
| 5 | ... | 29.901 | 65.1 | 58.2 | 6.9 | 60.5 | + 1.1 | 58.8 | 57.3 | 3.2 | 8.0 | 0.6 | 90 | 93.0 | 57.6 | 60.42 | 0.287 | ... : wwP, wwN |
| 6 | ... | 30.056 | 65.5 | 54.5 | 11.0 | 59.7 | + 0.5 | 57.1 | 54.8 | 4.9 | 10.7 | 1.7 | 84 | 85.2 | 49.0 | 60.47 | 0.000 | wwP |
| 7 | First Quarter | 30.123 | 69.0 | 52.7 | 16.3 | 58.6 | − 0.4 | 54.6 | 51.0 | 7.6 | 15.7 | 1.6 | 76 | 120.6 | 44.5 | 60.47 | 0.000 | wwP : wP |
| 8 | Greatest Dec. S. | 30.112 | 69.8 | 48.2 | 21.6 | 57.9 | − 0.9 | 54.1 | 50.7 | 7.2 | 17.7 | 0.4 | 77 | 125.2 | 36.3 | 60.38 | 0.000 | wP |
| 9 | ... | 30.002 | 67.8 | 46.2 | 21.6 | 53.8 | − 4.8 | 51.9 | 50.1 | 3.7 | 9.5 | 0.0 | 88 | 108.0 | 35.2 | 60.17 | 0.055 | wP |
| 10 | ... | 30.080 | 64.3 | 45.3 | 19.0 | 53.5 | − 4.9 | 49.5 | 45.5 | 8.0 | 15.6 | 0.9 | 74 | 108.4 | 36.1 | 59.98 | 0.000 | wP : wP : mP |
| 11 | ... | 29.951 | 71.1 | 47.9 | 23.2 | 58.5 | + 0.4 | 55.3 | 52.4 | 6.1 | 12.0 | 2.1 | 80 | 112.5 | 38.1 | 59.68 | 0.000 | wP |
| 12 | ... | 29.646 | 71.0 | 52.8 | 18.2 | 59.7 | + 1.7 | 57.0 | 54.6 | 5.1 | 11.2 | 0.4 | 84 | 132.0 | 43.0 | 59.49 | 0.000 | wP |
| 13 | ... | 29.317 | 71.6 | 49.1 | 22.5 | 59.2 | + 1.4 | 55.1 | 51.4 | 7.8 | 17.5 | 0.0 | 76 | 118.6 | 37.0 | 59.55 | 0.000 | wP |
| 14 | ... | 29.213 | 66.3 | 46.7 | 19.6 | 57.0 | − 0.7 | 52.2 | 47.8 | 9.2 | 19.1 | 1.9 | 71 | 126.0 | 33.5 | 59.58 | 0.008 | wwP, wwN : wP : wP |
| 15 | Apogee : Full | 29.374 | 64.2 | 44.9 | 19.3 | 53.3 | − 4.3 | 50.1 | 46.9 | 6.4 | 14.4 | 0.2 | 79 | 125.2 | 29.8 | 59.50 | 0.099 | wP, wN : vP, vN : wP |
| 16 | In Equator | 29.402 | 65.8 | 43.0 | 22.8 | 53.2 | − 4.3 | 50.4 | 47.6 | 5.6 | 16.8 | 0.0 | 81 | 113.1 | 28.5 | 59.30 | 0.380 | wP : wP : vP, ssN |
| 17 | ... | 29.420 | 66.0 | 47.3 | 18.7 | 54.6 | − 2.6 | 52.7 | 50.9 | 3.7 | 12.3 | 0.4 | 87 | 131.7 | 38.0 | 58.95 | 0.020 | wP |
| 18 | ... | 29.658 | 65.8 | 45.3 | 20.5 | 53.6 | − 3.3 | 52.0 | 50.4 | 3.2 | 9.7 | 0.0 | 89 | 119.0 | 35.8 | 58.73 | 0.000 | wP |
| 19 | ... | 29.761 | 70.9 | 42.1 | 28.8 | 55.1 | − 1.4 | 52.6 | 50.2 | 4.9 | 15.9 | 0.0 | 84 | 117.9 | 34.0 | 58.70 | 0.045 | wP : wP : wP, wwN |
| 20 | ... | 29.721 | 61.2 | 51.5 | 9.7 | 56.0 | − 0.2 | 52.9 | 50.0 | 6.0 | 12.3 | 0.6 | 80 | 84.0 | 45.6 | 58.46 | 0.047 | vN, wP : wP : mP |
| 21 | ... | 29.954 | 67.0 | 49.5 | 17.5 | 56.4 | + 0.5 | 54.1 | 51.9 | 4.5 | 11.2 | 0.2 | 85 | 99.0 | 40.4 | 58.46 | 0.000 | wP |
| 22 | ... | 29.954 | 66.3 | 46.0 | 20.3 | 55.4 | − 0.2 | 53.4 | 51.5 | 3.9 | 11.0 | 0.2 | 87 | 103.0 | 37.9 | 58.41 | 0.038 | wP |
| 23 | Greatest Dec. N. : Last Quarter | 29.826 | 64.1 | 52.4 | 11.7 | 57.1 | + 1.7 | 55.5 | 54.1 | 3.0 | 8.2 | 0.0 | 89 | 95.3 | 49.4 | 58.30 | 0.095 | wP |
| 24 | ... | 29.772 | 71.6 | 51.0 | 20.6 | 60.8 | + 5.5 | 56.2 | 52.2 | 8.6 | 19.2 | 0.0 | 73 | 118.0 | 37.2 | 58.42 | 0.000 | wP |
| 25 | ... | 29.769 | 72.5 | 49.6 | 22.9 | 60.4 | + 5.2 | 57.1 | 54.3 | 6.1 | 13.2 | 0.9 | 81 | 124.9 | 34.9 | 58.45 | 0.000 | wP |
| 26 | ... | 29.813 | 77.4 | 55.3 | 22.1 | 63.8 | + 8.6 | 61.2 | 59.0 | 4.8 | 15.1 | 0.6 | 85 | 121.2 | 46.0 | 58.48 | 0.000 | wP : wwP : wwP |
| 27 | ... | 29.797 | 75.0 | 52.5 | 22.5 | 63.6 | + 8.5 | 59.4 | 55.9 | 7.7 | 21.8 | 1.5 | 77 | 124.8 | 39.8 | 58.68 | 0.000 | wwP : wwP : wP |
| 28 | ... | 29.796 | 70.9 | 50.3 | 20.6 | 58.6 | + 3.7 | 55.8 | 53.3 | 5.3 | 11.2 | 0.6 | 83 | 114.2 | 35.7 | 58.81 | 0.000 | wP |
| 29 | In Equator : Perigee | 29.831 | 69.0 | 49.4 | 19.6 | 57.9 | + 3.2 | 55.7 | 53.7 | 4.2 | 12.4 | 0.0 | 86 | 112.1 | 37.3 | 58.83 | 0.000 | wP |
| 30 | New | 29.753 | 67.8 | 53.1 | 14.7 | 58.8 | + 4.4 | 55.6 | 52.7 | 6.1 | 15.4 | 0.2 | 81 | 111.9 | 47.1 | 58.80 | 0.000 | wP |
| Means | ... | 29.781 | 67.8 | 50.2 | 17.6 | 57.7 | + 0.5 | 55.0 | 52.4 | 5.3 | 12.8 | 0.6 | 83.0 | 110.2 | 41.4 | 59.41 | Sum 1.647 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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 $29^{in}.781$, being $0^{in}.030$ *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 77°.4 on September 26; the lowest in the month was 42°.1 on September 19; and the range was 35°.3.
The mean of all the highest daily readings in the month was 67°.8, being 0°.5 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 50°.2, being 1°.1 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 17°.6, being 0°.6 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 57°.7, being 0°.5 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Sept. 1 | 0·0 | 13·6 | NNE : N | N : NNW | 0·1 | 0·08 | 151 | 10, fq.-r : 10, fq.-r : 10, s, n, th.-r | 10, n, fq.-th.-r : 10, fq.-r |
| 2 | 0·0 | 13·5 | WSW : Calm : NE | NE : ENE | 1·9 | 0·05 | 187 | 10, th.-r, m : 10, m : 10, s, n | 10, s, n, th.-r : 10, r : 10, oc.-m.-r |
| 3 | 2·4 | 13·4 | ENE : E | E : ENE : ESE | 1·5 | 0·06 | 243 | 10 : 10, s, n | p.-cl, cu, n : 9, slt.-sh : 10 |
| 4 | 0·9 | 13·3 | E | E : ESE | 2·5 | 0·36 | 362 | 9 : 10 : 10, cu, s, n | 9, cu, cu.-s, s : 10, cu.-s, s, n : 10 |
| 5 | 0·2 | 13·3 | E : ENE | E : ENE | 2·2 | 0·21 | 303 | 9 : 10 : 9, s, n | 10, s, r : 10, c.-r : 10, r |
| 6 | 0·9 | 13·2 | ENE | ENE : E | 2·9 | 0·31 | 349 | 10 : 10, s, n | 10, n : p.-cl : p.-cl |
| 7 | 7·1 | 13·2 | NE : ENE | ENE : E | 2·9 | 0·32 | 329 | p.-cl : p.-cl : 7, cu, cu.-s | p.-cl : p.-cl |
| 8 | 10·9 | 13·1 | ENE : E | ENE : SE : Calm | 2·1 | 0·09 | 204 | p.-cl : p.-cl, cu : p.-cl, cu | 4, cu : 1, hy.-d : 0, d |
| 9 | 0·7 | 13·1 | Calm : W : N | N : NE | 1·6 | 0·07 | 210 | f : 9 : 9, s, n | 10, th.-r : 10, fq.-r : 1 |
| 10 | 7·2 | 13·0 | NNE | NNE : NE : Calm | 1·6 | 0·04 | 177 | 0 : p.-cl : 3, ci, cu | 8, cu, s, n : p.-cl : p.-cl, m |
| 11 | 5·4 | 12·9 | WSW : W : WNW | W : WSW : SW | 0·5 | 0·00 | 182 | 9 : p.-cl : p.-cl, cu | p.-cl, cu, s, n : 8, cu : p.-cl |
| 12 | 6·2 | 12·9 | SW | SW : SSW | 2·1 | 0·11 | 262 | 9 : 9 : 8, cu, n | 8, cu, n : p.-cl : 1, hy.-d |
| 13 | 8·5 | 12·8 | SSW : Calm : S | SW : SSW : SSE | 1·3 | 0·05 | 195 | p.-cl : p.-cl, slt.-f : 3, cu | 5, cu : 5, d : p.-cl, slt.-sh |
| 14 | 10·4 | 12·7 | SSE : SSW : SW | SW : SSW | 4·0 | 0·41 | 347 | p.-cl, shs.-r : 3, cu, n, w | 4, cu, n, w : 5, cu, li.-cl, hy.-d : p.-cl |
| 15 | 7·8 | 12·7 | S : SSE : SW | SW : SSW : S | 2·9 | 0·06 | 182 | 10, slt.-sh : p.-cl : p.-cl, ci, ci.-s, sh.-r | p.-cl, cu, n, shs.-r, t : p.-cl, hy.-d, slt.-m : 1, th.-cl, d |
| 16 | 3·7 | 12·6 | ESE : Calm : SE | ESE : ENE : NE | 4·5 | 0·15 | 220 | p.-cl : p.-cl, m : 6, ci.-s, cu, n | 9, cu.-s, s, n : 9, t.-sm, hy.-r : 9 |
| 17 | 2·2 | 12·5 | NE : SW : Calm | SW : Calm | 0·4 | 0·02 | 111 | 10, slt.-sh : 9 : p.-cl, cu, s, n | 9, cu, n, s : p.-cl, cu, th.-cl, lu.-ha, d : s, slt.-f, hy.-d |
| 18 | 1·5 | 12·5 | Calm | SE : Calm | 0·1 | 0·00 | 80 | f : 10, slt.-f : 10, slt.-f, oc.-th.-r | 8, cu, cu.-s : p.-cl : 0, hy.-d |
| 19 | 7·3 | 12·4 | Calm : SW | WSW : SW | 0·9 | 0·03 | 131 | 0, hy.-d : 0, slt.-f : 4, ci, cu, n | 7, ci, cu, n : th.-cl : p.-cl, r, lu.-ha |
| 20 | 0·7 | 12·3 | SSW : SW : NW | NW : WNW | 2·1 | 0·15 | 272 | 10, r : 10, oc.-slt.-r : 10, n, s | 9, cu, cu.-s, n, s : 9 |
| 21 | 3·8 | 12·3 | WNW : Calm : NNE | NNE : Calm | 0·6 | 0·00 | 103 | 10 : 10 : 8, cu, n | 2, cu : li.-cl, slt.-f : 0, slt.-f |
| 22 | 3·0 | 12·2 | Calm : W | W : Calm | 0·3 | 0·00 | 152 | 0, f : th.-cl : 7, cu, s, so.-ha | p.-cl, s : 10, s, slt.-r : 10, r |
| 23 | 0·1 | 12·1 | Calm : S | SSW : S : SSE | 1·8 | 0·05 | 178 | 10, fq.-r : 10, slt.-r : 10, sc, n, fq.-r | 9, sc, cu.-s : 9, cu.-s, s : p.-cl, th.-cl |
| 24 | 10·2 | 12·1 | SSE : S : SSW | S : SSE | 2·0 | 0·12 | 213 | th.-cl : th.-cl : 0 | 1, ci : 0, hy.-d |
| 25 | 8·2 | 12·0 | S : SSE | SSE | 0·9 | 0·05 | 169 | 1, lu.-co : th.-cl, lu.-co : 6, ci.-s, so.-ha | 4, ci.-s, th.-cl : 0 li.-cl, hy.-d |
| 26 | 4·0 | 11·9 | Calm | S | 0·4 | 0·01 | 129 | p.-cl, slt.-f : 10 : 8, ci.-s, cu, s, so.-ha | 6, ci.-s, cu, so.-ha : p.-cl, ci.-s, cu : 0, hy.-d |
| 27 | 10·5 | 11·9 | S | SSE : SE | 0·6 | 0·03 | 182 | 1 : p.-cl, th.-cl : 1, ci, ci.-s | 1, ci, ci.-s : 4, ci, ci.-s, ci.-cu : th.-cl |
| 28 | 10·1 | 11·8 | SE | SE : ESE : Calm | 0·9 | 0·04 | 175 | 1 : 0 : 0 | 0 : 0 : 0, slt.-f, hy.-d |
| 29 | 7·9 | 11·8 | Calm : ESE : E | ESE : SE : E | 1·0 | 0·05 | 194 | 0, f : f : 5, cu, li.-cl | 1, cu : 1 : 9, slt.-f |
| 30 | 6·7 | 11·7 | ENE : E | ESE : E : ENE | 2·3 | 0·13 | 249 | 10, f : 9 : p.-cl, cu | 3, cu : p.-cl, cu : 1, slt.-m |
| Means | 5·0 | 12·6 | ... | ... | ... | 0·10 | 208 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 55°·0, being 0°·9 *higher* than
The mean *Temperature of the Dew Point* for the month was 52°·4, being 1°·2 *higher* than
The mean *Degree of Humidity* for the month was 83·0, being 2·8 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·394, being 0in·017 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·4, being 0gr·2 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 532 grains, being 1 grain *less* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·0.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·392. The maximum daily amount of *Sunshine* was 10·9 hours on September 8.

The highest reading of the *Solar Radiation Thermometer* was 132°·0 on September 12; and the lowest reading of the *Terrestrial Radiation Thermometer* was 28°·5 on September 16.

The *Proportions of Wind* referred to the cardinal points were N. 4, E. 9, S. 8, and W. 4. Five days were calm.

The *Greatest Pressure of the Wind* in the month was 4·5 lbs. on the square foot on September 16. The mean daily *Horizontal Movement of the Air* for the month was 208 miles; the greatest daily value was 362 miles on September 4; and the least daily value was 80 miles on September 18.

*Rain* (0in·005 or over) fell on 12 days in the month, amounting to 1in·647, as measured by gauge No. 6 partly sunk below the ground; being 0in·501 *less* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Oct. 1 | ... | 29·672 | 66·6 | 54·1 | 12·5 | 58·3 | + 4·2 | 55·6 | 53·2 | 5·1 | 14·0 | 1·6 | 83 | 111·6 | 46·0 | 58·77 | 0·001 | wP : wP, wN : wP, mN |
| 2 | ... | 29·665 | 66·1 | 54·4 | 11·7 | 59·1 | + 5·4 | 57·0 | 55·1 | 4·0 | 11·2 | 1·0 | 87 | 105·1 | 47·5 | 58·72 | 0·001 | wN, wP : wP, vN : wP |
| 3 | ... | 29·734 | 67·0 | 48·1 | 18·9 | 56·0 | + 2·7 | 53·6 | 51·3 | 4·7 | 11·6 | 0·8 | 85 | 111·9 | 36·2 | 58·70 | 0·000 | wP |
| 4 | ... | 29·588 | 67·3 | 48·1 | 19·2 | 55·3 | + 2·3 | 53·7 | 52·2 | 3·1 | 10·5 | 0·2 | 90 | 109·9 | 36·1 | 58·65 | 0·220 | wP : wP : vP, ssN |
| 5 | Greatest Dec. S. | 29·414 | 61·2 | 46·4 | 14·8 | 53·6 | + 0·8 | 51·8 | 50·1 | 3·5 | 6·0 | 0·4 | 88 | 88·5 | 36·1 | 58·49 | 0·028 | wP, mN : wP : wP |
| 6 | ... | 29·483 | 63·2 | 42·7 | 20·5 | 53·2 | + 0·7 | 50·1 | 47·0 | 6·2 | 14·7 | 1·8 | 79 | 115·2 | 31·0 | 58·40 | 0·001 | wP : wP, mN : wP |
| 7 | First Quarter | 29·344 | 63·0 | 50·3 | 12·7 | 54·5 | + 2·2 | 52·6 | 50·7 | 3·8 | 10·1 | 1·2 | 87 | 100·2 | 41·0 | 58·10 | 0·331 | wP, wwN : wN, wP : wP |
| 8 | ... | 29·230 | 61·4 | 50·7 | 10·7 | 54·3 | + 2·3 | 52·5 | 50·7 | 3·6 | 7·4 | 1·4 | 88 | 103·9 | 40·9 | 57·83 | 0·292 | wP, mN |
| 9 | ... | 29·688 | 61·0 | 44·8 | 16·2 | 53·1 | + 1·5 | 49·6 | 46·1 | 7·0 | 14·0 | 2·3 | 77 | 99·6 | 32·0 | 57·60 | 0·000 | wP |
| 10 | ... | 29·857 | 59·8 | 42·1 | 17·7 | 50·6 | − 0·7 | 46·8 | 42·8 | 7·8 | 13·7 | 2·3 | 76 | 96·0 | 29·6 | 57·41 | 0·000 | wP |
| 11 | ... | 29·766 | 54·0 | 45·0 | 9·0 | 49·9 | − 1·0 | 48·9 | 47·9 | 2·0 | 4·6 | 0·2 | 93 | 63·0 | 38·9 | 57·08 | 0·627 | wP : wP, mN : wP |
| 12 | Apogee | 30·092 | 63·9 | 46·2 | 17·7 | 52·9 | + 2·3 | 51·2 | 49·5 | 3·4 | 10·8 | 0·2 | 89 | 99·0 | 38·0 | 56·75 | 0·000 | wP |
| 13 | In Equator | 30·257 | 64·2 | 44·1 | 20·1 | 52·4 | + 2·1 | 51·1 | 49·8 | 2·6 | 9·7 | 0·2 | 91 | 100·2 | 34·0 | 56·50 | 0·001* | wP |
| 14 | ... | 30·123 | 61·8 | 46·0 | 15·8 | 53·5 | + 3·4 | 51·2 | 48·9 | 4·6 | 10·0 | 0·2 | 84 | 96·1 | 35·9 | 56·37 | 0·001* | wP |
| 15 | Full | 29·995 | 58·0 | 52·6 | 5·4 | 55·2 | + 5·3 | 52·2 | 49·3 | 5·9 | 11·0 | 1·4 | 81 | 78·9 | 47·0 | 56·22 | 0·115 | wP |
| 16 | ... | 30·124 | 62·4 | 43·0 | 19·4 | 52·7 | + 2·9 | 50·6 | 48·5 | 4·2 | 13·7 | 0·4 | 86 | 100·0 | 31·7 | 56·22 | 0·000 | wP : wP : ... |
| 17 | ... | 30·023 | 61·2 | 38·9 | 22·3 | 48·2 | − 1·4 | 46·5 | 44·7 | 3·5 | 11·7 | 0·4 | 88 | 100·8 | 26·1 | 56·13 | 0·001* | wP |
| 18 | ... | 29·900 | 63·2 | 41·2 | 22·0 | 50·5 | + 1·2 | 47·7 | 44·8 | 5·7 | 13·1 | 0·2 | 81 | 106·0 | 26·1 | 55·92 | 0·000 | wP |
| 19 | ... | 29·714 | 61·0 | 43·1 | 17·9 | 52·0 | + 2·9 | 50·2 | 48·4 | 3·6 | 9·7 | 1·1 | 87 | 99·7 | 31·0 | 55·69 | 0·000 | wP |
| 20 | Greatest Dec. N. | 29·544 | 61·9 | 53·5 | 8·4 | 57·4 | + 8·6 | 55·3 | 53·4 | 4·0 | 9·2 | 0·6 | 87 | 79·0 | 45·0 | 55·59 | 0·116 | wP : wP : wwP, wN |
| 21 | ... | 29·396 | 57·7 | 44·1 | 13·6 | 51·3 | + 2·7 | 50·4 | 49·5 | 1·8 | 5·8 | 0·8 | 94 | 67·8 | 40·2 | 55·57 | 0·574 | wP, wN |
| 22 | Last Quarter | 29·610 | 59·2 | 40·2 | 19·0 | 47·0 | − 1·3 | 44·6 | 41·9 | 5·1 | 13·1 | 0·4 | 83 | 102·5 | 28·4 | 55·59 | 0·000 | wP |
| 23 | ... | 29·920 | 53·4 | 36·1 | 17·3 | 44·0 | − 4·1 | 42·7 | 41·1 | 2·9 | 8·5 | 0·0 | 90 | 72·9 | 28·2 | 55·30 | 0·000 | wP |
| 24 | ... | 30·063 | 55·2 | 37·4 | 17·8 | 43·6 | − 4·3 | 42·8 | 41·8 | 1·8 | 8·6 | 0·0 | 94 | 87·2 | 28·7 | 54·91 | 0·002* | wP |
| 25 | ... | 29·841 | 60·2 | 37·1 | 23·1 | 48·2 | + 0·5 | 47·0 | 45·7 | 2·5 | 8·0 | 0·0 | 92 | 90·0 | 31·8 | 54·52 | 0·002* | wP |
| 26 | ... | 29·481 | 56·2 | 47·3 | 8·9 | 52·4 | + 4·8 | 52·1 | 51·8 | 0·6 | 2·1 | 0·4 | 99 | 62·0 | 40·2 | 54·18 | 0·782 | wwP : wP, wN : wwN, wwP |
| 27 | In Equator | 29·426 | 63·0 | 48·3 | 14·7 | 55·7 | + 8·2 | 53·8 | 52·0 | 3·7 | 7·5 | 0·4 | 88 | 103·2 | 38·2 | 54·03 | 0·000 | wwP |
| 28 | Perigee | 29·222 | 64·0 | 51·1 | 12·9 | 57·1 | + 9·7 | 54·6 | 52·3 | 4·8 | 7·9 | 1·8 | 84 | 96·0 | 39·0 | 54·11 | 0·212 | wP, wN : wP, wN : wP, vN |
| 29 | New | 29·111 | 64·2 | 50·6 | 13·6 | 57·1 | + 9·8 | 53·2 | 49·6 | 7·5 | 14·0 | 2·2 | 76 | 101·6 | 41·2 | 54·32 | 0·005 | wwP : wP : wP |
| 30 | ... | 29·358 | 59·2 | 50·2 | 9·0 | 54·1 | + 6·9 | 51·3 | 48·6 | 5·5 | 10·6 | 2·6 | 81 | 85·0 | 42·1 | 54·39 | 0·064 | wP : wP : wN, wP |
| 31 | ... | 29·624 | 58·0 | 45·1 | 12·9 | 51·2 | + 4·1 | 48·4 | 45·5 | 5·7 | 12·0 | 1·4 | 81 | 94·6 | 36·2 | 54·42 | 0·047 | wP, wwN : wP, mN : wP |
| Means | ... | 29·686 | 61·2 | 45·9 | 15·3 | 52·7 | + 2·7 | 50·6 | 48·5 | 4·2 | 10·2 | 0·9 | 86·1 | 94·4 | 36·3 | 56·34 | Sum 3·423 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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.

* Rainfall (Column 17). The amounts entered on October 13, 14, 17, 24, and 25 are derived from fog and dew.

The mean reading of the *Barometer* for the month was 29in·686, being 0in·035 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 67°·3 on October 4; the lowest in the month was 36°·1 on October 23; and the range was 31°·2.
The mean of all the highest daily readings in the month was 61°·2, being 3°·7 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 45°·9, being 2°·7 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 15°·3, being 1°·0 *greater* than the average for the 65 years, 1841–1905.
The mean for the month was 52°·7, being 2°·7 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Oct. 1 | 5·5 | 11·6 | ENE : E | ESE : E | 4·6 | 0·28 | 315 | p.-cl : 9 : 6, ci.-cu, cu, oc.-slt.-r, w | 3, cu, w : 1 : p.-cl, slt.-r, l |
| 2 | 3·5 | 11·6 | E : SE | SE : Calm : WSW | 0·9 | 0·01 | 145 | 10, f : p.-cl : p.-cl, cu, n | 10,cu,n,oc.-r,t : 9, l : 10, slt.-m |
| 3 | 3·9 | 11·5 | WSW : Calm | W : WSW | 0·1 | 0·00 | 141 | 10 : 10, slt.-f : p.-cl,ci.-cu, cu | 5, ci.-cu, cu : p.-cl, ci.-s, cu, d : p.-cl, f |
| 4 | 2·5 | 11·4 | Calm : Variable | SE : SSW : S | 0·9 | 0·01 | 133 | 9, f : 9, f : 9, cu, s | p.-cl, cu, n : p.-cl, r, hy.-sh., l : 2 |
| 5 | 0·0 | 11·4 | Calm : W | W | 0·7 | 0·01 | 153 | 0, f : 9 : 10,ci.-s, cu, s, slt.-r | 10, cu, n, s, slt.-r : 9, ci.-s, cu, n : 9 |
| 6 | 6·8 | 11·3 | W : Calm : S | Variable : SE : ESE | 0·8 | 0·02 | 159 | 9 : p.-cl : 5,ci,ci.-s,ci.-cu | p.-cl,cu,n,slt.-sh : p.-cl,ci,cu,n : p.-cl, hy.-d |
| 7 | 2·7 | 11·2 | SE : ESE : SW | SSW : SW : S | 2·6 | 0·17 | 236 | 9 : 10, c.-r : 10, s, n, c.-r | 5, cu : 3, cu : p.-cl |
| 8 | 2·1 | 11·1 | S : SW | SW : WSW : W | 4·0 | 0·29 | 326 | 9, slt.-r : 10, r : p.-cl,cu,cu.-s,fq.-shs | 9,cu, cu.-s, s, li.-shs : 10, sc, n, fq.-r : 10, w |
| 9 | 4·4 | 11·1 | W : N | N : NE : E | 0·7 | 0·03 | 184 | 10 : 9 : 5, ci.-s, cu, n | p.-cl, cu, n : p.-cl, slt.-m : p.-cl, hy.-d |
| 10 | 5·3 | 11·0 | E : ESE | SE : ESE | 2·3 | 0·19 | 222 | p.-cl, d : p.-cl,li.-cl : 5, ci.-cu, cu | 7,ci,ci.-s, cu : p.-cl : p.-cl, ci.-s, ci.-cu |
| 11 | 0·0 | 10·9 | ESE : E | Calm : Variable : W | 1·9 | 0·08 | 198 | 9 : p.-cl : 10, s, n, r | 10, c.-r : 10, r, slt.-m : p.-cl, m |
| 12 | 5·7 | 10·9 | W : Calm | W : Calm : SW | 0·3 | 0·02 | 131 | 9 : 10, f : 6, cu, s, slt.-f | 2, cu, n : p.-cl : p.-cl,slt.-m,d |
| 13 | 4·2 | 10·8 | SW : Calm | S | 0·1 | 0·00 | 115 | p.-cl, m : f : 8, cu, s, slt.-f | 7, ci.-s, cu, h,so.-ha : p.-cl, cu, s, lu.-ha : s,hy.-d,lu.-ha,lu.-co |
| 14 | 0·9 | 10·8 | SSW : S : SW | SW | 1·9 | 0·15 | 247 | th.-cl : 9, th.-cl : 9, cu, n | 9, cu, n, s : 10 : p.-cl |
| 15 | 4·1 | 10·7 | W : N | N : NNE | 1·5 | 0·17 | 269 | 10, r : p.-cl | 9, cu.-s, n : 10, s, n |
| 16 | 3·4 | 10·6 | Calm | SE : S : Calm | 0·0 | 0·00 | 106 | 10 : 9 : 7, cu, cu.-s | 6, cu : 1 : 0,slt.-m,hy.-d,lu.-co |
| 17 | 7·6 | 10·6 | Calm : SSW | SW : S | 1·0 | 0·03 | 142 | 0, f : 0, f : 3, cu | 1, cu : 0, slt.-m, hy.-d : 1, li.-cl, slt.-m, hy.-d |
| 18 | 6·1 | 10·5 | SSE : Calm : WSW | WSW : SW | 0·7 | 0·02 | 177 | p.-cl : 9 : 5, cu, cu.-s | 1, cu : 1, th.-cl : 1, th.-cl,slt.-m, d |
| 19 | 4·3 | 10·5 | SW : S : SSW | S : SSW | 2·0 | 0·06 | 194 | p.-cl : 10 : 5 | 4 : 10 : p.-cl, d |
| 20 | 0·2 | 10·4 | SW | SW : SSW : S | 2·0 | 0·21 | 277 | p.-cl : p.-cl : 8, ci.-s, ci.-cu, cu | 10, s, oc.-th.-r : 10, slt.-r : p.-cl, slt.-r |
| 21 | 0·0 | 10·3 | SSW : SW : W | Calm : Variable : SW | 1·3 | 0·04 | 156 | 10, r : 10, s, n, fq.-r | 10, s, n, fq.-r : 10, n, r, slt.-f : 10, slt.-f, oc.-slt.-r |
| 22 | 6·7 | 10·3 | Calm : SSW | SW : Calm | 0·5 | 0·02 | 190 | p.-cl, th.-cl, lu.-ha : p.-cl : 8, ci, ci.-s, cu, so.-ha | 5, ci.-s, cu, n,so.-ha : p.-cl,cu,cu.-s : 1, f |
| 23 | 0·5 | 10·2 | Calm | NE : N | 0·9 | 0·03 | 131 | f, hy.-d : f : p.-cl, ci, ci.-s, ci.-cu, f, so.-ha | 9 : p.-cl, cu, s, slt.-f : p.-cl, h, d |
| 24 | 4·5 | 10·1 | NNE : NE : Calm | Calm | 0·3 | 0·00 | 79 | 10, slt.-f : 10 : 6, ci, ci.-s, s | 1,th.-cl, slt.-f : f : tk.-f, hy.-d |
| 25 | 4·8 | 10·1 | Calm : E | E : ESE | 1·0 | 0·05 | 176 | tk.-f : f : 2, cu, f | p.-cl, cu : p.-cl,cu,hy.-d : p.-cl, hy.-d |
| 26 | 0·0 | 10·0 | Calm | Calm : W : SW | 2·0 | 0·05 | 159 | 10, f : 10, f : 10, f, glm, r | 10, tk.-f, c.-r : 10, sc, s, r : p.-cl, ci.-s, th.-cl |
| 27 | 1·9 | 9·9 | SW : SSE : S | S : SSW : SW | 2·8 | 0·22 | 278 | p.-cl : 9 : 9, cu.-s, n | 8, cu.-s, s, n : p.-cl : p.-cl, d |
| 28 | 2·6 | 9·9 | SW : S | S : Variable | 2·4 | 0·20 | 258 | p.-cl : 9, r : 8, ci, cu, cu.-s, slt.-r | 8,cu.-s,s,n, sh.-r : 8, oc.-slt.-r : 10, r |
| 29 | 7·7 | 9·8 | S : SSE : SSW | SSW : SW | 8·5 | 0·77 | 398 | p.-cl, r : 1 : 5, ci.-s, cu, w | p.-cl,cu, cu.-s,w : p.-cl, w : p.-cl, shs.-r, w |
| 30 | 2·5 | 9·7 | SW : SSW | SSW: S | 5·2 | 0·44 | 369 | p.-cl, oc.-r, w : 8,ci.-s,cu,cu.-s,oc.-shs | 9, cu.-s, n, oc.-slt.-r : 9, oc.-slt.-r : p.-cl, slt.-r |
| 31 | 6·2 | 9·7 | S : WSW : SW | SW : S | 6·2 | 0·18 | 271 | 10, r, sq, w : 2 : 2, cu | p.-cl, ci, cu.-s, sh.-r : p.-cl : 9 |
| Means | 3·6 | 10·6 | ... | ... | ... | 0·12 | 204 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 50°·6, being 2°·7 *higher* than
The mean *Temperature of the Dew Point* for the month was 48°·5, being 2°·8 *higher* than
The mean *Degree of Humidity* for the month was 86·1, being 1·1 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·342, being 0in·035 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·8, being 0gr·3 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 536 grains, being 4 grains *less* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·4.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·335. The maximum daily amount of *Sunshine* was 7·7 hours on October 29.

The highest reading of the *Solar Radiation Thermometer* was 115°·2 on October 6 ; and the lowest reading of the *Terrestrial Radiation Thermometer* was 26°·1 on October 17 and 18.

The *Proportions of Wind* referred to the cardinal points were N. 1, E. 5, S. 11, and W. 7. Seven days were calm.

The *Greatest Pressure of the Wind* in the month was 8·5 lbs. on the square foot on October 29. The mean daily *Horizontal Movement of the Air* for the month was 204 miles ; the greatest daily value was 398 miles on October 29 ; and the least daily value was 79 miles on October 24.

*Rain* (0in·005 or over) fell on 13 days in the month, amounting to 3in·423, as measured by gauge No. 6 partly sunk below the ground ; being 0in·641 *greater* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Lowest. | Daily Range. | Mean of 24 Hourly Values. | Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Nov. 1 | ... | 29·680 | 58·0 | 43·6 | 14·4 | 49·4 | + 2·4 | 47·7 | 45·9 | 3·5 | 8·0 | 1·0 | 88 | 78·3 | 34·2 | 54·31 | 0·160 | vP, vN : wP : wP |
| 2 | Greatest Dec. S. | 29·624 | 59·2 | 51·0 | 8·2 | 54·4 | + 7·6 | 52·1 | 49·8 | 4·6 | 9·1 | 2·4 | 84 | 87·2 | 43·0 | 54·16 | 0·030 | wP |
| 3 | ... | 29·783 | 56·3 | 44·7 | 11·6 | 50·6 | + 4·0 | 46·8 | 42·8 | 7·8 | 12·5 | 2·4 | 76 | 93·2 | 35·0 | 54·00 | 0·110 | wN, wP : wP : wP |
| 4 | ... | 29·788 | 56·7 | 36·1 | 20·6 | 47·3 | + 0·9 | 45·0 | 42·5 | 4·8 | 11·1 | 0·4 | 84 | 90·9 | 25·5 | 53·82 | 0·000 | wP : vP : wP |
| 5 | First Quarter | 29·466 | 56·1 | 39·1 | 17·0 | 50·4 | + 4·3 | 48·0 | 45·5 | 4·9 | 13·3 | 0·6 | 84 | 77·2 | 28·1 | 53·55 | 0·005 | wP |
| 6 | ... | 29·253 | 53·0 | 39·1 | 13·9 | 44·5 | − 1·3 | 42·8 | 40·8 | 3·7 | 9·6 | 1·3 | 87 | 78·0 | 28·1 | 53·37 | 0·167 | wP : wP : mP, vN |
| 7 | ... | 29·425 | 51·1 | 38·8 | 12·3 | 44·8 | − 0·6 | 42·5 | 39·8 | 5·0 | 10·8 | 0·9 | 83 | 64·8 | 29·0 | 53·03 | 0·018 | vN, wP : mP : mP |
| 8 | ... | 29·505 | 54·0 | 37·5 | 16·5 | 45·3 | + 0·3 | 43·3 | 41·0 | 4·3 | 12·6 | 1·5 | 85 | 80·0 | 27·5 | 52·75 | 0·058 | wP, wwN : wP : mP |
| 9 | Apogee: In Equator | 29·565 | 55·0 | 36·0 | 19·0 | 45·6 | + 1·0 | 44·3 | 42·8 | 2·8 | 9·6 | 0·6 | 90 | 86·2 | 25·4 | 52·40 | 0·006 | mP : wP : wP |
| 10 | ... | 29·488 | 56·5 | 48·0 | 8·5 | 52·1 | + 7·8 | 51·5 | 50·9 | 1·2 | 4·1 | 0·2 | 96 | 63·5 | 36·0 | 52·06 | 0·124 | wwP : ... : wP, wN |
| 11 | ... | 29·327 | 59·1 | 44·1 | 15·0 | 51·6 | + 7·6 | 49·9 | 48·2 | 3·4 | 8·7 | 0·8 | 89 | 82·3 | 33·1 | 51·92 | 0·699 | wP, sN : vP, wN : vP, vN |
| 12 | ... | 29·134 | 57·0 | 48·4 | 8·6 | 52·5 | + 8·8 | 50·2 | 47·9 | 4·6 | 7·8 | 2·1 | 84 | 75·6 | 43·1 | 51·92 | 0·165 | wwP, wwN : wP, wN : wP, vN |
| 13 | Full | 29·048 | 49·0 | 41·9 | 7·1 | 45·7 | + 2·2 | 44·2 | 42·5 | 3·2 | 4·6 | 1·3 | 89 | 53·1 | 38·9 | 51·90 | 0·228 | wN, wP : vN, vP : wP |
| 14 | ... | 29·242 | 53·2 | 44·0 | 9·2 | 46·5 | + 3·2 | 43·7 | 40·5 | 6·0 | 12·0 | 1·3 | 81 | 72·8 | 35·9 | 51·78 | 0·271 | ... : wP |
| 15 | ... | 29·449 | 51·8 | 41·1 | 10·7 | 46·4 | + 3·3 | 43·2 | 39·6 | 6·8 | 12·4 | 2·7 | 78 | 65·5 | 35·0 | 51·47 | 0·000 | wP |
| 16 | Greatest Dec. N. | 29·725 | 53·8 | 43·9 | 9·9 | 49·4 | + 6·6 | 46·1 | 42·6 | 6·8 | 9·4 | 3·5 | 77 | 68·2 | 36·0 | 51·19 | 0·000 | ... : wP |
| 17 | ... | 29·906 | 59·5 | 52·0 | 7·5 | 55·0 | +12·4 | 52·3 | 49·7 | 5·3 | 12·3 | 2·0 | 83 | 78·0 | 47·9 | 51·01 | 0·001 | wP |
| 18 | ... | 29·890 | 58·6 | 44·0 | 14·6 | 53·2 | +10·8 | 50·7 | 48·2 | 5·0 | 10·4 | 1·8 | 83 | 79·9 | 35·2 | 51·16 | 0·016 | wP |
| 19 | ... | 30·171 | 50·1 | 39·9 | 10·2 | 44·5 | + 2·2 | 40·9 | 36·7 | 7·8 | 12·6 | 4·8 | 73 | 72·0 | 31·1 | 51·32 | 0·000 | wP : mP : wP |
| 20 | ... | 29·951 | 54·0 | 47·5 | 6·5 | 50·7 | + 8·5 | 47·7 | 44·6 | 6·1 | 9·8 | 1·8 | 80 | 67·7 | 40·0 | 51·22 | 0·019 | wP |
| 21 | Last Quarter | 29·678 | 54·2 | 45·1 | 9·1 | 50·9 | + 8·8 | 49·4 | 47·8 | 3·1 | 6·8 | 0·6 | 89 | 63·0 | 41·7 | 51·12 | 0·589 | wP : wP : wP, vN |
| 22 | ... | 30·072 | 46·1 | 31·7 | 14·4 | 41·0 | − 1·1 | 38·7 | 35·8 | 5·2 | 9·6 | 0·8 | 82 | 59·0 | 19·8 | 51·02 | 0·000 | wP : mP : mP |
| 23 | In Equator | 30·009 | 46·0 | 27·6 | 18·4 | 38·3 | − 3·7 | 37·7 | 36·9 | 1·4 | 2·2 | 0·0 | 95 | 65·9 | 19·0 | 50·70 | 0·006* | mP : wP |
| 24 | ... | 29·839 | 50·0 | 39·1 | 10·9 | 43·9 | + 1·9 | 42·7 | 41·3 | 2·6 | 6·8 | 0·4 | 90 | 62·5 | 27·0 | 50·36 | 0·019 | wP : wP : mP |
| 25 | Perigee | 30·001 | 51·9 | 38·2 | 13·7 | 46·6 | + 4·7 | 44·7 | 42·6 | 4·0 | 10·1 | 0·7 | 87 | 67·5 | 27·2 | 50·00 | 0·000 | wP |
| 26 | ... | 30·091 | 55·5 | 41·8 | 13·7 | 50·5 | + 8·7 | 47·7 | 44·8 | 5·7 | 9·3 | 3·3 | 81 | 63·1 | 32·2 | 49·81 | 0·001 | wP |
| 27 | ... | 30·196 | 52·2 | 37·2 | 15·0 | 45·0 | + 3·3 | 43·4 | 41·5 | 3·5 | 5·6 | 1·6 | 88 | 57·0 | 28·2 | 49·74 | 0·000 | wP |
| 28 | New | 30·205 | 55·8 | 44·7 | 11·1 | 51·4 | + 9·9 | 49·8 | 48·2 | 3·2 | 6·5 | 1·3 | 89 | 69·0 | 34·6 | 49·69 | 0·000 | wP |
| 29 | Greatest Dec. S. | 30·191 | 57·0 | 42·6 | 14·4 | 48·2 | + 7·0 | 46·8 | 45·3 | 2·9 | 6·8 | 0·7 | 90 | 66·0 | 33·0 | 49·76 | 0·002* | wP |
| 30 | ... | 30·097 | 54·0 | 51·4 | 2·6 | 52·1 | +11·1 | 49·8 | 47·5 | 4·6 | 7·0 | 2·4 | 84 | 61·1 | 49·4 | 49·81 | 0·000 | wP |
| Means | ... | 29·727 | 54·2 | 42·0 | 12·2 | 48·3 | + 4·8 | 46·1 | 43·7 | 4·5 | 9·0 | 1·5 | 84·8 | 71·6 | 33·3 | 51·68 | Sum 2·694 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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.

* Rainfall (Column 17). The amounts entered on November 23 and 29 are derived from frost, fog, and dew.

The mean reading of the *Barometer* for the month was 29in·727, being 0in·031 *lower* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 59°·5 on November 17; the lowest in the month was 27°·6 on November 23; and the range was 31°·9.
The mean of all the highest daily readings in the month was 54°·2, being 5°·2 *higher* than the average for the 65 years, 1841–1905.
The mean of all the lowest daily readings in the month was 42°·0, being 4°·1 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 12°·2, being 1°·1 *greater* than the average for the 65 years, 1841–1905.
The mean for the month was 48°·3, being 4°·8 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as Deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | P.M. | Pressure on the Square Foot. Greatest. | Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Nov. 1 | 2·0 | 9·6 | S : Calm | WSW : SW : SSW | 1·5 | 0·03 | 184 | 10, r : p.-cl, slt.-f : p.-cl, ci.-s, ci.-cu, slt.-f, so.-ha | 6 : 1 : p.-cl, hy.-d |
| 2 | 1·7 | 9·6 | SW : WSW | WSW : SW | 5·3 | 0·87 | 471 | 10, w : 10, r, w : 9, sc, n, th.-r, so.-ha | 8, ci, ci.-s, ci.-cu, s : p.-cl : 10, slt.-r, w |
| 3 | 3·5 | 9·5 | SW : W | W : WSW | 4·7 | 0·40 | 351 | p.-cl, sh.-r, w : 1 : p.-cl, cu, cu.-s | 8, cu, cu.-s : p.-cl : 2 |
| 4 | 6·2 | 9·4 | Calm : SE | S : SSE : Calm | 0·6 | 0·01 | 150 | 0, ho.-fr : p.-cl, m, f, ho.-fr : p.-cl, cu.-s, f | 3, cu, cu.-s : p.-cl : 10, s |
| 5 | 3·6 | 9·4 | SE : S : W | W : WSW | 2·4 | 0·19 | 301 | 10, th.-r : 10, slt.-r : p.-cl, slt.-r | p.-cl, ci.-s, cu, cu.-s : p.-cl, li.-shs : p.-cl |
| 6 | 1·8 | 9·3 | SW : SSW | SW : SSW : Calm | 1·0 | 0·05 | 224 | p.-cl : 9, slt.-r : 8, ci, ci.-s, s | 6, ci, ci.-s, cu.-s, s : p.-cl, cu.-s, th.-cl, r : 10, fq.-r |
| 7 | 2·0 | 9·3 | NNE : N : NNW | NW : W : SW | 2·0 | 0·14 | 260 | 10, slt.-r : 10 : 7, cu, s, th.-cl, h | 2, cu, h : p.-cl : li.-cl, lu.-ha, d, slt.-f |
| 8 | 3·9 | 9·2 | Variable | W : WSW | 4·0 | 0·22 | 315 | 9 : 10, slt.-r : 9, cu, n, fq.-th.-r, w | 2, ci.-s, w : 0, d |
| 9 | 4·1 | 9·2 | Calm | SE : ESE : E | 0·4 | 0·03 | 128 | 1, ho.-fr : p.-cl, slt.-f : 2, li.-cl, slt.-f | p.-cl, th.-r : 10 : 10, slt.-f |
| 10 | 0·1 | 9·1 | E : SE : S | SSE : Calm | 0·5 | 0·02 | 145 | 10, li.-shs : 10 : 9, cu.-s, s | 9, ci.-s, n, sh.-r : 9, sh.-r : 10, oc.-r |
| 11 | 4·1 | 9·1 | Variable : Calm : SW | SW : SSW | 7·0 | 0·18 | 269 | 9, sh.-r : 9, hy.-sh, m : 8, cu, cu.-s, r | 2, ci, ci.-s, cu.-s : 9, lu.-ha : p.-cl, fq.-r, lu.-ha, w |
| 12 | 1·0 | 9·0 | SSW : S : SW | SW | 9·0 | 0·64 | 445 | 9, oc.-slt.-r, l : 9, oc.-r, w : 8, ci, ci.-s, s, oc.-shs, w | 8, ci, ci.-s, n, li.-shs, so.-ha, w : 9, fq.-r, lu.-ha : 10, oc.-r, lu.-ha |
| 13 | 0·0 | 9·0 | WSW : W | WNW : NW | 5·7 | 0·70 | 514 | 10, oc.-r : 10, fq.-r : 10, sc, s, slt.-r, w | 10, sc, s, slt.-r, w : 10, slt.-r, w : p.-cl, w |
| 14 | 2·7 | 8·9 | W : SW | NW : W : WSW | 6·3 | 0·62 | 465 | p.-cl, lu.-ha : 10, r : 9, n, r, w | p.-cl, cu.-s, sh.-r, w : p.-cl, d : p.-cl, lu.-ha, d |
| 15 | 5·7 | 8·9 | WSW : W | W : WSW : SW | 5·5 | 0·54 | 471 | 10 : p.-cl : 1, cu, w | p.-cl, ci.-s, cu.-s, w : 10, slt.-r, lu.-ha, w |
| 16 | 0·0 | 8·8 | W : WSW | W : WSW | 3·8 | 0·55 | 479 | p.-cl, w : 9 : 10, s, so.-ha | 9, s, n, so.-ha : 10, s, n, w : 10, slt.-r, w |
| 17 | 1·8 | 8·8 | WSW : W | W : WSW | 8·6 | 0·73 | 484 | 10, w : 10 : 8, cu, cu.-s, s, w | 9, cu, cu.-s, glm, w : 10, slt.-r : 10 |
| 18 | 2·5 | 8·7 | SW : WSW | WSW : W | 10·0 | 0·90 | 532 | 10 : 10 : p.-cl, cu, cu.-s, w | 8, cu, cu.-s, sc, fq.-th.-r, w : p.-cl, w : 0, w |
| 19 | 5·3 | 8·7 | W | WSW : SW | 3·0 | 0·35 | 392 | 0 : p.-cl : 1, cu, th.-cl | p.-cl, cu, cu.-s : 5 : p.-cl |
| 20 | 0·0 | 8·6 | WSW | WSW : SW | 5·1 | 0·73 | 521 | 10, w : 10, w : 9, cu, cu.-s, s, w | 10, sc, s, n, w : 10, slt.-r, w : 9, m.-r, w |
| 21 | 0·0 | 8·5 | SW | SW : Calm : NNE | 8·0 | 0·78 | 459 | 10, w : 10, w : 9, sc, s, th.-r, w | 10, sc, s, n, fq.-r, w : 10, c.-r, hy.-shs : 10, r |
| 22 | 6·0 | 8·5 | NNE : N | NNE : Calm | 2·8 | 0·15 | 181 | 9 : p.-cl : 0 | 0 : 0, slt.-f, ho.-fr |
| 23 | 0·3 | 8·4 | Calm | SE : Calm : SSE | 0·1 | 0·00 | 94 | 0, tk.-f, ho.-fr : tk.-f, ho.-fr : p.-cl, s, th.-cl, f | 8, s : 10 : 9 |
| 24 | 1·9 | 8·4 | SSE : SW | WNW : W : SW | 1·1 | 0·04 | 235 | 10 : 10 : 7, cu.-s, s, th.-r | 9, cu, s, n : p.-cl : p.-cl |
| 25 | 2·4 | 8·3 | WSW : W | WSW : SW | 1·5 | 0·07 | 252 | p.-cl : 1, h : 5, th.-cl | 9, s : 10 : 9 |
| 26 | 0·0 | 8·3 | WSW : W | NW : N : W | 1·5 | 0·16 | 323 | 9 : 10, th.-r : 10, s, n | 10, s, n : p.-cl, th.-cl : th.-cl |
| 27 | 0·0 | 8·3 | W : WSW | W : WNW | 1·3 | 0·10 | 301 | 9, slt.-f : 10, m : 10, cu.-s, s | 10, s : 9 : p.-cl, d |
| 28 | 4·1 | 8·2 | WNW : NW : W | W : NW | 1·5 | 0·10 | 307 | 10 : 9 : 1, cu, h | 5, cu, s, n : p.-cl, s, n, d : p.-cl, d |
| 29 | 5·1 | 8·2 | W | W : WSW | 3·3 | 0·21 | 384 | p.-cl, th.-cl : p.-cl, slt.-m : 6, s | 0 : 0 : 10 |
| 30 | 0·0 | 8·2 | W : WSW | W | 3·8 | 0·42 | 445 | 10 : 10 : 9, cu.-s, n | 10 : 10 |
| Means | 2·4 | 8·8 | ... | ... | ... | 0·33 | 336 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 46°·1, being 4°·2 *higher* than the average for the 65 years, 1841–1905.
The mean *Temperature of the Dew Point* for the month was 43°·7, being 3°·7 *higher* than the average for the 65 years, 1841–1905.
The mean *Degree of Humidity* for the month was 84·8, being 2·5 *less* than the average for the 65 years, 1841–1905.
The mean *Elastic Force of Vapour* for the month was 0in·285, being 0in·038 *greater* than the average for the 65 years, 1841–1905.
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·3, being 0gr·5 *greater* than the average for the 65 years, 1841–1905.
The mean *Weight of a Cubic Foot of Air* for the month was 542 grains, being 6 grains *less* than the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 6·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·271. The maximum daily amount of *Sunshine* was 6·2 hours on November 4.

The highest reading of the *Solar Radiation Thermometer* was 93°·2 on November 3; and the lowest reading of the *Terrestrial Radiation Thermometer* was 19°·0 on November 23.

The *Proportions of Wind* referred to the cardinal points were N. 2, E. 0, S. 7, and W. 18. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 10·0 lbs. on the square foot on November 18. The mean daily *Horizontal Movement of the Air* for the month was 336 miles; the greatest daily value was 532 miles on November 18; and the least daily value was 94 miles on November 23.

*Rain* (0in·005 or over) fell on 17 days in the month, amounting to 2in·694, as measured by gauge No. 6 partly sunk below the ground; being 0in·474 *greater* than the average fall for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Phases of the Moon. | BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit). | TEMPERATURE. Of the Air. Highest. | Of the Air. Lowest. | Of the Air. Daily Range. | Of the Air. Mean of 24 Hourly Values. | Of the Air. Excess above Average of 65 Years. | Of Evaporation. Mean of 24 Hourly Values. | Of the Dew Point. Deduced Mean Daily Value. | Difference between the Air Temperature and Dew Point Temperature. Mean. | Greatest. | Least. | Degree of Humidity (Saturation = 100). | TEMPERATURE. Of Radiation. Highest in Sun's Rays. | Of Radiation. Lowest on the Grass. | Of the Earth 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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | | ° | ° | ° | in. | |
| Dec. 1 | ... | 29.970 | 52.1 | 47.1 | 5.0 | 50.4 | + 9.5 | 48.2 | 45.9 | 4.5 | 7.8 | 0.6 | 85 | 57.6 | 38.6 | 49.89 | 0.080 | wP |
| 2 | ... | 29.891 | 53.2 | 46.0 | 7.2 | 49.1 | + 8.2 | 47.0 | 44.7 | 4.4 | 8.0 | 1.1 | 85 | 60.0 | 37.7 | 50.02 | 0.016 | wP : ... |
| 3 | ... | 29.513 | 53.4 | 49.1 | 4.3 | 51.1 | +10.0 | 48.2 | 45.2 | 5.9 | 7.7 | 2.9 | 81 | 62.2 | 42.5 | 50.11 | 0.044 | .. : wP : wP,sN |
| 4 | ... | 29.357 | 49.2 | 36.9 | 12.3 | 41.6 | + 0.3 | 38.5 | 34.7 | 6.9 | 12.1 | 2.4 | 77 | 55.0 | 30.5 | 50.12 | 0.039 | wP, wwN : wP, ssN : mP, wwN |
| 5 | First Quarter | 29.619 | 47.6 | 35.0 | 12.6 | 39.8 | − 1.7 | 37.6 | 34.7 | 5.1 | 9.0 | 3.0 | 82 | 58.6 | 27.0 | 50.01 | 0.072 | wP : vP, vN : mP |
| 6 | In Equator : Apogee | 29.524 | 43.6 | 38.0 | 5.6 | 40.6 | − 0.9 | 38.7 | 36.3 | 4.3 | 7.7 | 2.8 | 85 | 49.0 | 34.7 | 49.55 | 0.062 | wP |
| 7 | ... | 29.869 | 43.3 | 36.9 | 6.4 | 39.9 | − 1.4 | 38.1 | 35.8 | 4.1 | 8.5 | 1.6 | 86 | 51.0 | 28.2 | 49.05 | 0.002 | wP |
| 8 | ... | 30.033 | 54.5 | 43.3 | 11.2 | 48.8 | + 7.8 | 46.9 | 44.9 | 3.9 | 7.1 | 0.0 | 87 | 76.5 | 37.0 | 48.70 | 0.000 | wP |
| 9 | ... | 29.913 | 54.6 | 45.1 | 9.5 | 51.9 | +11.3 | 49.3 | 46.7 | 5.2 | 8.8 | 1.6 | 83 | 61.0 | 36.6 | 48.62 | 0.020 | wwP : wP : wP |
| 10 | ... | 30.022 | 49.0 | 42.1 | 6.9 | 46.0 | + 5.6 | 43.0 | 39.6 | 6.4 | 8.4 | 4.6 | 79 | 52.0 | 35.1 | 48.79 | 0.000 | wP |
| 11 | ... | 30.024 | 47.2 | 38.8 | 8.4 | 43.9 | + 3.7 | 41.6 | 38.9 | 5.0 | 7.1 | 1.6 | 83 | 52.0 | 29.1 | 48.87 | 0.000 | wP |
| 12 | ... | 29.853 | 54.5 | 44.9 | 9.6 | 49.4 | + 9.1 | 46.0 | 42.4 | 7.0 | 10.3 | 3.2 | 77 | 61.0 | 39.0 | 48.82 | 0.000 | wP |
| 13 | Full | 30.068 | 46.1 | 38.4 | 7.7 | 42.2 | + 1.7 | 39.6 | 36.4 | 5.8 | 10.1 | 3.0 | 81 | 52.8 | 27.2 | 48.77 | 0.000 | wP : mP : mP |
| 14 | Greatest Dec. N. | 30.133 | 44.6 | 38.0 | 6.6 | 41.0 | + 0.3 | 38.6 | 35.6 | 5.4 | 7.8 | 3.5 | 81 | 52.2 | 29.0 | 48.70 | 0.006* | wP : mP : mP |
| 15 | ... | 30.080 | 50.5 | 41.1 | 9.4 | 46.9 | + 6.1 | 45.3 | 43.5 | 3.4 | 8.2 | 1.3 | 89 | 55.3 | 35.0 | 48.37 | 0.001 | wP |
| 16 | ... | 29.968 | 49.2 | 44.2 | 5.0 | 46.4 | + 5.7 | 42.1 | 37.2 | 9.2 | 11.9 | 5.2 | 71 | 60.5 | 35.9 | 48.12 | 0.000 | wP : mP : mP |
| 17 | ... | 30.202 | 47.5 | 42.7 | 4.8 | 45.5 | + 5.1 | 42.3 | 38.6 | 6.9 | 9.1 | 3.9 | 77 | 53.8 | 38.0 | 48.11 | 0.000 | wP |
| 18 | ... | 30.328 | 44.8 | 34.3 | 10.5 | 40.9 | + 0.9 | 38.7 | 35.9 | 5.0 | 8.6 | 3.4 | 83 | 53.0 | 24.6 | 48.08 | 0.000 | wP : wP : mP |
| 19 | ... | 30.330 | 42.4 | 32.1 | 10.3 | 37.8 | − 1.7 | 36.0 | 33.6 | 4.2 | 6.3 | 0.7 | 85 | 54.6 | 21.6 | 47.94 | 0.000 | mP : wP |
| 20 | In Equator : Last Quarter | 30.376 | 43.1 | 36.8 | 6.3 | 40.0 | + 1.0 | 37.5 | 34.2 | 5.8 | 7.9 | 4.5 | 80 | 56.1 | 28.0 | 47.52 | 0.000 | wP : mP : mP |
| 21 | Perigee | 30.446 | 42.1 | 30.9 | 11.2 | 38.6 | − 0.1 | 36.4 | 33.4 | 5.2 | 7.6 | 1.9 | 83 | 47.7 | 19.3 | 47.22 | 0.000 | wP : mP : mP |
| 22 | ... | 30.193 | 38.5 | 30.8 | 7.7 | 34.8 | − 3.6 | 33.4 | 31.1 | 3.7 | 6.0 | 1.8 | 86 | 41.3 | 19.1 | 46.92 | 0.002 | mP |
| 23 | ... | 29.713 | 40.5 | 31.3 | 9.2 | 36.1 | − 2.1 | 35.4 | 34.4 | 1.7 | 2.6 | 0.7 | 94 | 44.4 | 20.2 | 46.53 | 0.319 | wP : wP, vN : vN, vP |
| 24 | ... | 29.643 | 40.2 | 32.1 | 8.1 | 36.3 | − 1.9 | 34.5 | 31.9 | 4.4 | 8.3 | 0.8 | 84 | 42.2 | 22.0 | 46.16 | 0.000 | wP : mP : mP |
| 25 | ... | 29.997 | 45.2 | 30.2 | 15.0 | 38.0 | − 0.4 | 36.0 | 33.3 | 4.7 | 6.3 | 3.5 | 83 | 50.2 | 21.4 | 45.88 | 0.005* | mP : mP : wP |
| 26 | ... | 29.819 | 51.0 | 45.2 | 5.8 | 48.4 | + 9.8 | 45.1 | 41.5 | 6.9 | 8.4 | 3.4 | 77 | 59.0 | 40.2 | 45.51 | 0.051 | wP |
| 27 | Greatest Dec. S. : New | 29.548 | 49.4 | 37.4 | 12.0 | 41.9 | + 3.1 | 38.9 | 35.3 | 6.6 | 9.9 | 3.1 | 79 | 50.0 | 28.4 | 45.45 | 0.150 | wP, wN : mP : mP |
| 28 | ... | 29.283 | 37.6 | 32.1 | 5.5 | 34.8 | − 4.1 | 33.1 | 30.0 | 4.8 | 5.7 | 3.1 | 83 | 47.3 | 23.9 | 45.58 | 0.000 | wP : mP : mP |
| 29 | ... | 29.421 | 36.8 | 30.6 | 6.2 | 33.6 | − 5.4 | 32.2 | 29.6 | 4.0 | 10.6 | 2.6 | 86 | 38.8 | 23.0 | 45.32 | 0.008 | mP |
| 30 | ... | 29.870 | 35.6 | 29.4 | 6.2 | 32.2 | − 6.7 | 30.4 | 26.4 | 5.8 | 7.7 | 2.8 | 78 | 49.9 | 21.2 | 44.81 | 0.000 | mP : sP : sP |
| 31 | ... | 30.310 | 37.0 | 28.1 | 8.9 | 31.9 | − 6.8 | 29.8 | 24.9 | 7.0 | 12.3 | 2.2 | 74 | 43.3 | 18.1 | 44.42 | 0.000 | mP : sP : sP |
| Means | ... | 29.913 | 45.9 | 37.7 | 8.2 | 41.9 | + 2.0 | 39.6 | 36.7 | 5.3 | 8.3 | 2.5 | 82.1 | 53.2 | 29.4 | 47.81 | Sum 0.877 | ... |
| Number of Column for Reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 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.

* Rainfall (Column 17). The amounts entered on December 14 and 25 are derived from frost.

The mean reading of the *Barometer* for the month was 29in.913, being 0in.128 *higher* than the average for the 65 years, 1841–1905.

TEMPERATURE OF THE AIR.

The highest in the month was 54°.6 on December 9; the lowest in the month was 28°.1 on December 31; and the range was 26°.5.
The mean of all the highest daily readings in the month was 45°.9, 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 37°.7, being 2°.7 *higher* than the average for the 65 years, 1841–1905.
The mean of the daily ranges was 8°.2, being 1°.0 *less* than the average for the 65 years, 1841–1905.
The mean for the month was 41°.9, being 2°.0 *higher* than the average for the 65 years, 1841–1905.

| MONTH and DAY, 1913. | Daily Duration of Sunshine. | Sun above Horizon. | Wind as deduced from Self-Registering Anemometers. Osler's. General Direction. A.M. | Osler's. General Direction. P.M. | Osler's. Pressure on the Square Foot. Greatest. | Osler's. Pressure on the Square Foot. Mean of 24 Hourly Measures. | Robinson's. Horizontal Movement of the Air. | Clouds and Weather. A.M. | Clouds and Weather. P.M. |
|---|---|---|---|---|---|---|---|---|---|
| | hours. | hours. | | | lbs. | lbs. | miles. | | |
| Dec. 1 | 0·0 | 8·1 | W : WNW | WNW : NW : NNW | 3·0 | 0·27 | 350 | 10 : 9 : 10,sc,s,n,th.-r | 10,sc,s,n,oc.-th.-r : 10 : p.-cl |
| 2 | 0·0 | 8·1 | WSW : Calm : W | W | 4·0 | 0·35 | 355 | 10 : 10, slt.-r : 10,s,n,slt.-f,oc.-slt.-r | 9,cu,s,n,oc.-slt.-r : 9, cu, n, w : 9, w |
| 3 | 0·1 | 8·1 | W : WSW | W : WSW | 19·0 | 1·50 | 677 | 10,slt.-sh,w : 10, w : 9, sc, cu.-s,s,n,w | 9,sc,cu.-s,s,w : 9,sc,cu,n,fq.-th.-r, st.-w : 9, r, g |
| 4 | 3·3 | 8·1 | W : WNW | WNW : NW | 15·5 | 1·38 | 681 | p.-cl, st.-w : p.-cl : p.-cl, ci, cu, sc, w | 5, cu, cu.-s, n, sh.-r, st.-w : v, fq.-r, g : p.-cl, w |
| 5 | 1·2 | 8·0 | W : WSW : NW | N : SW | 19·7 | 0·64 | 415 | p.-cl,ho.-fr : 9,oc.-slt.-r,w : p.-cl, sh.-r, w, hy.-sq | p.-cl, ci, cu.-s, sh.-r, w : 9, slt.-m : 10, slt.-f |
| 6 | 0·0 | 8·0 | S : SE : ESE | SE | 0·7 | 0·03 | 180 | 10 : 10, s | 10, s : 10, r : p.-cl,s,lu.-ha |
| 7 | 0·0 | 8·0 | ENE : Calm | Calm : S : SW | 0·0 | 0·00 | 101 | p.-cl : 10, slt.-f : 10, s, slt.-f | 10, s, n : 10, s, n, th.-r : 10 |
| 8 | 0·7 | 7·9 | SW | WSW : W | 2·5 | 0·21 | 342 | 10 : p.-cl : p.-cl,s,n,so.-ha | 9, s, n : 10, fq.-m.-r : 10, oc.-m.-r |
| 9 | 0·0 | 7·9 | WSW : W | W : NNW : NW | 5·8 | 0·54 | 487 | 10 : 10, sc, s, w | 10, sc, s, n, w : 10, oc.-th.-r : p.-cl, sq |
| 10 | 0·0 | 7·9 | W : WNW | NW | 3·5 | 0·24 | 370 | p.-cl : 10 | 10, s, n : 10 : 9, th.-cl |
| 11 | 0·0 | 7·9 | W | W | 1·0 | 0·05 | 245 | p.-cl, th.-cl : 9, cu | 9, cu : 10 : 10 |
| 12 | 0·0 | 7·8 | WSW | WNW : NW : NNW | 8·5 | 0·69 | 462 | 10 : 10 : 9,cu,cu.-s,n,w | 9, cu, n, w : 10 : 9, lu.-ha |
| 13 | 1·9 | 7·8 | NNW : NW : W | NW : W : WSW | 1·0 | 0·08 | 259 | 9 : p.-cl, m, ho.-fr : 1, th.-cl, slt.-f | 4,cu.-s,th.-cl : p.-cl, lu.-co : p.-cl, lu.-ha |
| 14 | 2·0 | 7·8 | WSW : W | WNW : W | 2·3 | 0·29 | 384 | th.-cl, ho.-fr : p.-cl, ho.-fr : 2,th.-cl,slt.-m | 1, cu : 1 : 9, th.-cl |
| 15 | 0·0 | 7·8 | W : WSW | W | 3·5 | 0·30 | 379 | 9 : 10, m.-r : 10, s, n | 10, s, n : 10 |
| 16 | 3·9 | 7·8 | WSW : W : WNW | WNW : NW : NNW | 6·0 | 0·72 | 515 | 10 : 10 : 0, h | 5, cu, s, n,w : 9, cu, s, n, w : 10, s, w |
| 17 | 0·0 | 7·8 | N : NNE | ENE : NE | 5·5 | 0·57 | 398 | 10, w : 10, sc, s, n, w | p.-cl, sc, cu, cu.-s, w : 9 : p.-cl |
| 18 | 0·7 | 7·8 | NE : ENE | E : ENE | 1·8 | 0·17 | 284 | 9 : 10 : 9, cu.-s, n | p.-cl, ci, cu.-s : 0, ho.-fr |
| 19 | 0·5 | 7·8 | ENE : E | ENE : E | 1·9 | 0·14 | 274 | 0, ho.-fr : p.-cl,ho.-fr : 9, cu.-s, n | 9, cu.-s, n : 10 |
| 20 | 0·8 | 7·8 | E : ESE : ENE | E : ENE | 2·8 | 0·17 | 269 | 9 : p.-cl,ho.-fr : 8, cu.-s, n | 9, cu.-s, n : 8, cu.-s, s : 9 |
| 21 | 0·0 | 7·8 | ENE : NE | NE : Calm : WSW | 0·5 | 0·02 | 159 | 9 : 10 : 10, s | 10 : th.-cl : slt.-f, ho.-fr |
| 22 | 0·0 | 7·8 | WSW : Calm | Variable : Calm | 0·8 | 0·01 | 146 | slt.-f, ho.-fr : 10 : 10, s | 10, s : 10, slt.-r, sl : p.-cl, slt.-f |
| 23 | 0·0 | 7·8 | SSW : Calm | SSW : SW : W | 0·4 | 0·00 | 134 | 10 : 10, slt.-f : 10, s, slt.-f | 10,s,oc.-slt.-r : 10, c.-r, f : 10, r, slt.-f |
| 24 | 2·5 | 7·8 | W | NW : NNW | 3·8 | 0·14 | 322 | 8 : 1, slt.-f, ho.-fr : 1, th.-cl,slt.-f | p.-cl : 0, h : 0, h, ho.-fr |
| 25 | 0·0 | 7·8 | W : WSW | WSW : W | 3·8 | 0·25 | 377 | p.-cl,ho.-fr : 1, ho.-fr : p.-cl, s | 10, s : 10, s, slt.-r, w : 9, w |
| 26 | 0·0 | 7·8 | W : WSW | W : WSW | 26·0 | 1·78 | 754 | 10, w : 9, sc, w : 10, sc, s, w | 10, sc, s, w : 9,oc.-shs,st.-w : 10, slt.-r, g |
| 27 | 0·9 | 7·8 | WSW : WNW : W | W : WSW | 14·0 | 0·96 | 577 | 10, r, g : 9 : 8,ci,ci.-s,s,w | 8, ci, ci.-s, ci.-cu : p.-cl, s : p.-cl, m |
| 28 | 0·2 | 7·8 | W : NW : N | N : NW : WNW | 2·8 | 0·20 | 307 | 9 : p.-cl,h,ho.-fr : 1, h | p.-cl : p.-cl, h, ho.-fr |
| 29 | 0·0 | 7·8 | NNW : N : NE | NNE : NE | 2·7 | 0·43 | 310 | 10 : 10, slt.-sn : 10,s, n, slt.-sn | 10, s, n : p.-cl, slt.-r, ho.-fr : p.-cl, ho.-fr |
| 30 | 5·2 | 7·8 | NNE | NNE : NE | 3·8 | 0·58 | 366 | p.-cl,ho.-fr : 0, ho.-fr : 1, cu, h | p.-cl, cu.-s : 1, slt.-sn : 1, ho.-fr |
| 31 | 3·1 | 7·8 | NNE | NNE : N | 2·0 | 0·15 | 213 | p.-cl,sl,ho.-fr : p.-cl,ho.-fr : 1, th.-cl | 1, th.-cl, h : p.-cl, ho.-fr : 10 |
| Means | 0·9 | 7·9 | ... | ... | ... | 0·41 | 358 | | |
| Number of Column for Reference. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

The mean *Temperature of Evaporation* for the month was 39°·6, being 1°·1 *higher* than
The mean *Temperature of the Dew Point* for the month was 36°·7, being the *same* as
The mean *Degree of Humidity* for the month was 82·1, being 6·5 *less* than
The mean *Elastic Force of Vapour* for the month was $0^{in}\cdot218$, being the *same* as
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was $2^{grs}\cdot5$, being $0^{gr}\cdot1$ *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 553 grains, being 1 grain *greater* than
} the average for the 65 years, 1841–1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0, and an overcast sky by 10) was 7·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·111. The maximum daily amount of *Sunshine* was 5·2 hours on December 30.

The highest reading of the *Solar Radiation Thermometer* was 76°·5 on December 8; and the lowest reading of the *Terrestrial Radiation Thermometer* was 18°·1 on December 31.

The *Proportions of Wind* referred to the cardinal points were N. 7, E. 4, S. 3, and W. 15. Two days were calm.

The *Greatest Pressure of the Wind* in the month was 26·0 lbs. on the square foot on December 26. The mean daily *Horizontal Movement of the Air* for the month was 358 miles; the greatest daily value was 754 miles on December 26; and the least daily value was 101 miles on December 7.

*Rain* ($0^{in}\cdot005$ or over) fell on 11 days in the month, amounting to $0^{in}\cdot877$, as measured by gauge No. 6 partly sunk below the ground; being $0^{in}\cdot950$ *less* than the average fall for the 65 years, 1841–1905.

## HIGHEST and LOWEST READINGS of the BAROMETER, reduced to 32° Fahrenheit, as extracted from the PHOTOGRAPHIC RECORDS.

| MAXIMA. Greenwich Civil Time, 1913. | Reading. | MINIMA. Greenwich Civil Time, 1913. | Reading. |
|---|---|---|---|
| **January** d h m | in. | **January** d h m | in. |
| | | 1. 14. 0 | 29·692 |
| 2. 10. 20 | 29·819 | 5. 14. 45 | 29·638 |
| 7. 16. 45 | 29·948 | 11. 20. 45 | 29·206 |
| 13. 11. 20 | 29·659 | 15. 9. 0 | 29·154 |
| 16. 9. 40 | 29·385 | 16. 22. 30 | 29·062 |
| 19. 2. 40 | 29·679 | 21. 3. 15 | 28·931 |
| 22. 11. 10 | 29·951 | 23. 6. 5 | 29·631 |
| 23. 23. 25 | 29·717 | 24. 19. 50 | 29·494 |
| 26. 16. 25 | 30·177 | 31. 0. 30 | 28·964 |
| **February** | | **February** | |
| 1. 2. 30 | 29·592 | 1. 19. 50 | 29·282 |
| 2. 10. 10 | 29·632 | 2. 15. 10 | 29·463 |
| 4. 19. 55 | 30·100 | 5. 23. 10 | 29·721 |
| 7. 7. 55 | 29·873 | 7. 19. 45 | 29·604 |
| 8. 18. 45 | 30·331 | 9. 6. 45 | 30·170 |
| 12. 10. 20 | 30·522 | 16. 4. 0 | 30·005 |
| 16. 21. 20 | 30·097 | 20. 5. 15 | 29·889 |
| 22. 9. 25 | 30·315 | 27. 4. 0 | 29·527 |
| **March** | | **March** | |
| 1. 0. 55 | 30·157 | 2. 6. 0 | 29·821 |
| 2. 20. 0 | 29·988 | 3. 16. 30 | 29·742 |
| 4. 1. 55 | 29·888 | 4. 23. 10 | 29·731 |
| 5. 11. 55 | 29·977 | 6. 23. 5 | 29·646 |
| 9. 2. 30 | 30·381 | 10. 6. 15 | 30·137 |
| 10. 12. 55 | 30·216 | 11. 7. 50 | 30·058 |
| 12. 1. 25 | 30·243 | 14. 18. 25 | 29·565 |
| 15. 17. 35 | 29·967 | 17. 6. 35 | 28·964 |
| 18. 9. 15 | 29·594 | 19. 9. 15 | 28·730 |
| 22. 7. 20 | 29·467 | 22. 22. 25 | 29·038 |
| 25. 10. 35 | 30·147 | 28. 11. 10 | 29·158 |
| 29. 2. 30 | 29·460 | 29. 15. 15 | 29·246 |
| 30. 23. 0 | 29·658 | | |
| **April** | | **April** | |
| | | 1. 7. 20 | 29·567 |
| 3. 8. 50 | 29·951 | 6. 4. 0 | 29·579 |
| 9. 21. 30 | 29·996 | 10. 15. 35 | 29·744 |
| 11. 1. 40 | 29·880 | 12. 0. 25 | 29·304 |
| 13. 21. 50 | 29·975 | 16. 12. 20 | 29·220 |
| 16. 22. 15 | 29·424 | 17. 12. 30 | 29·342 |
| 18. 0. 30 | 29·500 | 19. 1. 5 | 29·237 |

| MAXIMA. Greenwich Civil Time, 1913. | Reading. | MINIMA. Greenwich Civil Time, 1913. | Reading. |
|---|---|---|---|
| **April** d h m | in. | **April** d h m | in. |
| 20. 20. 20 | 29·809 | 21. 10. 20 | 29·674 |
| 22. 20. 35 | 29·936 | 25. 20. 5 | 29·254 |
| 26. 7. 35 | 29·410 | 27. 3. 55 | 29·247 |
| 29. 8. 30 | 29·893 | 29. 20. 30 | 29·586 |
| 29. 20. 45 | 29·667 | 30. 0. 40 | 29·572 |
| **May** | | **May** | |
| 1. 9. 30 | 29·752 | 4. 3. 0 | 29·167 |
| 5. 21. 5 | 29·494 | 6. 16. 5 | 29·346 |
| 7. 21. 55 | 29·534 | 8. 16. 15 | 29·412 |
| 14. 23. 20 | 29·978 | 17. 17. 35 | 29·468 |
| 20. 22. 25 | 29·922 | 21. 19. 55 | 29·775 |
| 24. 23. 20 | 30·124 | 27. 15. 50 | 29·786 |
| 28. 5. 40 | 29·903 | 30. 12. 20 | 29·476 |
| **June** | | **June** | |
| 2. 7. 15 | 29·941 | 5. 17. 5 | 29·589 |
| 6. 23. 0 | 29·816 | 7. 9. 50 | 29·705 |
| 7. 23. 20 | 29·855 | 8. 14. 35 | 29·684 |
| 9. 8. 10 | 30·020 | 10. 13. 20 | 29·598 |
| 14. 8. 45 | 30·195 | 18. 18. 20 | 29·763 |
| 22. 8. 30 | 29·983 | 25. 5. 10 | 29·809 |
| 28. 3. 45 | 30·197 | 29. 16. 45 | 30·103 |
| **July** | | **July** | |
| 1. 11. 5 | 30·190 | 6. 12. 15 | 29·530 |
| 8. 22. 20 | 29·903 | 10. 14. 40 | 29·614 |
| 13. 9. 0 | 29·853 | 15. 3. 0 | 29·627 |
| 18. 23. 40 | 29·973 | 19. 16. 50 | 29·868 |
| 20. 23. 25 | 29·989 | 22. 6. 10 | 29·834 |
| 22. 21. 0 | 29·953 | 23. 9. 35 | 29·813 |
| 27. 11. 0 | 30·104 | 30. 17. 30 | 29·821 |
| **August** | | **August** | |
| 2. 11. 15 | 30·103 | 6. 5. 20 | 29·781 |
| 7. 5. 30 | 29·893 | 9. 18. 0 | 29·602 |
| 12. 21. 45 | 30·025 | 14. 3. 40 | 29·850 |
| 18. 0. 35 | 30·049 | 23. 6. 45 | 29·614 |
| 26. 8. 0 | 30·119 | 30. 3. 20 | 29·524 |

| MAXIMA. Greenwich Civil Time, 1913. | Reading. | MINIMA. Greenwich Civil Time, 1913. | Reading. |
|---|---|---|---|
| **September** d h m | in. | **September** d h m | in. |
| 6. 23. 0 | 30·147 | 9. 14. 15 | 29·949 |
| 10. 10. 20 | 30·115 | 14. 3. 15 | 29·110 |
| 16. 0. 0 | 29·475 | 17. 1. 0 | 29·329 |
| 19. 9. 25 | 29·790 | 20. 5. 0 | 29·643 |
| 21. 22. 15 | 30·023 | 25. 15. 10 | 29·749 |
| 26. 9. 45 | 29·850 | 28. 6. 15 | 29·770 |
| 29. 9. 0 | 29·871 | | |
| **October** | | **October** | |
| | | 2. 4. 0 | 29·648 |
| 3. 10. 0 | 29·764 | 5. 8. 45 | 29·389 |
| 6. 20. 0 | 29·515 | 8. 14. 25 | 29·166 |
| 10. 1. 25 | 29·890 | 11. 12. 35 | 29·698 |
| 13. 8. 55 | 30·304 | 15. 4. 30 | 29·928 |
| 16. 11. 5 | 30·163 | 21. 17. 35 | 29·323 |
| 24. 9. 0 | 30·100 | 26. 14. 0 | 29·381 |
| 27. 1. 45 | 29·545 | 29. 15. 50 | 29·070 |
| 31. 20. 45 | 29·753 | | |
| **November** | | **November** | |
| | | 2. 9. 20 | 29·568 |
| 2. 11. 0 | 29·671 | 2. 23. 30 | 29·560 |
| 3. 21. 0 | 29·886 | 6. 20. 30 | 29·160 |
| 7. 21. 20 | 29·585 | 8. 10. 10 | 29·401 |
| 8. 23. 40 | 29·591 | 13. 4. 10 | 28·935 |
| 14. 0. 20 | 29·298 | 14. 10. 0 | 29·106 |
| 17. 21. 45 | 29·982 | 18. 15. 25 | 29·763 |
| 19. 11. 5 | 30·250 | 21. 14. 25 | 29·586 |
| 22. 21. 10 | 30·213 | 24. 5. 0 | 29·802 |
| 27. 0. 45 | 30·241 | 27. 16. 0 | 30·150 |
| 28. 23. 30 | 30·240 | | |
| **December** | | **December** | |
| | | 3. 22. 10 | 29·174 |
| 5. 2. 40 | 29·726 | 5. 9. 10 | 29·486 |
| 5. 19. 30 | 29·656 | 6. 15. 15 | 29·488 |
| 8. 10. 55 | 30·069 | 9. 15. 50 | 29·831 |
| 10. 10. 15 | 30·058 | 12. 2. 45 | 29·770 |
| 13. 21. 15 | 30·166 | 16. 5. 15 | 29·921 |
| 21. 11. 0 | 30·489 | 24. 3. 15 | 29·519 |
| 25. 10. 10 | 30·050 | 27. 2. 0 | 29·453 |
| 27. 10. 45 | 29·619 | 28. 11. 15 | 29·211 |
| 31. 21. 15 | 30·448 | | |

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 time given is the middle of the stationary period.

The time is expressed in civil reckoning, commencing at midnight and counting from $0^h$ to $24^h$.

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

## HIGHEST and LOWEST READINGS of the BAROMETER in each Month for the YEAR 1913.

| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. |
| Highest....... | 30·177 | 30·522 | 30·381 | 29·996 | 30·124 | 30·197 | 30·190 | 30·119 | 30·147 | 30·304 | 30·250 | 30·489 |
| Lowest........ | 28·931 | 29·282 | 28·730 | 29·220 | 29·167 | 29·589 | 29·530 | 29·524 | 29·110 | 29·070 | 28·935 | 29·174 |
| Range......... | 1·246 | 1·240 | 1·651 | 0·776 | 0·957 | 0·608 | 0·660 | 0·595 | 1·037 | 1·234 | 1·315 | 1·315 |

The highest reading in the year was $30^{in.}522$. The lowest reading in the year was $28^{in.}730$.
The range of reading in the year was $1^{in.}792$.

## MONTHLY RESULTS of METEOROLOGICAL ELEMENTS for the YEAR 1913.

| MONTH, 1913. | Mean Reading of the Barometer. | Temperature of the Air. Highest. | Lowest. | Range in the Month. | Mean of all the Highest. | Mean of all the Lowest. | Mean of the Daily Ranges. | Monthly Mean. | Excess of Mean above Average of 65 Years. | Mean Temperature of Evaporation. | Mean Temperature of the Dew Point. | Mean Degree of Humidity. (Saturation = 100.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in. | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | |
| January ..... | 29·618 | 52·1 | 26·2 | 25·9 | 46·1 | 35·9 | 10·2 | 41·1 | + 2·5 | 39·7 | 37·9 | 89·0 |
| February.... | 29·986 | 55·0 | 24·2 | 30·8 | 46·7 | 35·6 | 11·1 | 40·9 | + 1·4 | 38·6 | 35·4 | 81·4 |
| March ....... | 29·698 | 59·0 | 28·2 | 30·8 | 52·0 | 38·3 | 13·7 | 44·5 | + 2·6 | 41·7 | 38·3 | 79·4 |
| April......... | 29·672 | 67·2 | 29·0 | 38·2 | 55·4 | 38·9 | 16·4 | 46·8 | − 0·5 | 43·4 | 39·6 | 76·6 |
| May ......... | 29·727 | 84·1 | 36·3 | 47·8 | 66·6 | 45·3 | 21·2 | 54·8 | + 1·7 | 50·4 | 46·3 | 73·7 |
| June......... | 29·901 | 87·1 | 42·2 | 44·9 | 71·4 | 49·2 | 22·3 | 58·9 | − 0·5 | 53·7 | 49·2 | 70·5 |
| July ......... | 29·870 | 75·8 | 46·2 | 29·6 | 68·2 | 51·8 | 16·4 | 58·5 | − 4·2 | 55·1 | 52·0 | 79·6 |
| August...... | 29·871 | 80·0 | 45·0 | 35·0 | 71·1 | 52·0 | 19·1 | 60·0 | − 1·6 | 55·8 | 52·0 | 75·3 |
| September .. | 29·781 | 77·4 | 42·1 | 35·3 | 67·8 | 50·2 | 17·6 | 57·7 | + 0·5 | 55·0 | 52·4 | 83·0 |
| October...... | 29·686 | 67·3 | 36·1 | 31·2 | 61·2 | 45·9 | 15·3 | 52·7 | + 2·7 | 50·6 | 48·5 | 86·1 |
| November... | 29·727 | 59·5 | 27·6 | 31·9 | 54·2 | 42·0 | 12·2 | 48·3 | + 4·8 | 46·1 | 43·7 | 84·8 |
| December... | 29·913 | 54·6 | 28·1 | 26·5 | 45·9 | 37·7 | 8·2 | 41·9 | + 2·0 | 39·6 | 36·7 | 82·1 |
| Means....... | 29·788 | Highest 87·1 | Lowest 24·2 | Annual Range 62·9 | 58·9 | 43·6 | 15·3 | 50·5 | + 1·0 | 47·5 | 44·3 | 80·1 |

| MONTH, 1913. | Mean Elastic Force of Vapour. | Mean Weight of Vapour in a Cubic Foot of Air. | Mean Weight of a Cubic Foot of Air. | Mean Temperature at Noon of the Earth 3ft. 2in. below the surface of the Soil. | Mean Amount of Cloud. (0–10.) | Rain. Number of Rainy Days (0in·005 or over). | Rain. Amount collected in Gauge No. 6, whose receiving Surface is 5 inches above the Ground. | Wind. From Osler's Anemometer. Number of Hours of Prevalence of each Wind referred to different Points of Azimuth. N. | N.E. | E. | S.E. | S. | S.W. | W. | N.W. | Number of Calm or nearly Calm Hours. | Mean Daily Pressure on the Square Foot. | From Robinson's Anemometer. Mean Daily Horizontal Movement of the Air. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in. | grs. | grs. | ° | | | in. | h | h | h | h | h | h | h | h | h | lbs. | miles. |
| January...... | 0·228 | 2·6 | 548 | 44·78 | 6·8 | 21 | 2·654 | 26 | 12 | 30 | 122 | 122 | 205 | 122 | 10 | 95 | 0·25 | 297 |
| February.... | 0·207 | 2·4 | 554 | 43·32 | 7·5 | 11 | 0·812 | 24 | 84 | 91 | 36 | 50 | 146 | 87 | 14 | 140 | 0·39 | 315 |
| March ....... | 0·231 | 2·7 | 546 | 43·97 | 7·4 | 18 | 2·423 | 37 | 27 | 32 | 28 | 60 | 272 | 190 | 25 | 73 | 0·71 | 414 |
| April......... | 0·243 | 2·8 | 543 | 45·76 | 7·8 | 20 | 2·229 | 54 | 153 | 41 | 48 | 95 | 182 | 68 | 22 | 57 | 0·53 | 361 |
| May ........ | 0·315 | 3·5 | 535 | 51·42 | 6·2 | 15 | 1·157 | 37 | 97 | 23 | 52 | 84 | 213 | 122 | 51 | 65 | 0·25 | 269 |
| June......... | 0·345 | 3·9 | 533 | 58·11 | 6·5 | 7 | 0·733 | 64 | 30 | 41 | 60 | 23 | 147 | 187 | 85 | 83 | 0·32 | 285 |
| July ......... | 0·388 | 4·3 | 533 | 59·58 | 8·2 | 13 | 2·121 | 154 | 187 | 89 | 22 | 9 | 80 | 73 | 37 | 93 | 0·12 | 219 |
| August...... | 0·388 | 4·3 | 531 | 60·38 | 6·6 | 11 | 1·669 | 73 | 121 | 108 | 31 | 4 | 78 | 125 | 14 | 190 | 0·09 | 202 |
| September... | 0·394 | 4·4 | 532 | 59·41 | 6·0 | 12 | 1·647 | 26 | 91 | 125 | 87 | 102 | 97 | 51 | 24 | 117 | 0·10 | 208 |
| October...... | 0·342 | 3·8 | 536 | 56·34 | 6·4 | 13 | 3·423 | 33 | 24 | 65 | 68 | 139 | 176 | 72 | 5 | 162 | 0·12 | 204 |
| November... | 0·285 | 3·3 | 542 | 51·68 | 6·5 | 17 | 2·694 | 29 | 8 | 7 | 33 | 45 | 215 | 276 | 36 | 71 | 0·33 | 336 |
| December... | 0·218 | 2·5 | 553 | 47·81 | 7·5 | 11 | 0·877 | 71 | 81 | 56 | 16 | 14 | 90 | 262 | 102 | 52 | 0·41 | 358 |
| Sums......... | ... | ... | ... | ... | ... | 169 | 22·439 | 628 | 915 | 708 | 603 | 747 | 1901 | 1635 | 425 | 1198 | ... | ... |
| Means....... | 0·299 | 3·4 | 540 | 51·88 | 6·9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·30 | 289 |

The greatest recorded pressure of the wind on the square foot in the year was 26·0 lbs. on December 26.
The greatest recorded daily horizontal movement of the air in the year was 845 miles on March 19.
The least recorded daily horizontal movement of the air in the year was 66 miles on February 12.

## MONTHLY MEAN READING of the BAROMETER at every HOUR of the DAY, as deduced from the PHOTOGRAPHIC RECORDS.

| Hour, Greenwich Civil Time. | 1913. January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. |
| Midnight | 29·616 | 29·977 | 29·717 | 29·674 | 29·737 | 29·910 | 29·886 | 29·881 | 29·788 | 29·692 | 29·728 | 29·920 | 29·794 |
| 1h | 29·612 | 29·980 | 29·715 | 29·669 | 29·732 | 29·906 | 29·880 | 29·878 | 29·785 | 29·690 | 29·725 | 29·914 | 29·791 |
| 2 | 29·615 | 29·979 | 29·706 | 29·666 | 29·730 | 29·903 | 29·876 | 29·875 | 29·781 | 29·686 | 29·723 | 29·914 | 29·788 |
| 3 | 29·615 | 29·977 | 29·697 | 29·666 | 29·724 | 29·898 | 29·872 | 29·870 | 29·775 | 29·682 | 29·719 | 29·912 | 29·784 |
| 4 | 29·612 | 29·976 | 29·692 | 29·664 | 29·722 | 29·898 | 29·869 | 29·865 | 29·771 | 29·682 | 29·713 | 29·905 | 29·781 |
| 5 | 29·610 | 29·980 | 29·689 | 29·667 | 29·725 | 29·899 | 29·869 | 29·866 | 29·772 | 29·683 | 29·711 | 29·900 | 29·781 |
| 6 | 29·613 | 29·983 | 29·690 | 29·673 | 29·728 | 29·901 | 29·870 | 29·871 | 29·776 | 29·685 | 29·712 | 29·899 | 29·783 |
| 7 | 29·618 | 29·988 | 29·692 | 29·678 | 29·732 | 29·905 | 29·872 | 29·876 | 29·780 | 29·691 | 29·720 | 29·900 | 29·788 |
| 8 | 29·626 | 29·997 | 29·698 | 29·682 | 29·735 | 29·907 | 29·874 | 29·878 | 29·786 | 29·697 | 29·727 | 29·905 | 29·793 |
| 9 | 29·634 | 30·003 | 29·706 | 29·684 | 29·735 | 29·906 | 29·875 | 29·881 | 29·791 | 29·701 | 29·728 | 29·910 | 29·796 |
| 10 | 29·640 | 30·005 | 29·710 | 29·685 | 29·734 | 29·903 | 29·875 | 29·883 | 29·793 | 29·702 | 29·732 | 29·920 | 29·798 |
| 11 | 29·638 | 30·008 | 29·710 | 29·680 | 29·730 | 29·903 | 29·874 | 29·879 | 29·790 | 29·699 | 29·734 | 29·920 | 29·797 |
| Noon | 29·629 | 30·003 | 29·705 | 29·675 | 29·724 | 29·898 | 29·869 | 29·875 | 29·784 | 29·688 | 29·726 | 29·913 | 29·791 |
| 13h | 29·619 | 29·991 | 29·698 | 29·672 | 29·721 | 29·894 | 29·865 | 29·872 | 29·781 | 29·680 | 29·722 | 29·907 | 29·785 |
| 14 | 29·615 | 29·981 | 29·690 | 29·668 | 29·717 | 29·892 | 29·863 | 29·867 | 29·776 | 29·674 | 29·718 | 29·903 | 29·780 |
| 15 | 29·614 | 29·973 | 29·685 | 29·663 | 29·714 | 29·889 | 29·859 | 29·861 | 29·770 | 29·669 | 29·719 | 29·903 | 29·777 |
| 16 | 29·616 | 29·970 | 29·680 | 29·660 | 29·711 | 29·887 | 29·856 | 29·856 | 29·766 | 29·667 | 29·722 | 29·908 | 29·775 |
| 17 | 29·617 | 29·973 | 29·682 | 29·659 | 29·710 | 29·886 | 29·855 | 29·854 | 29·768 | 29·669 | 29·729 | 29·912 | 29·776 |
| 18 | 29·618 | 29·979 | 29·688 | 29·664 | 29·714 | 29·889 | 29·856 | 29·857 | 29·771 | 29·677 | 29·735 | 29·917 | 29·780 |
| 19 | 29·619 | 29·981 | 29·694 | 29·667 | 29·720 | 29·895 | 29·860 | 29·860 | 29·779 | 29·682 | 29·738 | 29·922 | 29·785 |
| 20 | 29·614 | 29·984 | 29·699 | 29·673 | 29·730 | 29·903 | 29·868 | 29·870 | 29·784 | 29·687 | 29·739 | 29·926 | 29·790 |
| 21 | 29·612 | 29·989 | 29·700 | 29·679 | 29·741 | 29·915 | 29·878 | 29·876 | 29·788 | 29·692 | 29·741 | 29·929 | 29·795 |
| 22 | 29·609 | 29·992 | 29·701 | 29·677 | 29·743 | 29·920 | 29·882 | 29·877 | 29·788 | 29·694 | 29·740 | 29·931 | 29·796 |
| 23 | 29·607 | 29·995 | 29·702 | 29·679 | 29·743 | 29·922 | 29·882 | 29·877 | 29·790 | 29·693 | 29·738 | 29·933 | 29·797 |
| 24 | 29·606 | 29·997 | 29·700 | 29·678 | 29·740 | 29·920 | 29·879 | 29·875 | 29·786 | 29·692 | 29·737 | 29·934 | 29·795 |
| Means 0h.–23h. | 29·618 | 29·986 | 29·698 | 29·672 | 29·727 | 29·901 | 29·870 | 29·871 | 29·781 | 29·686 | 29·727 | 29·913 | 29·788 |
| Means 1h.–24h. | 29·618 | 29·987 | 29·697 | 29·672 | 29·727 | 29·902 | 29·870 | 29·871 | 29·780 | 29·686 | 29·727 | 29·914 | 29·788 |
| Number of Days employed. | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | ... |

## MONTHLY MEAN TEMPERATURE of the AIR at every HOUR of the DAY, as deduced from the PHOTOGRAPHIC RECORDS.

| Hour, Greenwich Civil Time. | 1913. January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| Midnight | 40·6 | 39·3 | 42·2 | 43·5 | 49·2 | 52·6 | 54·8 | 55·3 | 53·5 | 49·9 | 47·1 | 41·6 | 47·5 |
| 1h | 40·2 | 38·9 | 41·8 | 42·8 | 48·4 | 51·8 | 54·0 | 54·7 | 53·2 | 49·6 | 46·6 | 41·1 | 46·9 |
| 2 | 39·7 | 38·4 | 41·5 | 42·1 | 47·7 | 50·9 | 53·3 | 54·1 | 52·9 | 49·2 | 46·3 | 40·9 | 46·4 |
| 3 | 39·5 | 37·9 | 41·0 | 41·6 | 47·1 | 50·3 | 53·0 | 53·6 | 52·5 | 49·0 | 45·8 | 40·6 | 46·0 |
| 4 | 39·4 | 37·5 | 40·5 | 41·0 | 46·6 | 50·0 | 52·7 | 53·2 | 52·0 | 48·5 | 45·6 | 40·2 | 45·6 |
| 5 | 39·1 | 37·5 | 40·3 | 41·1 | 46·7 | 50·6 | 52·9 | 53·3 | 51·8 | 48·4 | 45·2 | 40·0 | 45·6 |
| 6 | 38·6 | 37·6 | 40·5 | 41·7 | 47·9 | 52·3 | 53·7 | 54·0 | 51·9 | 48·9 | 45·2 | 40·1 | 46·0 |
| 7 | 38·6 | 37·9 | 41·3 | 43·6 | 50·5 | 55·3 | 55·0 | 56·0 | 53·4 | 49·9 | 45·5 | 40·5 | 47·3 |
| 8 | 39·1 | 38·8 | 42·6 | 46·2 | 53·8 | 58·7 | 56·9 | 58·8 | 56·2 | 51·3 | 46·3 | 40·9 | 49·1 |
| 9 | 39·8 | 40·2 | 44·7 | 48·4 | 57·2 | 61·4 | 58·7 | 61·4 | 59·6 | 53·1 | 47·3 | 41·3 | 51·1 |
| 10 | 41·1 | 41·8 | 46·0 | 50·0 | 59·4 | 63·5 | 60·1 | 63·3 | 61·6 | 54·8 | 48·7 | 42·2 | 52·7 |
| 11 | 42·3 | 43·2 | 47·1 | 51·1 | 60·9 | 65·2 | 61·7 | 65·0 | 63·5 | 57·0 | 50·4 | 43·0 | 54·2 |
| Noon | 43·6 | 44·7 | 48·3 | 51·7 | 62·4 | 66·3 | 63·1 | 66·3 | 64·5 | 58·4 | 52·1 | 44·1 | 55·5 |
| 13h | 44·3 | 45·5 | 49·0 | 52·5 | 62·9 | 67·1 | 63·9 | 67·3 | 65·4 | 59·0 | 52·7 | 44·4 | 56·2 |
| 14 | 44·3 | 45·4 | 49·4 | 52·6 | 62·8 | 67·8 | 64·7 | 68·0 | 65·3 | 58·9 | 52·4 | 44·3 | 56·3 |
| 15 | 43·7 | 45·1 | 49·2 | 52·5 | 62·6 | 67·4 | 64·6 | 67·6 | 64·9 | 58·0 | 51·7 | 44·0 | 55·9 |
| 16 | 43·0 | 44·5 | 49·0 | 51·6 | 62·0 | 66·7 | 64·1 | 67·0 | 63·8 | 56·6 | 50·8 | 43·2 | 55·2 |
| 17 | 42·3 | 43·3 | 48·0 | 50·6 | 60·9 | 65·3 | 63·2 | 65·5 | 62·0 | 54·9 | 49·7 | 42·9 | 54·1 |
| 18 | 42·0 | 42·1 | 46·6 | 49·1 | 59·4 | 63·7 | 62·3 | 63·8 | 59·8 | 53·5 | 49·1 | 42·6 | 52·8 |
| 19 | 41·4 | 41·4 | 45·4 | 47·4 | 57·2 | 61·3 | 61·0 | 61·7 | 57·9 | 52·6 | 48·5 | 42·0 | 51·5 |
| 20 | 40·9 | 40·8 | 44·7 | 46·5 | 54·7 | 58·8 | 59·4 | 59·7 | 56·5 | 51·9 | 48·2 | 41·8 | 50·3 |
| 21 | 40·8 | 40·3 | 43·9 | 45·6 | 52·7 | 56·7 | 58·1 | 58·2 | 55·2 | 51·2 | 47·9 | 41·7 | 49·4 |
| 22 | 40·6 | 39·9 | 43·3 | 44·9 | 51·2 | 55·0 | 56·8 | 57·0 | 54·4 | 50·6 | 47·6 | 41·5 | 48·6 |
| 23 | 40·6 | 39·7 | 42·9 | 44·3 | 50·1 | 53·8 | 55·7 | 56·1 | 53·9 | 50·1 | 47·4 | 41·2 | 48·0 |
| 24 | 40·4 | 39·3 | 42·4 | 43·7 | 49·2 | 52·8 | 54·9 | 55·4 | 53·4 | 49·6 | 47·2 | 40·9 | 47·4 |
| Means 0h.–23h. | 41·1 | 40·9 | 44·5 | 46·8 | 54·8 | 58·9 | 58·5 | 60·0 | 57·7 | 52·7 | 48·3 | 41·9 | 50·5 |
| Means 1h.–24h. | 41·1 | 40·9 | 44·6 | 46·8 | 54·8 | 58·9 | 58·5 | 60·0 | 57·7 | 52·7 | 48·3 | 41·9 | 50·5 |
| Number of Days employed. | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | ... |

## MONTHLY MEAN TEMPERATURE of EVAPORATION at every HOUR of the DAY, as deduced from the PHOTOGRAPHIC RECORDS.

| Hour, Greenwich Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| Midnight | 39·6 | 37·6 | 40·0 | 41·5 | 47·5 | 50·2 | 53·3 | 53·5 | 52·6 | 48·9 | 45·6 | 39·2 | 45·8 |
| 1h | 39·2 | 37·3 | 39·6 | 41·1 | 46·9 | 49·5 | 52·6 | 52·9 | 52·3 | 48·6 | 45·2 | 39·0 | 45·4 |
| 2 | 38·8 | 36·7 | 39·3 | 40·5 | 46·3 | 49·0 | 52·1 | 52·4 | 52·2 | 48·3 | 44·9 | 38·9 | 44·9 |
| 3 | 38·6 | 36·4 | 39·1 | 40·0 | 45·7 | 48·6 | 51·8 | 52·2 | 51·8 | 48·0 | 44·5 | 38·7 | 44·6 |
| 4 | 38·4 | 36·0 | 38·8 | 39·7 | 45·4 | 48·5 | 51·6 | 52·0 | 51·4 | 47·6 | 44·2 | 38·3 | 44·3 |
| 5 | 38·0 | 35·7 | 38·8 | 39·7 | 45·6 | 48·9 | 51·7 | 51·8 | 51·0 | 47·4 | 43·8 | 38·1 | 44·2 |
| 6 | 37·5 | 35·8 | 38·9 | 40·1 | 46·6 | 50·2 | 52·3 | 52·2 | 51·2 | 47·7 | 43·7 | 38·3 | 44·5 |
| 7 | 37·7 | 36·1 | 39·4 | 41·5 | 48·3 | 52·1 | 53·2 | 53·6 | 52·3 | 48·4 | 44·0 | 38·6 | 45·4 |
| 8 | 38·2 | 37·0 | 40·4 | 43·2 | 50·3 | 54·2 | 54·3 | 55·4 | 54·4 | 49·8 | 44·7 | 38·9 | 46·7 |
| 9 | 38·8 | 38·3 | 42·2 | 44·7 | 52·1 | 55·6 | 55·2 | 57·0 | 56·6 | 51·3 | 45·6 | 39·4 | 48·1 |
| 10 | 39·9 | 39·3 | 43·0 | 45·6 | 53·3 | 56·6 | 56·0 | 57·8 | 57·6 | 52·2 | 46·6 | 40·0 | 49·0 |
| 11 | 40·9 | 40·2 | 43·7 | 46·1 | 54·1 | 57·2 | 56·6 | 58·3 | 58·4 | 53·4 | 47·7 | 40·6 | 49·8 |
| Noon | 41·7 | 41·0 | 44·3 | 46·3 | 54·4 | 57·8 | 57·2 | 58·6 | 58·8 | 54·2 | 48·5 | 41·3 | 50·3 |
| 13h | 42·1 | 41·3 | 44·7 | 46·7 | 54·6 | 58·1 | 57·7 | 59·1 | 59·1 | 54·2 | 48·7 | 41·4 | 50·6 |
| 14 | 42·1 | 41·3 | 44·9 | 46·8 | 54·6 | 58·4 | 58·0 | 59·5 | 58·9 | 54·2 | 48·6 | 41·1 | 50·7 |
| 15 | 41·7 | 41·3 | 44·8 | 46·6 | 54·5 | 58·3 | 58·1 | 59·3 | 58·8 | 53·7 | 48·3 | 40·9 | 50·5 |
| 16 | 41·2 | 41·0 | 44·7 | 46·0 | 54·2 | 57·9 | 58·0 | 58·9 | 58·2 | 53·2 | 47·8 | 40·6 | 50·1 |
| 17 | 40·7 | 40·4 | 44·0 | 45·6 | 53·6 | 57·2 | 57·8 | 58·3 | 57·2 | 52·4 | 47·2 | 40·4 | 49·6 |
| 18 | 40·4 | 39·7 | 43·2 | 44·8 | 52·9 | 56·3 | 57·6 | 57·6 | 56·4 | 51·5 | 46·8 | 40·3 | 49·0 |
| 19 | 40·0 | 39·2 | 42·6 | 44·1 | 51·8 | 55·2 | 56·9 | 57·1 | 55·5 | 50·9 | 46·5 | 39·8 | 48·3 |
| 20 | 39·7 | 38·9 | 42·0 | 43·5 | 50·7 | 54·1 | 56·1 | 56·4 | 54·8 | 50·5 | 46·2 | 39·6 | 47·7 |
| 21 | 39·6 | 38·5 | 41·4 | 42·9 | 49·7 | 52·9 | 55·4 | 55·5 | 54·0 | 49·9 | 46·0 | 39·5 | 47·1 |
| 22 | 39·4 | 38·2 | 40·7 | 42·5 | 48·8 | 51·9 | 54·6 | 54·8 | 53·3 | 49·5 | 45·8 | 39·2 | 46·6 |
| 23 | 39·5 | 38·0 | 40·5 | 42·1 | 48·2 | 51·1 | 54·0 | 54·3 | 52·9 | 49·1 | 45·8 | 38·9 | 46·2 |
| 24 | 39·4 | 37·7 | 40·2 | 41·7 | 47·5 | 50·4 | 53·4 | 53·6 | 52·5 | 48·7 | 45·6 | 38·6 | 45·8 |
| Means $0^h$.–$23^h$. | 39·7 | 38·6 | 41·7 | 43·4 | 50·4 | 53·7 | 55·1 | 55·8 | 55·0 | 50·6 | 46·1 | 39·6 | 47·5 |
| Means $1^h$.–$24^h$. | 39·7 | 38·6 | 41·7 | 43·4 | 50·4 | 53·7 | 55·1 | 55·8 | 55·0 | 50·6 | 46·1 | 39·6 | 47·5 |
| Number of Days employed. | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | ... |

## 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, Greenwich Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| Midnight | 38·4 | 35·4 | 37·3 | 39·1 | 45·7 | 47·8 | 51·8 | 51·8 | 51·7 | 47·9 | 43·9 | 36·2 | 43·9 |
| 1h | 37·9 | 35·2 | 36·9 | 39·1 | 45·3 | 47·2 | 51·2 | 51·2 | 51·4 | 47·6 | 43·7 | 36·4 | 43·6 |
| 2 | 37·6 | 34·4 | 36·6 | 38·5 | 44·8 | 47·0 | 50·9 | 50·7 | 51·5 | 47·3 | 43·4 | 36·4 | 43·3 |
| 3 | 37·4 | 34·4 | 36·7 | 38·0 | 44·2 | 46·8 | 50·6 | 50·8 | 51·1 | 46·9 | 43·0 | 36·3 | 43·0 |
| 4 | 37·1 | 33·9 | 36·6 | 38·0 | 44·1 | 46·9 | 50·5 | 50·8 | 50·8 | 46·6 | 42·6 | 35·8 | 42·8 |
| 5 | 36·6 | 33·2 | 36·9 | 37·9 | 44·4 | 47·1 | 50·5 | 50·3 | 50·2 | 46·3 | 42·2 | 35·6 | 42·6 |
| 6 | 36·0 | 33·3 | 36·9 | 38·1 | 45·2 | 48·1 | 50·9 | 50·4 | 50·5 | 46·4 | 41·9 | 36·0 | 42·8 |
| 7 | 36·5 | 33·7 | 37·0 | 39·0 | 46·0 | 49·0 | 51·5 | 51·3 | 51·2 | 46·8 | 42·3 | 36·2 | 43·4 |
| 8 | 37·0 | 34·6 | 37·8 | 39·8 | 46·9 | 50·2 | 51·9 | 52·3 | 52·3 | 48·3 | 42·9 | 36·4 | 44·2 |
| 9 | 37·5 | 35·8 | 39·3 | 40·7 | 47·4 | 50·6 | 52·1 | 53·2 | 54·0 | 49·5 | 43·7 | 37·0 | 45·1 |
| 10 | 38·4 | 36·2 | 39·6 | 41·0 | 48·0 | 50·8 | 52·4 | 53·2 | 54·2 | 49·7 | 44·4 | 37·3 | 45·4 |
| 11 | 39·2 | 36·6 | 39·9 | 40·9 | 48·2 | 50·6 | 52·2 | 52·8 | 54·1 | 50·1 | 44·9 | 37·7 | 45·6 |
| Noon | 39·5 | 36·7 | 39·9 | 40·8 | 47·5 | 50·9 | 52·2 | 52·4 | 54·0 | 50·4 | 44·8 | 38·0 | 45·6 |
| 13h | 39·5 | 36·5 | 40·1 | 40·9 | 47·5 | 50·9 | 52·6 | 52·6 | 54·0 | 49·9 | 44·7 | 37·9 | 45·6 |
| 14 | 39·5 | 36·6 | 40·1 | 41·0 | 47·6 | 51·0 | 52·4 | 52·8 | 53·7 | 50·0 | 44·7 | 37·4 | 45·6 |
| 15 | 39·4 | 36·9 | 40·1 | 40·7 | 47·6 | 51·1 | 52·7 | 52·7 | 53·7 | 49·8 | 44·9 | 37·3 | 45·6 |
| 16 | 39·0 | 37·0 | 40·1 | 40·3 | 47·5 | 50·8 | 52·9 | 52·4 | 53·5 | 50·0 | 44·7 | 37·5 | 45·5 |
| 17 | 38·8 | 37·0 | 39·6 | 40·4 | 47·2 | 50·6 | 53·3 | 52·4 | 53·1 | 50·0 | 44·5 | 37·4 | 45·4 |
| 18 | 38·4 | 36·7 | 39·4 | 40·2 | 47·2 | 50·1 | 53·6 | 52·5 | 53·4 | 49·5 | 44·3 | 37·5 | 45·2 |
| 19 | 38·2 | 36·5 | 39·4 | 40·4 | 46·9 | 49·9 | 53·3 | 53·1 | 53·3 | 49·2 | 44·3 | 37·1 | 45·1 |
| 20 | 38·2 | 36·5 | 38·8 | 40·1 | 46·9 | 49·9 | 53·2 | 53·5 | 53·3 | 49·1 | 44·0 | 36·9 | 45·0 |
| 21 | 38·1 | 36·2 | 38·5 | 39·8 | 46·7 | 49·4 | 53·0 | 53·1 | 52·8 | 48·6 | 43·9 | 36·8 | 44·7 |
| 22 | 37·9 | 36·0 | 37·6 | 39·7 | 46·3 | 48·9 | 52·6 | 52·8 | 52·2 | 48·4 | 43·8 | 36·3 | 44·4 |
| 23 | 38·1 | 35·8 | 37·7 | 39·5 | 46·2 | 48·5 | 52·4 | 52·6 | 51·9 | 48·0 | 44·0 | 36·0 | 44·2 |
| 24 | 38·1 | 35·6 | 37·5 | 39·4 | 45·7 | 48·0 | 51·9 | 51·9 | 51·6 | 47·8 | 43·8 | 35·7 | 43·9 |
| Means $0^h$.–$23^h$. | 38·1 | 35·6 | 38·5 | 39·7 | 46·5 | 49·3 | 52·1 | 52·2 | 52·6 | 48·6 | 43·8 | 36·8 | 44·5 |
| Means $1^h$.–$24^h$. | 38·1 | 35·6 | 38·5 | 39·8 | 46·5 | 49·3 | 52·1 | 52·2 | 52·6 | 48·6 | 43·8 | 36·8 | 44·5 |

## 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 Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| Midnight | 92 | 86 | 84 | 85 | 88 | 84 | 89 | 89 | 94 | 93 | 90 | 82 | 88 |
| $1^h$ | 92 | 87 | 84 | 86 | 89 | 85 | 90 | 88 | 94 | 93 | 90 | 83 | 88 |
| 2 | 93 | 86 | 83 | 88 | 90 | 87 | 92 | 88 | 95 | 94 | 90 | 85 | 89 |
| 3 | 93 | 87 | 85 | 88 | 90 | 88 | 92 | 90 | 96 | 93 | 90 | 85 | 90 |
| 4 | 92 | 87 | 87 | 90 | 94 | 89 | 93 | 92 | 96 | 94 | 89 | 85 | 91 |
| 5 | 91 | 85 | 88 | 89 | 92 | 89 | 93 | 90 | 94 | 93 | 89 | 85 | 90 |
| 6 | 91 | 85 | 88 | 88 | 91 | 86 | 90 | 87 | 95 | 92 | 89 | 86 | 89 |
| 7 | 93 | 85 | 85 | 84 | 85 | 80 | 88 | 85 | 92 | 90 | 88 | 85 | 87 |
| 8 | 93 | 85 | 84 | 79 | 77 | 74 | 83 | 79 | 88 | 90 | 89 | 85 | 84 |
| 9 | 92 | 85 | 81 | 75 | 70 | 68 | 79 | 75 | 83 | 87 | 88 | 85 | 81 |
| 10 | 91 | 82 | 79 | 72 | 66 | 63 | 75 | 70 | 77 | 83 | 85 | 84 | 77 |
| 11 | 89 | 78 | 77 | 68 | 63 | 59 | 72 | 64 | 72 | 77 | 82 | 82 | 74 |
| Noon | 85 | 73 | 73 | 66 | 58 | 58 | 68 | 62 | 69 | 75 | 77 | 78 | 70 |
| $13^h$ | 83 | 71 | 71 | 65 | 57 | 56 | 67 | 59 | 67 | 72 | 75 | 77 | 68 |
| 14 | 83 | 72 | 70 | 66 | 57 | 54 | 64 | 58 | 66 | 73 | 76 | 76 | 68 |
| 15 | 85 | 73 | 71 | 65 | 58 | 56 | 65 | 59 | 67 | 74 | 78 | 76 | 69 |
| 16 | 86 | 74 | 71 | 65 | 59 | 57 | 67 | 60 | 70 | 79 | 80 | 80 | 71 |
| 17 | 88 | 78 | 73 | 69 | 61 | 59 | 70 | 62 | 73 | 83 | 83 | 82 | 73 |
| 18 | 88 | 82 | 77 | 71 | 64 | 61 | 73 | 67 | 80 | 87 | 84 | 83 | 76 |
| 19 | 89 | 83 | 80 | 77 | 68 | 67 | 76 | 74 | 85 | 89 | 86 | 84 | 80 |
| 20 | 90 | 86 | 80 | 79 | 75 | 72 | 81 | 81 | 89 | 90 | 86 | 84 | 83 |
| 21 | 90 | 86 | 81 | 81 | 81 | 77 | 83 | 83 | 92 | 91 | 87 | 84 | 85 |
| 22 | 90 | 86 | 80 | 83 | 84 | 80 | 86 | 86 | 92 | 92 | 88 | 83 | 86 |
| 23 | 91 | 86 | 82 | 83 | 87 | 82 | 89 | 88 | 93 | 93 | 89 | 82 | 87 |
| 24 | 92 | 87 | 84 | 85 | 88 | 84 | 89 | 89 | 94 | 94 | 89 | 82 | 88 |
| Means $0^h.-23^h.$ | 90 | 82 | 80 | 78 | 75 | 72 | 80 | 76 | 84 | 87 | 85 | 83 | 81 |
| Means $1^h.-24^h.$ | 90 | 82 | 80 | 78 | 75 | 72 | 80 | 76 | 84 | 87 | 85 | 83 | 81 |

## 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 1913.

| Month, 1913. | Registered Duration of Sunshine in the Hour ending | | | | | | | | | | | | | | | | Total registered Duration of Sunshine in each Month. | Corresponding aggregate Period during which the Sun was above the Horizon. | Proportion of Sunshine. | Mean Altitude of the Sun at Noon. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $5^h$. | $6^h$. | $7^h$. | $8^h$. | $9^h$. | $10^h$. | $11^h$. | Noon. | $13^h$. | $14^h$. | $15^h$. | $16^h$. | $17^h$. | $18^h$. | $19^h$. | $20^h$. | | | | |
| | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | | ° |
| January | ... | ... | ... | ... | 2·1 | 7·5 | 8·5 | 10·3 | 11·6 | 7·3 | 6·2 | 1·1 | ... | ... | ... | ... | 54·6 | 259·0 | 0·211 | 18 |
| February | ... | ... | ... | 2·1 | 5·1 | 5·6 | 7·2 | 7·8 | 8·1 | 7·8 | 7·1 | 5·9 | 1·4 | ... | ... | ... | 58·1 | 277·1 | 0·210 | 26 |
| March | ... | ... | 0·9 | 6·3 | 8·4 | 7·1 | 8·7 | 9·9 | 11·7 | 11·0 | 10·7 | 11·4 | 5·8 | 0·4 | ... | ... | 92·3 | 366·4 | 0·252 | 37 |
| April | ... | 1·2 | 7·1 | 9·3 | 10·4 | 10·5 | 11·0 | 10·2 | 12·7 | 12·3 | 12·9 | 10·2 | 6·8 | 5·3 | 0·1 | ... | 120·0 | 413·8 | 0·290 | 48 |
| May | 0·7 | 8·4 | 11·2 | 13·7 | 14·8 | 14·4 | 15·6 | 17·5 | 16·6 | 15·0 | 16·2 | 15·1 | 15·9 | 14·9 | 11·3 | 0·8 | 202·1 | 481·8 | 0·419 | 57 |
| June | 1·6 | 9·7 | 12·2 | 14·7 | 13·7 | 13·5 | 13·0 | 12·9 | 16·2 | 15·9 | 15·5 | 16·7 | 18·6 | 14·5 | 13·2 | 2·3 | 204·2 | 494·5 | 0·413 | 62 |
| July | 0·3 | 1·3 | 2·8 | 4·4 | 4·2 | 5·9 | 8·0 | 8·0 | 9·0 | 11·2 | 9·7 | 7·9 | 6·5 | 7·4 | 7·0 | 0·9 | 94·5 | 497·5 | 0·190 | 60 |
| August | ... | 0·8 | 7·2 | 9·4 | 10·9 | 11·0 | 10·3 | 11·3 | 12·5 | 15·8 | 13·1 | 13·2 | 11·6 | 11·0 | 4·8 | ... | 142·9 | 450·4 | 0·317 | 52 |
| September | ... | ... | 2·2 | 8·7 | 12·5 | 14·8 | 15·4 | 16·8 | 16·6 | 14·7 | 13·8 | 14·9 | 14·0 | 4·1 | ... | ... | 148·5 | 378·8 | 0·392 | 41 |
| October | ... | ... | ... | 3·4 | 7·6 | 9·0 | 16·4 | 17·6 | 16·8 | 14·3 | 13·2 | 9·2 | 3·1 | ... | ... | ... | 110·6 | 329·9 | 0·335 | 30 |
| November | ... | ... | ... | ... | 3·0 | 6·3 | 8·4 | 13·5 | 14·3 | 12·5 | 9·1 | 4·3 | 0·4 | ... | ... | ... | 71·8 | 265·4 | 0·271 | 20 |
| December | ... | ... | ... | ... | 0·1 | 2·0 | 4·5 | 5·4 | 7·7 | 4·7 | 2·6 | ... | ... | ... | ... | ... | 27·0 | 244·0 | 0·111 | 16 |
| For the Year | 2·6 | 21·4 | 43·6 | 72·0 | 92·8 | 107·6 | 127·0 | 141·2 | 153·8 | 142·5 | 130·1 | 109·9 | 84·1 | 57·6 | 36·4 | 4·0 | 1326·6 | 4458·6 | 0·298 | ... |

The hours are reckoned from *apparent* midnight.

## READINGS of THERMOMETERS on the ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE, in the YEAR 1913.

(The readings of the maximum and minimum thermometers apply to the twenty-four hours ending at 21h.)

### JANUARY.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | 9h | Noon. | 15h | 21h | Wet-Bulb Thermometer, 4 ft. above the Ground. 9h | Noon. | 15h | 21h |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 47·3 | 40·1 | 42·5 | 44·6 | 47·0 | 41·9 | 40·4 | 43·2 | 45·8 | 41·1 |
| 2 | 48·7 | 32·1 | 34·8 | 47·1 | 45·3 | 41·5 | 34·6 | 44·4 | 42·8 | 41·0 |
| 3 | 48·8 | 37·3 | 42·6 | 47·8 | 47·8 | 48·0 | 42·2 | 46·1 | 45·6 | 46·0 |
| 4 | 50·4 | 46·0 | 47·3 | 49·4 | 48·6 | 46·7 | 46·0 | 47·3 | 45·8 | 45·2 |
| 5 | 51·4 | 39·2 | 49·0 | 50·6 | 50·0 | 39·3 | 47·6 | 48·9 | 46·6 | 38·0 |
| 6 | 48·1 | 36·2 | 41·0 | 44·6 | 45·1 | 44·6 | 40·7 | 43·0 | 43·7 | 43·1 |
| 7 | 50·5 | 43·1 | 47·4 | 49·6 | 47·1 | 43·6 | 45·7 | 46·9 | 45·0 | 41·8 |
| 8 | 45·7 | 41·1 | 41·9 | 43·4 | 44·2 | 45·4 | 40·8 | 42·1 | 42·5 | 44·1 |
| 9 | 48·0 | 41·2 | 42·9 | 45·8 | 46·2 | 41·8 | 42·4 | 44·7 | 44·6 | 41·0 |
| 10 | 42·0 | 33·9 | 37·1 | 36·8 | 35·9 | 34·6 | 37·0 | 36·8 | 35·8 | 33·9 |
| 11 | 40·4 | 33·1 | 33·8 | 35·8 | 36·8 | 40·4 | 33·2 | 35·8 | 36·7 | 39·8 |
| 12 | 43·0 | 34·6 | 37·5 | 41·6 | 41·9 | 34·7 | 35·8 | 38·4 | 38·5 | 33·6 |
| 13 | 36·0 | 26·2 | 28·6 | 30·8 | 35·2 | 34·6 | 27·7 | 30·7 | 33·9 | 34·0 |
| 14 | 42·0 | 30·6 | 32·4 | 39·8 | 39·6 | 38·5 | 32·0 | 39·0 | 38·8 | 37·4 |
| 15 | 48·1 | 37·1 | 42·4 | 47·2 | 45·5 | 42·6 | 41·6 | 43·0 | 41·7 | 41·8 |
| 16 | 46·3 | 34·1 | 37·6 | 45·7 | 44·4 | 41·4 | 36·3 | 42·2 | 41·9 | 40·6 |
| 17 | 45·1 | 37·0 | 39·6 | 42·5 | 42·9 | 37·4 | 38·8 | 39·8 | 40·8 | 36·8 |
| 18 | 45·9 | 31·3 | 32·6 | 44·6 | 45·5 | 39·8 | 32·5 | 42·0 | 42·6 | 38·4 |
| 19 | 45·9 | 32·1 | 36·5 | 44·3 | 44·3 | 39·6 | 35·8 | 42·9 | 43·3 | 38·8 |
| 20 | 48·0 | 39·1 | 42·6 | 45·5 | 44·5 | 42·4 | 41·4 | 43·6 | 43·4 | 41·4 |
| 21 | 42·4 | 36·1 | 41·3 | 41·7 | 42·3 | 40·1 | 40·2 | 40·6 | 40·8 | 37·9 |
| 22 | 40·2 | 32·0 | 32·6 | 32·8 | 34·4 | 33·0 | 31·6 | 32·6 | 33·3 | 33·0 |
| 23 | 52·1 | 33·0 | 51·1 | 51·5 | 51·6 | 48·1 | 49·1 | 49·0 | 48·6 | 45·3 |
| 24 | 50·6 | 46·1 | 48·0 | 48·7 | 49·1 | 50·4 | 45·4 | 46·4 | 46·9 | 47·8 |
| 25 | 50·8 | 39·4 | 44·5 | 45·7 | 43·8 | 39·6 | 42·8 | 42·2 | 41·8 | 37·8 |
| 26 | 43·1 | 28·3 | 31·5 | 40·7 | 41·5 | 32·8 | 31·0 | 37·0 | 36·8 | 31·2 |
| 27 | 42·3 | 28·1 | 33·7 | 41·3 | 38·9 | 35·6 | 32·9 | 38·2 | 36·6 | 33·8 |
| 28 | 44·3 | 34·6 | 39·6 | 41·5 | 43·0 | 41·1 | 39·2 | 41·4 | 42·0 | 40·5 |
| 29 | 44·1 | 40·2 | 41·5 | 43·5 | 43·6 | 43·0 | 41·4 | 43·2 | 43·5 | 42·9 |
| 30 | 46·9 | 41·1 | 42·6 | 43·9 | 45·5 | 46·9 | 42·3 | 43·5 | 44·0 | 45·8 |
| 31 | 50·2 | 36·1 | 37·8 | 42·2 | 42·3 | 36·7 | 34·8 | 37·2 | 37·5 | 34·9 |
| Means | 46·1 | 36·1 | 39·8 | 43·6 | 43·7 | 40·8 | 38·8 | 41·7 | 41·7 | 39·6 |

### FEBRUARY.

| Days of the Month. | Dry-Bulb Maximum. | Minimum. | 9h | Noon. | 15h | 21h | Wet-Bulb 9h | Noon. | 15h | 21h |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 44·1 | 35·1 | 39·1 | 43·8 | 40·0 | 37·5 | 38·1 | 41·7 | 39·7 | 37·0 |
| 2 | 45·8 | 33·3 | 37·8 | 44·3 | 42·7 | 44·6 | 35·5 | 40·8 | 41·6 | 42·8 |
| 3 | 52·3 | 44·2 | 48·6 | 51·7 | 50·9 | 50·2 | 45·8 | 47·8 | 47·9 | 46·4 |
| 4 | 55·0 | 46·1 | 49·4 | 53·2 | 53·1 | 46·9 | 44·9 | 47·6 | 48·1 | 45·7 |
| 5 | 48·3 | 43·9 | 46·6 | 48·0 | 47·1 | 45·3 | 45·3 | 45·2 | 43·4 | 42·8 |
| 6 | 52·2 | 39·9 | 46·5 | 49·9 | 49·9 | 49·6 | 45·6 | 47·6 | 46·8 | 46·8 |
| 7 | 52·6 | 44·4 | 48·4 | 52·0 | 52·4 | 51·2 | 47·0 | 50·1 | 49·2 | 49·1 |
| 8 | 51·2 | 41·1 | 42·6 | 46·6 | 48·0 | 41·9 | 38·9 | 40·8 | 40·8 | 39·6 |
| 9 | 52·0 | 41·4 | 46·9 | 49·6 | 51·6 | 48·6 | 45·5 | 48·3 | 50·1 | 48·1 |
| 10 | 53·5 | 41·2 | 44·7 | 49·9 | 53·5 | 42·1 | 42·6 | 45·3 | 47·0 | 38·7 |
| 11 | 53·2 | 32·1 | 34·6 | 48·0 | 51·8 | 38·0 | 34·6 | 44·0 | 46·8 | 37·8 |
| 12 | 48·0 | 30·2 | 33·4 | 40·3 | 47·6 | 40·6 | 33·4 | 40·2 | 45·8 | 40·3 |
| 13 | 42·0 | 34·4 | 35·3 | 37·2 | 41·0 | 36·9 | 35·3 | 36·8 | 39·7 | 36·4 |
| 14 | 38·1 | 30·2 | 35·1 | 36·6 | 37·7 | 37·7 | 35·0 | 36·5 | 37·2 | 37·3 |
| 15 | 39·8 | 35·4 | 37·6 | 37·9 | 37·9 | 38·7 | 36·8 | 37·0 | 37·7 | 38·0 |
| 16 | 46·0 | 33·1 | 35·4 | 44·0 | 45·0 | 37·7 | 34·4 | 39·0 | 38·0 | 34·8 |
| 17 | 42·0 | 33·0 | 38·2 | 39·6 | 41·3 | 33·0 | 36·2 | 37·0 | 37·8 | 31·8 |
| 18 | 38·4 | 32·1 | 32·6 | 38·1 | 35·6 | 33·7 | 30·7 | 32·7 | 30·8 | 30·5 |
| 19 | 40·0 | 28·9 | 32·7 | 37·8 | 38·7 | 33·2 | 29·8 | 32·3 | 34·0 | 31·1 |
| 20 | 36·2 | 31·1 | 33·6 | 34·3 | 35·4 | 33·6 | 30·8 | 32·0 | 31·8 | 31·0 |
| 21 | 43·3 | 33·0 | 38·6 | 41·9 | 42·0 | 36·1 | 35·2 | 37·1 | 37·8 | 34·9 |
| 22 | 42·1 | 29·7 | 37·5 | 41·1 | 40·6 | 30·4 | 36·6 | 37·2 | 35·8 | 29·3 |
| 23 | 48·3 | 24·2 | 36·8 | 46·4 | 47·4 | 32·5 | 34·0 | 38·5 | 39·4 | 31·0 |
| 24 | 48·6 | 29·1 | 39·8 | 48·6 | 47·6 | 42·0 | 36·5 | 41·9 | 41·4 | 37·7 |
| 25 | 49·0 | 36·1 | 46·6 | 47·4 | 45·3 | 40·4 | 41·9 | 42·6 | 41·2 | 39·0 |
| 26 | 53·0 | 39·9 | 44·7 | 51·6 | 50·1 | 43·0 | 44·0 | 47·2 | 45·0 | 41·8 |
| 27 | 52·0 | 38·1 | 43·7 | 49·7 | 47·8 | 43·6 | 42·4 | 43·8 | 43·0 | 42·0 |
| 28 | 44·0 | 36·8 | 38·3 | 41·8 | 40·9 | 38·8 | 36·7 | 37·9 | 37·7 | 36·2 |
| Means | 46·8 | 35·6 | 40·2 | 44·7 | 45·1 | 40·3 | 38·3 | 41·0 | 41·3 | 38·5 |

### MARCH.

| Days of the Month. | Dry-Bulb Maximum. | Minimum. | 9h | Noon. | 15h | 21h | Wet-Bulb 9h | Noon. | 15h | 21h |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 42·7 | 34·8 | 39·2 | 41·5 | 41·0 | 36·5 | 35·7 | 37·6 | 36·0 | 33·6 |
| 2 | 52·4 | 36·2 | 44·6 | 48·6 | 50·1 | 44·6 | 42·7 | 43·4 | 44·1 | 42·0 |
| 3 | 53·0 | 43·6 | 50·5 | 51·2 | 52·3 | 49·8 | 47·9 | 48·8 | 49·2 | 47·3 |
| 4 | 54·6 | 38·2 | 48·6 | 52·2 | 52·0 | 51·5 | 47·0 | 49·9 | 49·8 | 49·3 |
| 5 | 58·3 | 45·2 | 50·8 | 55·3 | 55·7 | 45·3 | 46·9 | 47·4 | 48·5 | 43·0 |
| 6 | 59·0 | 44·7 | 50·2 | 55·2 | 55·6 | 50·2 | 47·9 | 50·1 | 49·3 | 46·7 |
| 7 | 50·9 | 41·3 | 44·5 | 47·7 | 47·5 | 42·0 | 40·8 | 41·8 | 40·9 | 40·0 |
| 8 | 45·7 | 33·4 | 38·6 | 43·4 | 40·5 | 40·0 | 35·7 | 38·2 | 37·4 | 36·3 |
| 9 | 49·3 | 33·3 | 42·9 | 47·7 | 47·6 | 46·6 | 40·8 | 43·8 | 43·7 | 43·5 |
| 10 | 51·9 | 46·1 | 48·2 | 49·2 | 49·7 | 48·7 | 46·4 | 48·0 | 49·2 | 47·8 |
| 11 | 56·2 | 44·4 | 47·2 | 51·3 | 53·8 | 45·3 | 43·8 | 47·6 | 49·3 | 41·0 |
| 12 | 55·0 | 29·0 | 44·4 | 51·5 | 51·6 | 41·9 | 41·1 | 46·4 | 47·4 | 41·4 |
| 13 | 55·7 | 36·1 | 38·3 | 50·1 | 53·7 | 45·2 | 38·0 | 46·4 | 48·4 | 42·5 |
| 14 | 54·3 | 44·7 | 49·3 | 52·8 | 51·6 | 46·9 | 48·6 | 49·8 | 48·6 | 45·6 |
| 15 | 49·1 | 37·6 | 43·2 | 47·8 | 49·0 | 43·6 | 38·8 | 39·5 | 40·6 | 39·9 |
| 16 | 47·6 | 39·0 | 41·4 | 44·8 | 43·9 | 39·3 | 38·0 | 40·4 | 40·4 | 38·8 |
| 17 | 46·4 | 35·0 | 37·0 | 41·6 | 39·6 | 36·4 | 35·4 | 37·0 | 37·8 | 34·6 |
| 18 | 44·3 | 28·2 | 34·4 | 36·4 | 42·6 | 34·5 | 31·2 | 32·7 | 35·8 | 32·0 |
| 19 | 52·2 | 34·2 | 47·5 | 50·8 | 51·0 | 44·3 | 46·5 | 44·7 | 42·4 | 40·5 |
| 20 | 56·0 | 41·3 | 47·9 | 52·8 | 47·6 | 44·6 | 43·0 | 45·1 | 45·4 | 42·0 |
| 21 | 53·6 | 39·3 | 47·4 | 47·7 | 51·3 | 43·6 | 44·6 | 43·8 | 45·7 | 41·2 |
| 22 | 56·8 | 41·4 | 47·7 | 53·5 | 55·2 | 46·4 | 45·5 | 49·4 | 50·7 | 42·1 |
| 23 | 51·8 | 42·1 | 47·3 | 46·8 | 48·3 | 42·8 | 43·7 | 44·8 | 46·0 | 39·9 |
| 24 | 46·7 | 36·0 | 41·2 | 44·6 | 45·9 | 39·2 | 39·8 | 42·7 | 42·3 | 37·8 |
| 25 | 46·7 | 29·0 | 39·2 | 45·0 | 44·9 | 40·0 | 36·6 | 41·8 | 40·7 | 36·5 |
| 26 | 50·3 | 35·3 | 42·9 | 48·8 | 46·2 | 42·3 | 41·2 | 43·9 | 41·4 | 41·4 |
| 27 | 55·1 | 40·2 | 42·6 | 47·0 | 53·8 | 41·3 | 41·6 | 44·2 | 46·7 | 40·4 |
| 28 | 52·9 | 39·1 | 47·4 | 46·6 | 51·2 | 44·7 | 45·1 | 45·1 | 47·6 | 41·8 |
| 29 | 56·7 | 38·1 | 47·6 | 47·8 | 53·9 | 49·8 | 45·8 | 47·3 | 51·1 | 45·0 |
| 30 | 57·0 | 46·2 | 48·6 | 51·5 | 51·9 | 49·5 | 45·6 | 47·8 | 47·3 | 47·5 |
| 31 | 49·8 | 40·5 | 43·8 | 45·7 | 47·7 | 43·1 | 42·7 | 44·1 | 45·4 | 42·3 |
| Means | 52·0 | 38·5 | 44·7 | 48·3 | 49·2 | 43·9 | 42·2 | 44·3 | 44·8 | 41·4 |

### APRIL.

| Days of the Month. | Dry-Bulb Maximum. | Minimum. | 9h | Noon. | 15h | 21h | Wet-Bulb 9h | Noon. | 15h | 21h |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 53·0 | 37·2 | 46·3 | 47·4 | 49·1 | 42·4 | 43·8 | 43·7 | 43·8 | 41·4 |
| 2 | 55·2 | 33·0 | 47·6 | 50·9 | 53·1 | 43·3 | 44·1 | 45·5 | 47·0 | 41·2 |
| 3 | 55·0 | 36·3 | 49·7 | 52·5 | 51·6 | 43·9 | 44·5 | 43·3 | 42·7 | 42·1 |
| 4 | 51·2 | 40·4 | 43·7 | 48·2 | 50·6 | 46·2 | 41·4 | 45·0 | 47·9 | 44·7 |
| 5 | 52·6 | 42·1 | 44·8 | 48·6 | 51·6 | 45·3 | 43·0 | 44·9 | 47·2 | 43·1 |
| 6 | 55·0 | 41·5 | 47·5 | 52·3 | 52·5 | 41·8 | 42·4 | 44·4 | 45·7 | 38·0 |
| 7 | 51·1 | 39·8 | 43·7 | 47·0 | 47·5 | 41·6 | 39·9 | 40·8 | 38·9 | 37·1 |
| 8 | 51·3 | 34·9 | 43·3 | 43·8 | 49·8 | 43·8 | 39·5 | 40·0 | 44·8 | 39·9 |
| 9 | 47·0 | 39·1 | 42·1 | 44·6 | 45·5 | 39·8 | 38·8 | 40·1 | 40·9 | 36·7 |
| 10 | 49·4 | 38·1 | 45·9 | 48·4 | 48·6 | 43·5 | 44·1 | 46·1 | 47·0 | 41·4 |
| 11 | 43·7 | 34·1 | 39·6 | 39·5 | 35·7 | 42·8 | 35·8 | 37·4 | 35·1 | 41·6 |
| 12 | 44·1 | 33·9 | 39·5 | 40·0 | 40·8 | 37·2 | 33·7 | 33·7 | 34·9 | 33·4 |
| 13 | 45·8 | 29·0 | 39·5 | 44·0 | 44·2 | 35·6 | 34·0 | 36·7 | 37·0 | 33·2 |
| 14 | 48·6 | 33·4 | 42·6 | 46·8 | 46·4 | 44·1 | 38·3 | 41·6 | 41·4 | 43·5 |
| 15 | 52·6 | 42·8 | 50·2 | 50·6 | 51·1 | 46·5 | 46·0 | 46·0 | 45·9 | 43·2 |
| 16 | 57·9 | 43·0 | 47·8 | 51·2 | 55·8 | 43·8 | 46·8 | 49·8 | 48·1 | 39·9 |
| 17 | 55·9 | 31·2 | 47·4 | 51·5 | 51·0 | 41·3 | 41·7 | 43·9 | 46·8 | 37·8 |
| 18 | 54·1 | 35·3 | 48·2 | 51·3 | 50·9 | 48·0 | 44·8 | 47·2 | 47·2 | 47·2 |
| 19 | 57·0 | 43·7 | 52·4 | 55·6 | 53·8 | 43·7 | 47·5 | 45·9 | 45·2 | 41·0 |
| 20 | 58·2 | 38·0 | 48·4 | 52·4 | 57·3 | 44·9 | 43·2 | 44·9 | 46·1 | 40·9 |
| 21 | 61·2 | 43·0 | 51·2 | 57·7 | 58·8 | 51·2 | 50·1 | 54·4 | 53·2 | 50·4 |
| 22 | 64·2 | 48·8 | 52·3 | 60·8 | 63·3 | 53·2 | 51·4 | 56·0 | 57·0 | 50·8 |
| 23 | 63·8 | 41·1 | 56·9 | 62·6 | 61·7 | 46·7 | 51·3 | 52·0 | 49·7 | 42·9 |
| 24 | 67·2 | 33·1 | 49·5 | 63·9 | 64·6 | 51·0 | 47·7 | 54·6 | 54·8 | 47·1 |
| 25 | 59·0 | 42·1 | 50·8 | 53·9 | 54·0 | 42·5 | 48·8 | 47·9 | 46·7 | 41·1 |
| 26 | 57·2 | 39·1 | 51·3 | 54·7 | 52·6 | 54·3 | 47·0 | 49·6 | 49·1 | 48·8 |
| 27 | 62·6 | 50·5 | 58·6 | 58·1 | 57·6 | 56·6 | 53·4 | 53·4 | 54·5 | 51·9 |
| 28 | 62·8 | 51·0 | 54·6 | 56·9 | 60·8 | 51·1 | 53·0 | 54·8 | 56·9 | 48·8 |
| 29 | 64·9 | 42·0 | 60·4 | 62·6 | 61·1 | 53·5 | 54·9 | 54·8 | 54·3 | 51·5 |
| 30 | 58·7 | 47·8 | 55·6 | 54·0 | 54·6 | 47·9 | 50·3 | 49·7 | 49·4 | 47·2 |
| Means | 55·3 | 39·5 | 48·4 | 51·7 | 52·5 | 45·6 | 44·7 | 46·3 | 46·6 | 42·9 |

## READINGS of THERMOMETERS on the ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE—*continued.*

(The readings of the maximum and minimum thermometers apply to the twenty-four hours ending at $21^h$.)

### MAY.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | $9^h$ | Noon. | $15^h$ | $21^h$ | Wet-Bulb Thermometer, 4 ft. above the Ground. $9^h$ | Noon. | $15^h$ | $21^h$ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 62.2 | 45.1 | 51.2 | 56.9 | 54.8 | 48.5 | 47.2 | 48.6 | 48.7 | 46.0 |
| 2 | 61.1 | 39.6 | 49.3 | 54.0 | 57.6 | 45.9 | 46.9 | 47.1 | 48.6 | 44.7 |
| 3 | 60.0 | 40.1 | 52.5 | 57.5 | 55.4 | 46.5 | 46.9 | 49.0 | 48.7 | 44.8 |
| 4 | 53.3 | 42.2 | 45.0 | 47.3 | 52.8 | 47.3 | 43.4 | 44.8 | 47.4 | 44.8 |
| 5 | 62.6 | 45.7 | 52.6 | 57.7 | 57.6 | 48.1 | 49.4 | 52.8 | 52.0 | 45.1 |
| 6 | 61.4 | 42.2 | 55.3 | 59.4 | 50.8 | 44.7 | 51.0 | 53.0 | 48.7 | 41.4 |
| 7 | 59.0 | 36.3 | 52.0 | 53.3 | 55.9 | 49.8 | 47.1 | 47.8 | 49.1 | 47.5 |
| 8 | 54.0 | 44.7 | 51.3 | 52.6 | 51.5 | 51.2 | 46.5 | 46.8 | 48.0 | 48.3 |
| 9 | 57.5 | 48.2 | 51.8 | 54.6 | 53.4 | 50.3 | 49.5 | 50.8 | 49.5 | 48.7 |
| 10 | 63.2 | 45.2 | 55.5 | 60.1 | 60.8 | 48.9 | 50.8 | 53.5 | 52.5 | 46.6 |
| 11 | 65.0 | 41.0 | 55.8 | 61.4 | 60.7 | 49.7 | 51.4 | 56.4 | 53.5 | 47.9 |
| 12 | 61.0 | 42.8 | 58.3 | 58.8 | 58.8 | 52.8 | 53.4 | 53.7 | 52.5 | 51.0 |
| 13 | 68.0 | 50.3 | 57.0 | 66.2 | 65.4 | 55.0 | 54.1 | 56.3 | 56.3 | 50.4 |
| 14 | 64.6 | 45.4 | 57.1 | 62.2 | 61.7 | 52.1 | 53.0 | 55.7 | 55.0 | 48.4 |
| 15 | 60.1 | 45.1 | 49.6 | 56.6 | 58.8 | 45.6 | 45.7 | 49.9 | 51.0 | 42.8 |
| 16 | 65.2 | 43.1 | 47.3 | 58.7 | 65.0 | 51.4 | 44.6 | 52.3 | 56.0 | 48.2 |
| 17 | 70.6 | 39.4 | 55.6 | 67.3 | 69.5 | 54.5 | 49.4 | 51.4 | 56.8 | 49.9 |
| 18 | 60.0 | 44.6 | 53.2 | 55.7 | 54.6 | 47.6 | 46.3 | 45.7 | 44.3 | 42.4 |
| 19 | 60.5 | 38.3 | 49.7 | 56.6 | 52.3 | 48.9 | 43.5 | 46.6 | 46.8 | 43.9 |
| 20 | 65.3 | 37.1 | 52.6 | 55.3 | 63.0 | 51.8 | 50.0 | 52.7 | 55.6 | 49.3 |
| 21 | 66.1 | 47.1 | 56.3 | 61.8 | 61.5 | 52.4 | 51.3 | 53.0 | 53.8 | 49.4 |
| 22 | 63.0 | 45.6 | 55.1 | 58.3 | 57.5 | 52.6 | 48.3 | 49.1 | 49.2 | 50.7 |
| 23 | 71.8 | 52.1 | 58.2 | 64.6 | 67.8 | 58.3 | 54.7 | 58.0 | 59.7 | 55.0 |
| 24 | 74.9 | 53.3 | 63.5 | 70.1 | 71.6 | 62.2 | 58.3 | 61.0 | 61.9 | 57.4 |
| 25 | 81.2 | 50.3 | 71.2 | 76.2 | 78.7 | 63.7 | 62.9 | 64.6 | 65.4 | 59.7 |
| 26 | 83.5 | 52.2 | 74.9 | 80.0 | 79.8 | 63.6 | 66.4 | 66.9 | 67.0 | 60.3 |
| 27 | 84.1 | 53.2 | 71.2 | 81.9 | 77.8 | 62.3 | 65.4 | 66.9 | 65.6 | 60.9 |
| 28 | 80.8 | 51.6 | 69.5 | 76.3 | 77.1 | 63.6 | 58.8 | 63.4 | 63.8 | 59.8 |
| 29 | 81.4 | 57.1 | 69.6 | 76.3 | 73.7 | 61.7 | 62.4 | 66.5 | 64.1 | 60.2 |
| 30 | 79.5 | 53.1 | 72.9 | 77.5 | 75.8 | 53.3 | 66.9 | 68.8 | 65.7 | 48.7 |
| 31 | 62.3 | 50.1 | 57.5 | 58.6 | 59.6 | 50.6 | 51.0 | 51.9 | 52.1 | 47.5 |
| Means | 66.6 | 45.9 | 57.2 | 62.4 | 62.6 | 52.7 | 52.1 | 54.4 | 54.5 | 49.7 |

### JUNE.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | $9^h$ | Noon. | $15^h$ | $21^h$ | Wet-Bulb Thermometer, 4 ft. above the Ground. $9^h$ | Noon. | $15^h$ | $21^h$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 66.0 | 42.2 | 61.6 | 61.5 | 61.2 | 51.6 | 54.9 | 55.0 | 53.8 | 50.0 |
| 2 | 73.0 | 46.0 | 61.6 | 70.2 | 69.3 | 54.2 | 54.3 | 59.4 | 57.8 | 50.5 |
| 3 | 79.1 | 45.2 | 67.0 | 70.8 | 72.9 | 57.6 | 58.3 | 58.7 | 62.5 | 53.9 |
| 4 | 71.0 | 50.9 | 67.1 | 67.4 | 66.0 | 58.5 | 61.3 | 59.4 | 58.3 | 54.3 |
| 5 | 70.2 | 51.0 | 65.3 | 64.9 | 60.4 | 52.8 | 58.1 | 58.1 | 56.8 | 50.5 |
| 6 | 66.1 | 49.2 | 53.8 | 61.6 | 57.6 | 52.9 | 52.8 | 55.4 | 54.2 | 49.0 |
| 7 | 70.0 | 48.1 | 54.6 | 63.0 | 67.9 | 55.1 | 53.0 | 58.2 | 56.8 | 50.3 |
| 8 | 68.5 | 46.4 | 58.2 | 61.8 | 64.1 | 53.1 | 56.9 | 58.8 | 58.8 | 47.4 |
| 9 | 68.0 | 43.1 | 57.3 | 63.7 | 64.4 | 52.6 | 50.7 | 54.0 | 55.3 | 48.4 |
| 10 | 68.9 | 51.2 | 55.6 | 60.6 | 67.5 | 56.1 | 53.0 | 56.2 | 59.9 | 51.1 |
| 11 | 67.4 | 48.2 | 57.6 | 61.6 | 66.2 | 56.2 | 50.8 | 52.0 | 55.4 | 49.3 |
| 12 | 67.3 | 50.2 | 56.1 | 63.3 | 62.9 | 55.8 | 51.2 | 54.5 | 55.0 | 53.4 |
| 13 | 64.0 | 49.1 | 59.6 | 60.1 | 61.3 | 54.6 | 54.6 | 55.5 | 56.4 | 49.8 |
| 14 | 70.7 | 52.0 | 60.8 | 66.6 | 67.6 | 54.3 | 54.9 | 57.8 | 58.2 | 52.1 |
| 15 | 74.0 | 49.1 | 67.6 | 72.1 | 71.8 | 56.8 | 59.0 | 60.1 | 56.8 | 54.3 |
| 16 | 82.0 | 47.1 | 70.8 | 80.5 | 81.6 | 61.0 | 62.8 | 65.2 | 66.8 | 59.6 |
| 17 | 87.1 | 54.2 | 74.0 | 81.2 | 82.9 | 66.3 | 64.9 | 69.1 | 70.0 | 61.8 |
| 18 | 78.1 | 52.2 | 65.1 | 70.2 | 76.8 | 62.3 | 58.8 | 61.8 | 64.8 | 58.7 |
| 19 | 73.0 | 55.2 | 61.6 | 69.1 | 68.5 | 57.0 | 53.8 | 56.9 | 56.2 | 50.8 |
| 20 | 69.0 | 49.9 | 57.2 | 62.2 | 59.4 | 51.6 | 53.3 | 55.1 | 54.3 | 51.4 |
| 21 | 67.3 | 43.8 | 62.2 | 63.6 | 62.3 | 54.9 | 56.8 | 55.7 | 56.4 | 53.5 |
| 22 | 78.3 | 47.1 | 68.3 | 73.0 | 72.6 | 57.5 | 60.8 | 62.4 | 61.4 | 55.5 |
| 23 | 66.0 | 52.5 | 58.7 | 62.6 | 61.5 | 55.1 | 54.8 | 56.6 | 56.4 | 52.8 |
| 24 | 64.1 | 51.1 | 56.6 | 59.6 | 60.7 | 55.3 | 51.4 | 51.7 | 52.1 | 49.8 |
| 25 | 67.3 | 49.3 | 56.3 | 61.3 | 65.0 | 57.5 | 52.6 | 55.4 | 57.8 | 53.2 |
| 26 | 69.0 | 53.1 | 62.2 | 63.6 | 65.6 | 61.7 | 53.8 | 54.8 | 56.5 | 54.8 |
| 27 | 68.2 | 54.7 | 56.6 | 62.7 | 63.3 | 57.6 | 50.8 | 54.2 | 52.2 | 50.5 |
| 28 | 77.9 | 47.9 | 57.8 | 70.2 | 75.5 | 66.9 | 52.7 | 60.9 | 64.4 | 60.4 |
| 29 | 79.5 | 57.2 | 67.6 | 74.8 | 78.4 | 57.6 | 60.4 | 63.5 | 63.9 | 53.8 |
| 30 | 71.2 | 49.1 | 62.8 | 66.4 | 67.6 | 57.6 | 56.2 | 58.0 | 60.3 | 54.8 |
| Means | 71.4 | 49.5 | 61.4 | 66.3 | 67.4 | 56.7 | 55.6 | 57.8 | 58.3 | 52.9 |

### JULY.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | $9^h$ | Noon. | $15^h$ | $21^h$ | Wet-Bulb Thermometer, 4 ft. above the Ground. $9^h$ | Noon. | $15^h$ | $21^h$ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 70.0 | 49.1 | 55.7 | 61.2 | 68.9 | 61.1 | 52.3 | 55.6 | 59.2 | 56.0 |
| 2 | 72.1 | 51.1 | 60.0 | 64.6 | 69.2 | 58.7 | 55.7 | 56.2 | 58.9 | 58.1 |
| 3 | 68.9 | 54.3 | 57.8 | 61.7 | 65.4 | 60.3 | 55.5 | 56.7 | 57.8 | 56.8 |
| 4 | 68.9 | 53.2 | 57.6 | 63.8 | 66.8 | 55.8 | 55.7 | 58.8 | 60.0 | 54.9 |
| 5 | 66.9 | 51.3 | 58.8 | 61.2 | 63.4 | 57.4 | 52.6 | 54.4 | 56.0 | 55.6 |
| 6 | 60.1 | 52.2 | 55.4 | 58.6 | 55.8 | 52.9 | 53.7 | 55.1 | 53.1 | 52.8 |
| 7 | 66.0 | 49.1 | 57.0 | 59.7 | 55.0 | 53.8 | 52.4 | 53.3 | 52.4 | 48.3 |
| 8 | 64.8 | 46.2 | 56.2 | 58.7 | 63.1 | 53.3 | 50.2 | 49.7 | 52.4 | 49.8 |
| 9 | 69.2 | 47.6 | 59.3 | 61.6 | 62.8 | 55.2 | 53.5 | 53.9 | 56.1 | 53.8 |
| 10 | 66.2 | 53.8 | 57.0 | 62.6 | 54.6 | 55.2 | 55.5 | 57.3 | 53.8 | 53.2 |
| 11 | 68.2 | 53.1 | 61.3 | 66.8 | 64.5 | 59.7 | 57.2 | 59.4 | 58.3 | 58.4 |
| 12 | 75.8 | 50.2 | 68.2 | 70.4 | 71.8 | 59.8 | 60.9 | 61.1 | 61.6 | 56.2 |
| 13 | 73.0 | 53.0 | 61.6 | 66.9 | 67.6 | 58.4 | 57.9 | 59.4 | 60.5 | 55.7 |
| 14 | 69.2 | 51.2 | 65.0 | 66.8 | 64.8 | 60.6 | 60.3 | 61.3 | 61.3 | 60.6 |
| 15 | 61.6 | 53.1 | 53.8 | 58.9 | 60.8 | 58.1 | 53.4 | 57.6 | 59.4 | 57.0 |
| 16 | 67.0 | 55.3 | 63.8 | 63.2 | 65.2 | 60.6 | 59.0 | 58.5 | 60.8 | 56.9 |
| 17 | 73.8 | 52.1 | 62.1 | 68.1 | 69.9 | 63.6 | 59.2 | 61.5 | 61.8 | 61.1 |
| 18 | 69.0 | 58.6 | 60.3 | 65.8 | 63.8 | 61.1 | 59.5 | 61.6 | 58.0 | 55.4 |
| 19 | 64.0 | 52.9 | 58.6 | 56.8 | 62.5 | 60.0 | 55.4 | 56.4 | 58.4 | 56.6 |
| 20 | 69.0 | 52.6 | 58.3 | 64.2 | 67.2 | 58.4 | 52.9 | 54.5 | 56.0 | 51.4 |
| 21 | 65.9 | 48.7 | 59.4 | 58.9 | 63.4 | 59.6 | 53.4 | 53.0 | 56.3 | 57.0 |
| 22 | 67.0 | 53.3 | 54.4 | 60.0 | 62.0 | 54.6 | 53.8 | 54.4 | 53.9 | 51.3 |
| 23 | 59.2 | 51.1 | 53.4 | 55.0 | 55.6 | 56.6 | 50.2 | 52.4 | 53.9 | 54.3 |
| 24 | 71.3 | 51.7 | 58.8 | 67.1 | 69.9 | 59.7 | 54.8 | 59.0 | 60.0 | 56.5 |
| 25 | 70.3 | 51.1 | 56.0 | 66.3 | 66.6 | 56.8 | 53.8 | 58.8 | 59.3 | 54.4 |
| 26 | 66.0 | 53.1 | 57.5 | 60.0 | 61.3 | 58.9 | 54.4 | 56.0 | 57.2 | 57.3 |
| 27 | 62.5 | 52.1 | 53.7 | 56.8 | 60.8 | 58.7 | 52.8 | 54.8 | 57.8 | 57.6 |
| 28 | 74.2 | 53.5 | 55.5 | 67.7 | 72.6 | 55.9 | 54.0 | 60.2 | 62.9 | 55.0 |
| 29 | 73.0 | 50.1 | 62.0 | 69.1 | 69.5 | 57.3 | 58.2 | 59.9 | 62.0 | 55.5 |
| 30 | 64.6 | 53.1 | 60.4 | 61.8 | 62.2 | 56.6 | 56.0 | 57.4 | 57.6 | 53.4 |
| 31 | 75.0 | 52.4 | 60.2 | 72.0 | 74.4 | 61.3 | 57.8 | 63.8 | 63.9 | 57.8 |
| Means | 68.2 | 51.9 | 58.7 | 63.1 | 64.6 | 58.1 | 55.2 | 57.2 | 58.1 | 55.4 |

### AUGUST.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | $9^h$ | Noon. | $15^h$ | $21^h$ | Wet-Bulb Thermometer, 4 ft. above the Ground. $9^h$ | Noon. | $15^h$ | $21^h$ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 71.5 | 54.9 | 58.8 | 62.8 | 70.0 | 57.2 | 55.8 | 57.8 | 61.5 | 54.1 |
| 2 | 69.0 | 51.9 | 59.4 | 61.9 | 68.8 | 55.3 | 55.3 | 56.5 | 60.7 | 53.8 |
| 3 | 75.2 | 50.2 | 61.8 | 68.2 | 72.8 | 56.3 | 56.8 | 58.7 | 62.5 | 54.0 |
| 4 | 70.0 | 49.0 | 61.2 | 64.3 | 60.6 | 56.8 | 57.1 | 59.0 | 56.0 | 52.2 |
| 5 | 67.3 | 51.1 | 56.7 | 62.4 | 64.6 | 52.4 | 48.9 | 51.6 | 53.2 | 49.4 |
| 6 | 66.2 | 48.7 | 60.6 | 64.5 | 61.6 | 54.3 | 53.8 | 55.0 | 54.6 | 48.8 |
| 7 | 69.7 | 46.1 | 59.6 | 66.2 | 59.3 | 52.8 | 52.4 | 54.1 | 53.2 | 52.3 |
| 8 | 65.6 | 50.0 | 58.3 | 63.2 | 63.0 | 51.9 | 55.4 | 56.3 | 56.0 | 51.2 |
| 9 | 68.0 | 45.4 | 56.0 | 65.7 | 64.9 | 54.8 | 53.8 | 55.6 | 55.5 | 52.0 |
| 10 | 72.1 | 49.3 | 61.2 | 62.4 | 67.9 | 59.4 | 54.8 | 53.8 | 56.0 | 55.7 |
| 11 | 74.6 | 55.2 | 61.6 | 66.1 | 71.2 | 58.7 | 58.3 | 59.8 | 62.0 | 55.5 |
| 12 | 68.0 | 51.1 | 58.4 | 63.7 | 65.4 | 52.8 | 57.2 | 57.5 | 58.1 | 52.0 |
| 13 | 69.0 | 52.3 | 60.8 | 66.9 | 60.3 | 60.1 | 55.3 | 57.2 | 57.6 | 59.1 |
| 14 | 72.7 | 57.1 | 61.0 | 67.3 | 69.2 | 61.0 | 55.2 | 59.0 | 58.4 | 59.0 |
| 15 | 66.8 | 57.2 | 60.7 | 63.4 | 64.5 | 60.2 | 58.5 | 58.0 | 58.8 | 57.9 |
| 16 | 75.0 | 53.9 | 65.5 | 68.7 | 71.6 | 62.4 | 59.7 | 60.8 | 59.8 | 59.7 |
| 17 | 72.9 | 51.7 | 64.6 | 70.3 | 72.3 | 58.3 | 60.0 | 61.4 | 61.8 | 56.7 |
| 18 | 65.1 | 55.0 | 59.2 | 62.5 | 62.3 | 56.8 | 54.2 | 55.0 | 56.4 | 53.0 |
| 19 | 62.1 | 53.0 | 57.0 | 60.7 | 60.0 | 56.6 | 53.6 | 54.8 | 55.3 | 54.4 |
| 20 | 70.0 | 54.1 | 57.5 | 64.6 | 68.7 | 57.6 | 52.0 | 54.7 | 57.7 | 54.0 |
| 21 | 80.0 | 49.2 | 66.6 | 74.6 | 76.5 | 65.2 | 58.9 | 61.1 | 62.4 | 61.1 |
| 22 | 73.0 | 60.0 | 66.3 | 70.7 | 70.5 | 61.6 | 61.5 | 64.7 | 64.6 | 56.8 |
| 23 | 70.4 | 57.3 | 60.4 | 60.8 | 68.1 | 57.6 | 59.8 | 59.5 | 60.5 | 54.0 |
| 24 | 73.2 | 49.5 | 61.8 | 65.2 | 64.8 | 57.1 | 55.8 | 56.8 | 56.8 | 53.8 |
| 25 | 76.5 | 45.0 | 64.6 | 69.8 | 72.2 | 57.6 | 56.6 | 59.0 | 60.4 | 54.2 |
| 26 | 76.4 | 47.7 | 67.0 | 71.5 | 72.7 | 60.8 | 59.8 | 60.9 | 62.3 | 56.7 |
| 27 | 75.3 | 57.1 | 62.0 | 71.2 | 74.8 | 62.7 | 60.0 | 62.6 | 62.7 | 58.4 |
| 28 | 79.2 | 56.2 | 67.8 | 78.6 | 77.9 | 63.1 | 63.7 | 66.7 | 63.7 | 59.8 |
| 29 | 71.4 | 53.3 | 64.2 | 64.3 | 67.9 | 61.5 | 61.0 | 63.1 | 65.4 | 61.1 |
| 30 | 74.0 | 55.1 | 62.5 | 72.7 | 72.0 | 63.6 | 61.0 | 67.0 | 66.4 | 63.3 |
| 31 | 66.0 | 58.0 | 60.6 | 60.3 | 60.6 | 58.0 | 59.7 | 59.6 | 59.5 | 57.5 |
| Means | 71.2 | 52.4 | 61.4 | 66.3 | 67.6 | 58.2 | 57.0 | 58.6 | 59.3 | 55.5 |

## READINGS of THERMOMETERS on the ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE—*concluded.*

(The readings of the maximum and minimum thermometers apply to the twenty-four hours ending at 21ʰ.)

### SEPTEMBER.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | 9ʰ | Noon. | 15ʰ | 21ʰ | Wet-Bulb Thermometer, 4 ft. above the Ground. 9ʰ | Noon. | 15ʰ | 21ʰ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 58.7 | 54.4 | 55.3 | 57.6 | 56.1 | 56.0 | 54.8 | 55.6 | 55.3 | 55.4 |
| 2 | 63.0 | 55.2 | 59.0 | 60.5 | 61.4 | 56.6 | 58.4 | 59.6 | 60.3 | 56.0 |
| 3 | 67.8 | 53.5 | 58.9 | 63.5 | 65.5 | 61.2 | 56.4 | 59.3 | 60.6 | 59.8 |
| 4 | 68.0 | 59.4 | 62.3 | 64.9 | 64.2 | 61.9 | 58.8 | 60.5 | 59.8 | 60.3 |
| 5 | 65.1 | 59.1 | 62.0 | 63.7 | 59.5 | 59.5 | 59.0 | 60.3 | 58.9 | 58.9 |
| 6 | 65.5 | 56.6 | 59.7 | 62.8 | 64.0 | 57.1 | 57.8 | 59.4 | 59.8 | 54.6 |
| 7 | 69.0 | 52.7 | 60.9 | 65.8 | 66.2 | 54.4 | 56.5 | 58.0 | 58.4 | 51.3 |
| 8 | 69.8 | 50.7 | 59.6 | 66.2 | 68.1 | 52.3 | 55.8 | 58.4 | 58.6 | 52.0 |
| 9 | 67.8 | 46.2 | 57.1 | 63.9 | 59.6 | 52.3 | 53.5 | 59.2 | 58.6 | 50.4 |
| 10 | 64.3 | 45.3 | 55.1 | 61.4 | 61.8 | 49.2 | 50.0 | 53.4 | 54.4 | 48.4 |
| 11 | 71.1 | 47.9 | 60.8 | 65.0 | 70.1 | 59.1 | 56.7 | 59.8 | 62.8 | 57.4 |
| 12 | 71.0 | 54.8 | 63.1 | 67.3 | 66.0 | 54.8 | 59.9 | 61.4 | 60.2 | 54.1 |
| 13 | 71.6 | 49.1 | 65.0 | 68.1 | 67.8 | 56.3 | 58.8 | 59.1 | 59.9 | 54.3 |
| 14 | 66.3 | 48.1 | 60.6 | 63.8 | 63.3 | 48.4 | 53.9 | 54.0 | 54.3 | 47.3 |
| 15 | 64.2 | 45.1 | 61.7 | 62.8 | 60.2 | 46.7 | 55.1 | 54.9 | 54.6 | 46.2 |
| 16 | 65.8 | 43.0 | 60.4 | 62.6 | 60.6 | 52.5 | 56.5 | 55.0 | 55.6 | 51.4 |
| 17 | 66.0 | 50.1 | 55.4 | 59.8 | 60.3 | 50.4 | 53.7 | 55.5 | 55.9 | 50.0 |
| 18 | 65.8 | 45.3 | 53.7 | 58.7 | 64.6 | 50.3 | 53.6 | 56.2 | 58.7 | 50.0 |
| 19 | 70.9 | 42.1 | 57.6 | 66.5 | 65.8 | 54.6 | 55.8 | 59.6 | 59.2 | 53.6 |
| 20 | 61.2 | 53.9 | 55.7 | 57.1 | 59.8 | 54.8 | 52.9 | 52.9 | 52.9 | 51.3 |
| 21 | 67.0 | 51.4 | 56.8 | 62.7 | 64.6 | 53.3 | 54.9 | 57.4 | 58.4 | 53.2 |
| 22 | 66.3 | 46.0 | 58.1 | 63.8 | 62.8 | 55.3 | 56.3 | 57.8 | 57.2 | 54.5 |
| 23 | 64.1 | 52.4 | 56.9 | 61.1 | 62.7 | 57.6 | 56.3 | 58.8 | 58.0 | 56.0 |
| 24 | 71.6 | 51.0 | 63.8 | 70.5 | 69.0 | 59.6 | 59.0 | 60.4 | 60.2 | 55.5 |
| 25 | 72.5 | 49.6 | 60.6 | 70.0 | 70.8 | 57.8 | 57.1 | 63.1 | 63.4 | 57.8 |
| 26 | 77.4 | 55.3 | 64.2 | 72.8 | 74.5 | 60.7 | 61.9 | 66.7 | 66.1 | 60.3 |
| 27 | 75.0 | 56.2 | 66.6 | 72.8 | 73.8 | 56.2 | 62.7 | 65.4 | 61.0 | 54.8 |
| 28 | 70.9 | 50.3 | 60.6 | 68.2 | 69.3 | 54.7 | 57.1 | 62.1 | 62.6 | 54.6 |
| 29 | 69.0 | 49.4 | 57.6 | 67.5 | 67.4 | 56.2 | 57.5 | 61.4 | 60.0 | 55.5 |
| 30 | 67.8 | 53.1 | 58.4 | 64.2 | 66.6 | 57.6 | 57.3 | 57.3 | 57.4 | 55.8 |
| Means | 67.8 | 50.9 | 59.6 | 64.5 | 64.9 | 55.2 | 56.6 | 58.8 | 58.8 | 54.0 |

### OCTOBER.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | 9ʰ | Noon. | 15ʰ | 21ʰ | Wet-Bulb Thermometer, 4 ft. above the Ground. 9ʰ | Noon. | 15ʰ | 21ʰ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 66.6 | 54.1 | 60.4 | 64.7 | 62.7 | 56.4 | 57.8 | 58.4 | 57.4 | 55.0 |
| 2 | 66.1 | 54.3 | 61.9 | 64.3 | 62.6 | 56.1 | 57.8 | 59.7 | 59.0 | 55.7 |
| 3 | 67.0 | 48.1 | 54.4 | 64.2 | 65.4 | 52.5 | 54.2 | 58.1 | 58.5 | 51.9 |
| 4 | 67.3 | 48.1 | 54.6 | 61.8 | 63.1 | 53.8 | 54.4 | 58.4 | 57.5 | 53.4 |
| 5 | 61.2 | 46.4 | 56.6 | 59.6 | 56.8 | 52.2 | 56.1 | 56.0 | 53.8 | 49.0 |
| 6 | 63.2 | 42.7 | 56.7 | 63.1 | 58.2 | 52.3 | 52.0 | 55.6 | 52.7 | 50.3 |
| 7 | 63.0 | 48.9 | 54.0 | 57.1 | 62.4 | 53.1 | 53.6 | 56.1 | 56.5 | 52.0 |
| 8 | 61.4 | 50.7 | 54.6 | 57.8 | 56.9 | 53.5 | 53.4 | 54.9 | 53.7 | 51.7 |
| 9 | 61.0 | 45.1 | 54.1 | 56.6 | 57.4 | 47.5 | 50.5 | 50.9 | 50.8 | 46.1 |
| 10 | 59.8 | 42.1 | 52.3 | 59.1 | 56.0 | 50.5 | 48.6 | 51.8 | 49.8 | 47.0 |
| 11 | 54.0 | 45.0 | 50.7 | 53.2 | 51.8 | 50.3 | 49.1 | 51.8 | 51.7 | 50.0 |
| 12 | 63.9 | 46.2 | 49.2 | 59.2 | 63.6 | 51.8 | 48.9 | 54.7 | 57.1 | 51.6 |
| 13 | 64.2 | 44.1 | 51.2 | 61.8 | 60.8 | 49.7 | 50.4 | 58.7 | 56.9 | 49.6 |
| 14 | 61.8 | 46.0 | 54.6 | 60.9 | 58.7 | 53.7 | 52.7 | 55.8 | 53.8 | 51.8 |
| 15 | 58.0 | 53.2 | 54.8 | 55.9 | 57.2 | 53.8 | 51.3 | 50.8 | 51.9 | 51.1 |
| 16 | 62.4 | 45.9 | 54.1 | 59.4 | 58.7 | 45.9 | 51.9 | 53.8 | 54.3 | 45.9 |
| 17 | 61.2 | 38.9 | 49.6 | 57.9 | 59.3 | 43.7 | 49.3 | 53.0 | 53.1 | 43.4 |
| 18 | 63.2 | 41.2 | 52.2 | 59.8 | 60.1 | 47.6 | 51.1 | 53.0 | 54.3 | 46.9 |
| 19 | 61.0 | 43.1 | 53.8 | 58.7 | 55.6 | 53.3 | 51.5 | 54.5 | 52.3 | 52.4 |
| 20 | 61.9 | 53.1 | 58.6 | 60.1 | 58.6 | 57.1 | 55.6 | 55.7 | 55.6 | 56.5 |
| 21 | 57.7 | 46.1 | 51.6 | 52.6 | 49.8 | 46.4 | 51.0 | 51.7 | 46.6 | 46.0 |
| 22 | 59.2 | 40.5 | 48.8 | 56.6 | 55.2 | 41.8 | 46.5 | 50.2 | 49.8 | 41.8 |
| 23 | 53.4 | 36.1 | 43.2 | 50.4 | 52.6 | 43.8 | 43.0 | 48.4 | 47.8 | 42.8 |
| 24 | 55.2 | 38.1 | 42.0 | 50.9 | 48.2 | 38.2 | 41.4 | 48.3 | 46.9 | 38.0 |
| 25 | 60.2 | 37.1 | 42.8 | 57.6 | 58.1 | 53.1 | 42.8 | 53.7 | 54.6 | 52.4 |
| 26 | 56.2 | 47.3 | 51.8 | 54.6 | 55.8 | 53.3 | 51.8 | 54.6 | 55.8 | 52.1 |
| 27 | 63.0 | 48.3 | 55.4 | 60.2 | 60.6 | 58.2 | 54.4 | 56.8 | 57.2 | 55.3 |
| 28 | 64.0 | 51.1 | 56.5 | 61.0 | 62.0 | 57.4 | 55.0 | 57.4 | 57.8 | 53.4 |
| 29 | 64.2 | 50.6 | 59.6 | 62.6 | 59.6 | 57.2 | 54.7 | 55.0 | 53.3 | 53.9 |
| 30 | 59.2 | 50.2 | 54.3 | 54.3 | 56.6 | 54.5 | 51.3 | 52.6 | 52.3 | 52.1 |
| 31 | 58.0 | 45.1 | 51.4 | 55.6 | 54.9 | 48.5 | 47.8 | 49.0 | 50.8 | 47.4 |
| Means | 61.2 | 46.1 | 53.1 | 58.4 | 58.0 | 51.2 | 51.3 | 54.2 | 53.7 | 49.9 |

### NOVEMBER.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | 9ʰ | Noon. | 15ʰ | 21ʰ | Wet-Bulb Thermometer, 4 ft. above the Ground. 9ʰ | Noon. | 15ʰ | 21ʰ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 58.0 | 43.6 | 48.1 | 54.9 | 55.3 | 46.6 | 48.0 | 51.5 | 51.1 | 45.7 |
| 2 | 59.2 | 46.2 | 55.5 | 58.0 | 56.7 | 54.6 | 54.2 | 53.2 | 52.8 | 51.8 |
| 3 | 56.3 | 45.1 | 49.6 | 54.5 | 53.3 | 49.8 | 45.7 | 48.4 | 48.3 | 46.8 |
| 4 | 56.7 | 36.1 | 40.4 | 55.9 | 55.6 | 50.6 | 40.3 | 50.7 | 50.9 | 48.0 |
| 5 | 56.1 | 44.6 | 50.9 | 52.4 | 53.9 | 44.7 | 49.8 | 47.4 | 47.8 | 42.7 |
| 6 | 53.0 | 39.1 | 46.1 | 48.7 | 48.6 | 44.2 | 44.6 | 45.1 | 45.0 | 43.2 |
| 7 | 51.1 | 40.1 | 44.2 | 47.8 | 50.4 | 42.3 | 42.4 | 44.0 | 45.3 | 40.8 |
| 8 | 54.0 | 37.5 | 47.4 | 53.2 | 51.6 | 44.0 | 47.0 | 50.0 | 45.2 | 41.9 |
| 9 | 55.0 | 36.0 | 40.5 | 53.7 | 51.7 | 49.6 | 40.2 | 49.9 | 49.1 | 49.3 |
| 10 | 56.5 | 47.4 | 53.9 | 55.8 | 54.8 | 51.1 | 53.0 | 53.9 | 53.8 | 51.0 |
| 11 | 59.1 | 44.1 | 50.6 | 57.5 | 57.2 | 54.3 | 50.4 | 54.6 | 53.7 | 51.4 |
| 12 | 57.0 | 49.7 | 55.3 | 54.6 | 53.8 | 49.8 | 52.3 | 51.3 | 51.4 | 48.9 |
| 13 | 49.9 | 41.9 | 42.8 | 43.4 | 46.7 | 48.6 | 41.8 | 42.1 | 44.8 | 46.7 |
| 14 | 53.2 | 44.0 | 45.5 | 53.1 | 49.6 | 44.4 | 44.8 | 48.8 | 43.6 | 41.8 |
| 15 | 51.8 | 41.1 | 43.6 | 49.1 | 49.4 | 47.8 | 41.4 | 43.6 | 44.7 | 44.9 |
| 16 | 53.8 | 43.9 | 46.8 | 52.2 | 52.7 | 51.8 | 44.4 | 48.0 | 48.1 | 48.0 |
| 17 | 59.5 | 51.1 | 55.5 | 58.3 | 55.8 | 54.2 | 53.6 | 53.0 | 50.9 | 52.7 |
| 18 | 58.6 | 47.2 | 54.9 | 57.3 | 54.5 | 47.6 | 52.3 | 52.4 | 53.4 | 43.2 |
| 19 | 50.1 | 39.9 | 41.6 | 48.6 | 47.6 | 44.7 | 38.8 | 43.6 | 42.9 | 41.9 |
| 20 | 54.0 | 44.5 | 50.8 | 53.0 | 52.6 | 52.3 | 46.6 | 48.8 | 49.8 | 51.0 |
| 21 | 54.2 | 46.6 | 52.8 | 52.7 | 52.1 | 46.8 | 50.0 | 51.3 | 51.2 | 45.4 |
| 22 | 47.5 | 32.7 | 41.4 | 45.3 | 45.4 | 32.8 | 38.4 | 41.3 | 40.7 | 32.6 |
| 23 | 46.0 | 27.6 | 33.0 | 44.2 | 44.7 | 44.7 | 31.8 | 43.1 | 44.2 | 44.3 |
| 24 | 50.0 | 39.1 | 44.6 | 46.6 | 46.0 | 41.2 | 42.4 | 45.7 | 43.7 | 39.3 |
| 25 | 51.5 | 38.2 | 42.1 | 49.1 | 48.8 | 50.8 | 41.1 | 45.0 | 45.4 | 49.5 |
| 26 | 55.5 | 45.1 | 51.1 | 53.6 | 53.9 | 45.7 | 49.3 | 51.3 | 51.0 | 41.8 |
| 27 | 51.6 | 37.2 | 41.0 | 46.9 | 49.9 | 50.4 | 39.2 | 44.5 | 47.8 | 49.7 |
| 28 | 55.8 | 47.3 | 50.9 | 55.4 | 52.7 | 47.8 | 49.6 | 52.8 | 50.8 | 46.5 |
| 29 | 57.0 | 42.6 | 45.5 | 51.9 | 54.2 | 50.3 | 44.8 | 49.6 | 51.0 | 48.8 |
| 30 | 54.0 | 50.1 | 51.7 | 53.8 | 52.7 | 52.2 | 50.2 | 50.4 | 49.8 | 49.4 |
| Means | 54.2 | 42.3 | 47.3 | 52.1 | 51.7 | 47.9 | 45.6 | 48.5 | 48.3 | 46.0 |

### DECEMBER.

| Days of the Month. | Dry-Bulb Thermometers, 4 ft. above the Ground. Maximum. | Minimum. | 9ʰ | Noon. | 15ʰ | 21ʰ | Wet-Bulb Thermometer, 4 ft. above the Ground. 9ʰ | Noon. | 15ʰ | 21ʰ |
|---|---|---|---|---|---|---|---|---|---|---|
| d | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 52.3 | 47.5 | 51.7 | 49.9 | 49.9 | 47.9 | 49.6 | 49.2 | 48.1 | 44.8 |
| 2 | 53.2 | 46.0 | 47.2 | 51.1 | 52.8 | 50.3 | 46.9 | 49.6 | 50.5 | 46.8 |
| 3 | 53.4 | 49.1 | 50.8 | 52.9 | 52.0 | 52.3 | 47.3 | 48.8 | 49.1 | 49.0 |
| 4 | 52.5 | 36.9 | 40.3 | 42.7 | 43.2 | 38.7 | 37.5 | 39.0 | 37.9 | 36.4 |
| 5 | 47.6 | 35.0 | 44.9 | 44.5 | 41.8 | 37.7 | 41.8 | 42.6 | 38.8 | 36.9 |
| 6 | 43.6 | 37.1 | 41.2 | 42.8 | 43.2 | 40.9 | 39.4 | 40.5 | 40.3 | 38.8 |
| 7 | 43.0 | 36.9 | 38.8 | 41.4 | 41.6 | 40.8 | 37.8 | 39.0 | 38.8 | 39.8 |
| 8 | 54.5 | 40.5 | 47.4 | 51.9 | 52.6 | 52.1 | 46.3 | 49.4 | 50.0 | 50.8 |
| 9 | 54.6 | 46.9 | 52.8 | 54.2 | 53.2 | 48.2 | 51.1 | 49.9 | 49.8 | 44.4 |
| 10 | 49.0 | 42.1 | 45.1 | 47.7 | 48.6 | 47.1 | 42.3 | 44.4 | 44.8 | 44.1 |
| 11 | 47.3 | 38.8 | 43.7 | 46.4 | 46.4 | 44.6 | 42.0 | 43.4 | 42.8 | 41.7 |
| 12 | 54.5 | 44.1 | 51.4 | 53.6 | 52.5 | 47.9 | 49.0 | 51.4 | 48.0 | 43.7 |
| 13 | 48.6 | 38.6 | 39.8 | 44.8 | 44.7 | 39.8 | 38.7 | 40.9 | 40.0 | 37.8 |
| 14 | 44.6 | 38.0 | 39.6 | 43.0 | 43.2 | 43.0 | 37.4 | 40.2 | 40.2 | 40.4 |
| 15 | 50.5 | 41.1 | 47.2 | 49.7 | 50.5 | 48.1 | 46.3 | 48.0 | 48.3 | 45.8 |
| 16 | 49.2 | 44.2 | 44.9 | 46.8 | 47.1 | 46.2 | 41.0 | 41.9 | 41.8 | 41.8 |
| 17 | 47.5 | 44.0 | 44.4 | 46.8 | 46.6 | 44.1 | 42.4 | 44.5 | 42.6 | 41.6 |
| 18 | 44.8 | 36.1 | 42.7 | 43.8 | 42.6 | 36.5 | 41.4 | 41.4 | 38.7 | 34.8 |
| 19 | 42.2 | 32.1 | 35.2 | 40.2 | 41.6 | 41.9 | 32.3 | 37.9 | 39.8 | 40.4 |
| 20 | 43.1 | 36.8 | 38.2 | 41.8 | 41.1 | 40.8 | 36.1 | 38.7 | 38.0 | 38.4 |
| 21 | 42.1 | 31.2 | 40.8 | 41.8 | 39.7 | 31.9 | 38.0 | 38.5 | 36.7 | 31.5 |
| 22 | 38.5 | 30.8 | 35.7 | 36.8 | 37.3 | 36.1 | 34.0 | 34.5 | 35.0 | 35.0 |
| 23 | 40.5 | 31.3 | 34.7 | 39.7 | 39.2 | 37.5 | 34.5 | 38.6 | 38.8 | 36.9 |
| 24 | 40.2 | 32.1 | 33.2 | 38.6 | 39.6 | 36.5 | 32.4 | 35.6 | 36.4 | 33.4 |
| 25 | 44.9 | 30.2 | 33.8 | 40.1 | 41.8 | 44.7 | 32.2 | 37.3 | 39.0 | 42.9 |
| 26 | 51.0 | 44.2 | 47.9 | 50.2 | 50.6 | 48.6 | 44.8 | 46.1 | 46.4 | 46.0 |
| 27 | 49.4 | 38.2 | 40.6 | 41.2 | 39.9 | 39.1 | 38.3 | 36.7 | 35.8 | 36.0 |
| 28 | 39.7 | 32.1 | 33.4 | 37.3 | 35.6 | 33.5 | 32.3 | 34.9 | 33.0 | 32.7 |
| 29 | 36.8 | 30.6 | 32.2 | 34.8 | 35.9 | 34.6 | 30.7 | 33.8 | 34.2 | 32.8 |
| 30 | 35.9 | 30.2 | 30.7 | 33.9 | 34.3 | 30.6 | 29.1 | 31.6 | 31.8 | 29.5 |
| 31 | 37.0 | 28.1 | 29.8 | 35.5 | 35.2 | 32.2 | 28.4 | 32.3 | 32.3 | 29.4 |
| Means | 46.2 | 37.8 | 41.3 | 44.1 | 44.0 | 41.7 | 39.4 | 41.3 | 40.9 | 39.5 |

## EXCESS of MEAN MONTHLY READINGS of THERMOMETERS placed in a STEVENSON'S SCREEN above those of the corresponding THERMOMETERS on the adjacent ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE in the YEAR 1913.

(The readings of the maximum and minimum thermometers apply to the twenty-four hours ending at $21^h$.)

| MONTH, 1913. | Dry Bulb Thermometers, 4 ft. above the Ground. | | | | | | Wet Bulb Thermometer, 4 ft. above the Ground. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum. | Minimum. | $9^h$ | Noon. | $15^h$ | $21^h$ | $9^h$ | Noon. | $15^h$ | $21^h$ |
| | ° | ° | ° | ° | ° | ° | ° | ° | ° | ° |
| January | − 0·1 | + 0·6 | + 0·3 | + 0·2 | + 0·3 | + 0·3 | + 0·2 | + 0·1 | + 0·2 | + 0·3 |
| February | − 0·4 | + 0·6 | + 0·1 | 0·0 | + 0·2 | + 0·3 | + 0·2 | 0·0 | + 0·2 | + 0·3 |
| March | − 0·8 | + 0·6 | − 0·1 | − 0·1 | 0·0 | + 0·3 | + 0·1 | + 0·1 | + 0·1 | + 0·3 |
| April | − 1·2 | + 0·6 | − 0·3 | − 0·3 | − 0·3 | + 0·3 | 0·0 | 0·0 | 0·0 | + 0·4 |
| May | − 2·2 | + 0·8 | − 0·5 | − 0·6 | − 0·6 | + 0·5 | − 0·1 | − 0·1 | − 0·1 | + 0·6 |
| June | − 2·7 | + 0·9 | − 0·4 | − 0·7 | − 0·8 | + 0·5 | − 0·3 | − 0·4 | − 0·4 | + 0·2 |
| July | − 2·0 | + 0·5 | − 0·5 | − 0·3 | − 0·3 | + 0·2 | − 0·4 | − 0·3 | − 0·2 | + 0·1 |
| August | − 1·8 | + 0·7 | − 0·3 | − 0·2 | − 0·3 | + 0·4 | − 0·3 | − 0·1 | − 0·2 | + 0·2 |
| September | − 1·2 | + 0·7 | − 0·2 | − 0·1 | − 0·1 | + 0·4 | − 0·1 | − 0·1 | 0·0 | + 0·3 |
| October | − 0·3 | + 0·7 | + 0·1 | + 0·2 | + 0·5 | + 0·3 | + 0·1 | + 0·1 | + 0·4 | + 0·3 |
| November | − 0·1 | + 0·5 | 0·0 | + 0·1 | + 0·3 | + 0·2 | + 0·2 | + 0·4 | + 0·5 | + 0·5 |
| December | − 0·2 | + 0·4 | + 0·1 | + 0·1 | + 0·1 | + 0·3 | + 0·4 | + 0·4 | + 0·5 | + 0·4 |
| Means | − 1·1 | + 0·6 | − 0·1 | − 0·1 | − 0·1 | + 0·3 | 0·0 | 0·0 | + 0·1 | + 0·3 |

## AMOUNT of RAIN COLLECTED in each MONTH of the YEAR 1913.

| MONTH 1913. | Number of Rainy Days ($0^{in}$·005 or over). | Monthly Amount of Rain collected in each Gauge. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Self-registering Gauge of Osler's Anemometer. | Second Gauge at Osler's Anemometer. | On the roof of the Octagon Room. | On the roof of the Magnetic Observatory. | On the roof of the Photographic Thermometer Shed. | Gauges partly sunk in the ground. | | |
| | | | | | | | In Magnetic Pavilion Enclosure. | In Observatory Grounds. | In Magnetic Pavilion Enclosure. |
| | | No. 1. | No. 2. | No. 3. | No. 4. | No. 5. | No. 6. | No. 7. | No. 8. |
| | | in. | in. | in. | in. | in. | in. | in. | in. |
| January | 21 | 1·585 | 1·570 | 2·039 | 2·214 | 2·509 | 2·654 | 2·468 | 2·616 |
| February | 11 | 0·388 | 0·433 | 0·638 | 0·704 | 0·782 | 0·812 | 0·796 | 0·791 |
| March | 18 | 1·036 | 0·853 | 1·637 | 1·827 | 2·250 | 2·423 | 2·305 | 2·414 |
| April | 20 | 1·124 | 1·020 | 1·572 | 1·858 | 2·071 | 2·229 | 2·128 | 2·148 |
| May | 15 | 0·835 | 0·829 | 1·054 | 1·100 | 1·165 | 1·157 | 1·172 | 1·142 |
| June | 7 | 0·512 | 0·502 | 0·675 | 0·725 | 0·771 | 0·733 | 0·771 | 0·721 |
| July | 13 | 1·383 | 1·427 | 1·923 | 2·052 | 2·118 | 2·121 | 2·106 | 2·107 |
| August | 11 | 1·133 | 1·138 | 1·383 | 1·558 | 1·598 | 1·669 | 1·610 | 1·660 |
| September | 12 | 1·109 | 1·253 | 1·497 | 1·621 | 1·678 | 1·647 | 1·633 | 1·641 |
| October | 13 | 2·556 | 2·541 | 3·033 | 3·290 | 3·450 | 3·423 | 3·421 | 3·443 |
| November | 17 | 1·737 | 1·750 | 2·199 | 2·393 | 2·605 | 2·694 | 2·646 | 2·756 |
| December | 11 | 0·385 | 0·329 | 0·585 | 0·624 | 0·789 | 0·877 | 0·789 | 0·857 |
| Sums | 169 | 13·783 | 13·645 | 18·235 | 19·966 | 21·786 | 22·439 | 21·845 | 22·296 |
| Height of receiving Surface: above the ground | ... | ft. in. 50. 8 | ft. in. 50. 8 | ft. in. 38. 4 | ft. in. 21. 6 | ft. in. 10. 0 | ft. in. 0. 5 | ft. in. 0. 5 | ft. in. 1. 0 |
| Height of 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. 3 | ft. in. 150. 1 |

MEAN HOURLY MEASURES of the HORIZONTAL MOVEMENT of the AIR in each MONTH, and GREATEST and LEAST HOURLY MEASURES, as derived from the RECORDS of ROBINSON'S ANEMOMETER.

| Hour ending | 1913. | | | | | | | | | | | | Mean for the Year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| h | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. |
| 1 | 10·8 | 12·9 | 15·5 | 13·5 | 8·9 | 10·0 | 8·1 | 7·0 | 7·6 | 8·4 | 13·1 | 14·5 | 10·9 |
| 2 | 10·6 | 12·3 | 16·1 | 13·6 | 9·3 | 9·7 | 8·0 | 7·5 | 6·9 | 8·4 | 12·9 | 14·0 | 10·8 |
| 3 | 10·7 | 12·0 | 16·4 | 13·4 | 9·3 | 8·7 | 8·3 | 7·3 | 7·4 | 8·4 | 13·2 | 13·9 | 10·7 |
| 4 | 11·3 | 12·2 | 16·4 | 13·5 | 8·8 | 9·5 | 7·8 | 6·7 | 7·8 | 7·6 | 13·3 | 13·7 | 10·7 |
| 5 | 11·4 | 11·6 | 15·8 | 12·3 | 8·9 | 9·3 | 8·2 | 6·9 | 7·4 | 6·8 | 12·6 | 13·7 | 10·4 |
| 6 | 11·5 | 11·8 | 16·2 | 12·4 | 8·7 | 9·8 | 8·3 | 7·0 | 7·2 | 6·8 | 13·2 | 13·0 | 10·5 |
| 7 | 11·6 | 11·0 | 16·0 | 12·7 | 8·3 | 10·5 | 8·3 | 6·8 | 7·4 | 6·8 | 13·7 | 13·0 | 10·5 |
| 8 | 12·2 | 12·2 | 16·7 | 14·1 | 9·5 | 11·5 | 8·9 | 8·2 | 7·7 | 6·6 | 13·1 | 13·3 | 11·2 |
| 9 | 12·7 | 12·0 | 16·7 | 15·4 | 10·6 | 11·7 | 9·5 | 8·5 | 8·1 | 6·9 | 13·6 | 14·1 | 11·6 |
| 10 | 11·9 | 13·1 | 18·8 | 16·8 | 11·3 | 11·9 | 8·9 | 8·6 | 9·2 | 7·6 | 14·2 | 14·6 | 12·2 |
| 11 | 12·3 | 14·8 | 19·4 | 16·8 | 11·7 | 12·6 | 8·7 | 9·3 | 10·0 | 8·4 | 14·9 | 15·3 | 12·9 |
| Noon. | 13·2 | 15·3 | 19·6 | 17·2 | 12·8 | 12·9 | 9·1 | 9·9 | 10·7 | 9·4 | 16·5 | 15·5 | 13·5 |
| $13^h$ | 13·9 | 15·1 | 19·7 | 17·6 | 14·4 | 13·8 | 9·9 | 9·7 | 10·5 | 9·4 | 17·3 | 17·1 | 14·0 |
| 14 | 14·6 | 15·6 | 19·9 | 18·4 | 14·5 | 14·2 | 10·4 | 10·5 | 11·4 | 9·7 | 17·1 | 17·4 | 14·5 |
| 15 | 13·8 | 15·1 | 19·6 | 17·5 | 14·5 | 14·1 | 11·0 | 9·9 | 10·7 | 9·9 | 15·6 | 16·5 | 14·0 |
| 16 | 13·0 | 14·4 | 19·7 | 16·9 | 14·7 | 14·9 | 10·7 | 9·9 | 10·1 | 9·7 | 14·8 | 15·6 | 13·7 |
| 17 | 12·9 | 13·6 | 18·3 | 16·8 | 14·4 | 14·9 | 10·3 | 9·8 | 9·9 | 9·0 | 13·4 | 15·3 | 13·2 |
| 18 | 13·6 | 12·6 | 18·1 | 17·5 | 13·6 | 15·0 | 10·2 | 9·5 | 9·4 | 9·5 | 13·0 | 16·3 | 13·2 |
| 19 | 13·0 | 12·8 | 16·1 | 15·8 | 12·6 | 14·1 | 9·4 | 9·0 | 8·2 | 9·1 | 13·3 | 15·2 | 12·4 |
| 20 | 12·7 | 13·1 | 15·6 | 14·3 | 11·7 | 12·8 | 8·8 | 9·1 | 8·2 | 9·5 | 13·9 | 14·7 | 12·0 |
| 21 | 12·5 | 13·5 | 16·4 | 14·3 | 11·1 | 11·4 | 9·7 | 8·8 | 8·5 | 9·4 | 13·8 | 15·5 | 12·1 |
| 22 | 12·9 | 12·7 | 16·1 | 13·5 | 10·4 | 11·0 | 9·1 | 7·7 | 8·2 | 9·4 | 13·4 | 15·4 | 11·6 |
| 23 | 12·2 | 12·9 | 15·4 | 13·5 | 9·4 | 10·5 | 8·9 | 7·5 | 7·8 | 9·0 | 13·0 | 15·5 | 11·3 |
| Midnight. | 11·4 | 12·3 | 15·8 | 13·3 | 9·3 | 10·3 | 8·7 | 7·3 | 7·6 | 8·6 | 13·2 | 14·8 | 11·1 |
| Means | 12·4 | 13·1 | 17·3 | 15·0 | 11·2 | 11·9 | 9·1 | 8·4 | 8·7 | 8·5 | 14·0 | 14·9 | 12·0 |
| Greatest Hourly Measures. (1) | 37 | 42 | 51 | 36 | 29 | 35 | 24 | 24 | 23 | 25 | 33 | 42 | ... |
| Greatest Hourly Measures. (2) | 29 | 32 | 38 | 28 | 23 | 27 | 20 | 20 | 19 | 21 | 26 | 32 | ... |

(1) Deduced from the motion of the cups by the formula $V = 3v$;
(2) ,, ,, ,, ,, ,, ,, ,, $V = 2v + 4$;
where $v$ is the hourly motion of the cups in miles. See Introduction.

MEAN ELECTRICAL POTENTIAL of the ATMOSPHERE, from THOMSON'S ELECTROMETER, for each CIVIL DAY.

(Each result is the mean of Twenty-four Hourly Ordinates from the Photographic Register. The scale employed is arbitrary: the sign + indicates positive potential.)

1913.

| Day of Month. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d 1 | + 616 | + 377 | + 859 | + 574 | + 669 | + 544 | + 720 | + 306 | + 92 | + 156 | + 359 | + 352 |
| 2 | + 665 | + 685 | + 556 | + 690 | + 738 | + 615 | + 723 | + 399 | ... | + 80 | + 211 | ... |
| 3 | + 525 | + 535 | + 453 | + 408 | + 332 | + 598 | + 768 | + 348 | ... | + 213 | + 443 | ... |
| 4 | + 319 | + 608 | + 556 | + 388 | + 160 | + 591 | + 615 | + 250 | ... | + 231 | + 510 | + 490 |
| 5 | + 302 | + 688 | + 619 | + 569 | + 549 | + 556 | + 543 | + 557 | ... | + 238 | + 407 | + 643 |
| 6 | + 375 | + 652 | + 566 | ... | + 679 | + 594 | + 435 | + 779 | + 100 | + 255 | + 473 | + 398 |
| 7 | + 480 | + 377 | + 775 | + 780 | + 739 | + 625 | + 706 | + 622 | + 168 | + 139 | + 656 | + 386 |
| 8 | + 458 | + 789 | +1119 | +1053 | + 354 | + 506 | +1042 | + 385 | + 246 | + 74 | + 621 | + 182 |
| 9 | + 559 | + 414 | + 850 | +1036 | + 545 | + 706 | + 574 | + 669 | + 320 | + 305 | + 451 | + 133 |
| 10 | + 583 | + 780 | + 529 | + 822 | + 466 | + 482 | + 438 | ... | + 518 | + 240 | + 96 | + 469 |
| 11 | + 77 | + 888 | + 712 | + 233 | + 432 | + 850 | + 722 | ... | + 263 | + 115 | + 152 | + 499 |
| 12 | + 907 | +1017 | + 704 | + 968 | + 347 | + 829 | + 423 | + 441 | + 185 | + 132 | + 111 | + 334 |
| 13 | + 64 | + 959 | + 695 | + 952 | + 371 | + 566 | + 387 | + 408 | + 233 | + 128 | + 218 | + 615 |
| 14 | + 804 | + 908 | + 378 | + 490 | + 542 | + 300 | + 433 | + 560 | + 206 | + 190 | ... | + 585 |
| 15 | + 328 | + 744 | + 808 | + 826 | + 490 | + 371 | + 297 | + 252 | + 318 | + 299 | + 494 | + 316 |
| 16 | ... | + 893 | + 212 | + 530 | + 558 | + 445 | + 355 | + 410 | + 342 | + 255 | + 383 | + 486 |
| 17 | + 713 | + 832 | + 630 | +1109 | +1042 | + 518 | + 318 | + 229 | + 284 | + 296 | + 213 | + 382 |
| 18 | + 905 | + 905 | +1075 | + 675 | + 915 | + 519 | + 325 | + 469 | + 279 | + 302 | + 236 | + 505 |
| 19 | + 496 | +1082 | + 687 | + 740 | +1283 | + 795 | + 438 | + 572 | + 300 | + 204 | + 612 | + 553 |
| 20 | + 407 | +1218 | + 919 | ... | ... | + 834 | + 408 | + 654 | + 383 | + 95 | + 334 | + 605 |
| 21 | + 635 | +1118 | ... | ... | ... | + 652 | + 572 | + 552 | + 224 | + 133 | + 178 | + 717 |
| 22 | + 795 | + 889 | + 250 | + 284 | + 932 | + 333 | + 542 | + 292 | + 210 | + 335 | + 701 | + 790 |
| 23 | + 500 | + 855 | + 460 | + 519 | + 680 | + 413 | + 556 | + 389 | + 170 | + 436 | + 581 | + 317 |
| 24 | + 457 | + 885 | + 655 | + 643 | + 530 | + 697 | + 333 | + 455 | + 167 | + 375 | + 408 | + 870 |
| 25 | + 642 | + 825 | + 578 | + 332 | + 244 | + 722 | + 389 | + 443 | + 155 | + 259 | + 433 | + 826 |
| 26 | + 947 | + 569 | + 521 | + 366 | + 226 | + 927 | + 394 | + 269 | + 108 | + 102 | + 365 | + 268 |
| 27 | + 927 | + 815 | + 605 | + 277 | + 419 | +1017 | + 220 | + 310 | + 153 | + 106 | + 472 | + 508 |
| 28 | + 635 | + 985 | + 324 | + 306 | + 537 | + 890 | + 280 | + 273 | + 179 | + 98 | + 309 | + 749 |
| 29 | + 570 | | + 455 | + 336 | + 505 | + 485 | + 310 | + 184 | + 190 | + 174 | + 359 | + 805 |
| 30 | + 552 | | + 439 | + 497 | + 542 | + 615 | + 357 | + 82 | + 197 | + 214 | + 232 | +1032 |
| 31 | + 835 | | + 717 | | + 721 | | + 324 | + 85 | | + 406 | | +1225 |
| Means | + 603 | + 796 | + 624 | + 608 | + 571 | + 620 | + 482 | + 402 | + 230 | + 212 | + 380 | + 553 |

## MONTHLY MEAN ELECTRICAL POTENTIAL of the ATMOSPHERE, from THOMSON'S ELECTROMETER, at every HOUR of the DAY.

(The results depend on the Photographic Register, using all days of complete record. The scale employed is arbitary: the sign + indicates positive potential.)

| Hour, Greenwich Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| Midnight | + 540 | + 741 | + 630 | + 546 | + 506 | + 622 | + 463 | + 414 | + 222 | + 204 | + 309 | + 538 | + 478 |
| $1^h$ | + 523 | + 712 | + 541 | + 479 | + 456 | + 545 | + 425 | + 381 | + 196 | + 194 | + 304 | + 481 | + 436 |
| 2 | + 503 | + 703 | + 473 | + 477 | + 444 | + 498 | + 368 | + 339 | + 179 | + 187 | + 307 | + 428 | + 409 |
| 3 | + 457 | + 696 | + 438 | + 503 | + 446 | + 482 | + 360 | + 330 | + 168 | + 180 | + 285 | + 411 | + 396 |
| 4 | + 424 | + 695 | + 423 | + 527 | + 415 | + 466 | + 359 | + 324 | + 171 | + 164 | + 268 | + 412 | + 387 |
| 5 | + 456 | + 694 | + 423 | + 552 | + 432 | + 456 | + 358 | + 304 | + 166 | + 170 | + 286 | + 414 | + 393 |
| 6 | + 512 | + 686 | + 455 | + 610 | + 473 | + 534 | + 377 | + 317 | + 172 | + 186 | + 321 | + 430 | + 423 |
| 7 | + 481 | + 727 | + 546 | + 643 | + 535 | + 605 | + 398 | + 350 | + 177 | + 184 | + 335 | + 459 | + 453 |
| 8 | + 518 | + 823 | + 638 | + 660 | + 594 | + 645 | + 405 | + 369 | + 192 | + 189 | + 361 | + 513 | + 492 |
| 9 | + 610 | + 922 | + 702 | + 699 | + 651 | + 719 | + 488 | + 438 | + 222 | + 182 | + 402 | + 568 | + 550 |
| 10 | + 695 | + 948 | + 714 | + 723 | + 693 | + 774 | + 608 | + 494 | + 276 | + 247 | + 453 | + 604 | + 602 |
| 11 | + 748 | + 900 | + 678 | + 709 | + 660 | + 717 | + 619 | + 486 | + 256 | + 228 | + 430 | + 609 | + 587 |
| Noon | + 741 | + 814 | + 653 | + 665 | + 577 | + 658 | + 589 | + 454 | + 233 | + 198 | + 430 | + 621 | + 553 |
| $13^h$ | + 692 | + 731 | + 618 | + 601 | + 547 | + 596 | + 552 | + 400 | + 227 | + 168 | + 440 | + 584 | + 513 |
| 14 | + 647 | + 685 | + 612 | + 567 | + 539 | + 567 | + 503 | + 377 | + 204 | + 164 | + 411 | + 564 | + 487 |
| 15 | + 628 | + 725 | + 634 | + 590 | + 548 | + 550 | + 474 | + 382 | + 207 | + 201 | + 417 | + 593 | + 496 |
| 16 | + 666 | + 806 | + 658 | + 635 | + 564 | + 558 | + 509 | + 389 | + 264 | + 247 | + 439 | + 617 | + 529 |
| 17 | + 709 | + 887 | + 709 | + 663 | + 632 | + 634 | + 530 | + 405 | + 304 | + 266 | + 440 | + 633 | + 568 |
| 18 | + 695 | + 916 | + 752 | + 619 | + 683 | + 677 | + 507 | + 422 | + 287 | + 263 | + 456 | + 631 | + 576 |
| 19 | + 664 | + 914 | + 746 | + 543 | + 689 | + 697 | + 524 | + 444 | + 278 | + 265 | + 426 | + 619 | + 567 |
| 20 | + 673 | + 887 | + 730 | + 563 | + 686 | + 702 | + 542 | + 454 | + 287 | + 270 | + 412 | + 623 | + 569 |
| 21 | + 645 | + 853 | + 734 | + 640 | + 701 | + 750 | + 574 | + 462 | + 300 | + 258 | + 432 | + 648 | + 583 |
| 22 | + 640 | + 835 | + 740 | + 701 | + 646 | + 746 | + 545 | + 460 | + 287 | + 250 | + 398 | + 642 | + 574 |
| 23 | + 594 | + 806 | + 718 | + 668 | + 575 | + 676 | + 494 | + 442 | + 255 | + 235 | + 359 | + 630 | + 538 |
| 24 | + 542 | + 742 | + 654 | + 550 | + 508 | + 611 | + 459 | + 402 | + 227 | + 211 | + 303 | + 599 | + 484 |
| Means $0^h$.–$23^h$. | + 603 | + 796 | + 624 | + 608 | + 571 | + 620 | + 482 | + 402 | + 230 | + 212 | + 380 | + 553 | + 507 |
| Means $1^h$.–$24^h$. | + 603 | + 796 | + 625 | + 608 | + 571 | + 619 | + 482 | + 401 | + 231 | + 213 | + 380 | + 556 | + 507 |
| Number of Days employed. | 30 | 28 | 30 | 27 | 29 | 30 | 31 | 29 | 26 | 31 | 29 | 29 | ... |

MONTHLY MEAN ELECTRICAL POTENTIAL of the ATMOSPHERE, from THOMSON'S ELECTROMETER, on RAINY DAYS, at every HOUR of the DAY.

(The results depend on the Photographic Register, using all days on which the rainfall amounted to or exceeded $0^{in}\cdot020$. The scale employed is arbitrary : the sign + indicates positive potential.)

| Hour, Greenwich Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| Midnight | + 572 | + 727 | + 536 | + 435 | + 336 | + 670 | + 503 | + 325 | + 228 | + 185 | + 233 | + 386 | + 428 |
| $1^h$ | + 553 | + 686 | + 439 | + 362 | + 315 | + 564 | + 433 | + 292 | + 209 | + 163 | + 226 | + 316 | + 380 |
| 2 | + 520 | + 669 | + 374 | + 368 | + 371 | + 468 | + 369 | + 281 | + 200 | + 152 | + 199 | + 249 | + 352 |
| 3 | + 449 | + 646 | + 341 | + 406 | + 426 | + 500 | + 354 | + 274 | + 182 | + 138 | + 155 | + 243 | + 343 |
| 4 | + 406 | + 633 | + 312 | + 422 | + 344 | + 480 | + 342 | + 246 | + 183 | + 115 | + 131 | + 261 | + 323 |
| 5 | + 439 | + 572 | + 305 | + 448 | + 329 | + 218 | + 338 | + 200 | + 172 | + 130 | + 195 | + 252 | + 300 |
| 6 | + 510 | + 502 | + 342 | + 518 | + 346 | + 374 | + 357 | + 233 | + 181 | + 153 | + 239 | + 279 | + 336 |
| 7 | + 443 | + 537 | + 460 | + 563 | + 383 | + 478 | + 389 | + 296 | + 202 | + 154 | + 225 | + 286 | + 368 |
| 8 | + 462 | + 704 | + 554 | + 598 | + 414 | + 524 | + 415 | + 324 | + 219 | + 147 | + 236 | + 343 | + 412 |
| 9 | + 548 | + 842 | + 594 | + 631 | + 430 | + 612 | + 505 | + 392 | + 259 | + 145 | + 278 | + 364 | + 467 |
| 10 | + 628 | + 886 | + 579 | + 649 | + 465 | + 712 | + 644 | + 440 | + 319 | + 220 | + 299 | + 382 | + 519 |
| 11 | + 725 | + 804 | + 553 | + 643 | + 500 | + 632 | + 662 | + 418 | + 314 | + 192 | + 285 | + 398 | + 511 |
| Noon | + 756 | + 671 | + 585 | + 640 | + 402 | + 600 | + 631 | + 397 | + 288 | + 166 | + 283 | + 407 | + 485 |
| $13^h$ | + 706 | + 532 | + 574 | + 575 | + 408 | + 586 | + 607 | + 340 | + 283 | + 133 | + 346 | + 350 | + 453 |
| 14 | + 648 | + 413 | + 572 | + 537 | + 432 | + 578 | + 522 | + 310 | + 260 | + 136 | + 340 | + 325 | + 423 |
| 15 | + 595 | + 443 | + 619 | + 564 | + 419 | + 410 | + 432 | + 294 | + 240 | + 173 | + 358 | + 350 | + 408 |
| 16 | + 601 | + 541 | + 658 | + 614 | + 448 | + 298 | + 524 | + 315 | + 319 | + 226 | + 399 | + 406 | + 446 |
| 17 | + 664 | + 630 | + 704 | + 632 | + 555 | + 538 | + 582 | + 336 | + 396 | + 235 | + 367 | + 496 | + 511 |
| 18 | + 663 | + 677 | + 718 | + 551 | + 634 | + 670 | + 525 | + 343 | + 319 | + 230 | + 379 | + 544 | + 521 |
| 19 | + 614 | + 688 | + 678 | + 410 | + 626 | + 800 | + 517 | + 377 | + 300 | + 230 | + 321 | + 495 | + 505 |
| 20 | + 650 | + 667 | + 641 | + 428 | + 574 | + 816 | + 541 | + 405 | + 343 | + 237 | + 343 | + 528 | + 514 |
| 21 | + 582 | + 643 | + 661 | + 544 | + 617 | + 900 | + 607 | + 383 | + 368 | + 227 | + 379 | + 547 | + 538 |
| 22 | + 599 | + 702 | + 681 | + 653 | + 533 | + 978 | + 621 | + 364 | + 360 | + 212 | + 346 | + 556 | + 550 |
| 23 | + 578 | + 742 | + 680 | + 636 | + 439 | + 860 | + 571 | + 334 | + 306 | + 198 | + 309 | + 563 | + 518 |
| 24 | + 551 | + 667 | + 638 | + 493 | + 388 | + 796 | + 549 | + 305 | + 271 | + 177 | + 232 | + 518 | + 465 |
| Means $0^h.-23^h.$ | + 580 | + 648 | + 548 | + 534 | + 448 | + 594 | + 500 | + 330 | + 269 | + 179 | + 286 | + 389 | + 442 |
| Means $1^h.-24^h.$ | + 579 | + 646 | + 553 | + 537 | + 450 | + 600 | + 502 | + 329 | + 271 | + 179 | + 286 | + 394 | + 444 |
| Number of Days employed. | 17 | 10 | 17 | 18 | 10 | 5 | 11 | 8 | 9 | 12 | 10 | 8 | ... |

MONTHLY MEAN ELECTRICAL POTENTIAL of the ATMOSPHERE, from THOMSON'S ELECTROMETER, on NON-RAINY DAYS, at every HOUR of the DAY.

(The results depend on the Photographic Register, using only those days on which no rainfall was recorded. The scale employed is arbitrary: the sign + indicates positive potential.)

| Hour, Greenwich Civil Time. | 1913. | | | | | | | | | | | | Yearly Means. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | |
| Midnight | + 552 | + 765 | + 815 | + 850 | + 509 | + 574 | + 461 | + 449 | + 219 | + 248 | + 436 | + 584 | + 539 |
| $1^h$ | + 490 | + 738 | + 733 | + 796 | + 445 | + 507 | + 439 | + 420 | + 188 | + 237 | + 433 | + 535 | + 497 |
| 2 | + 466 | + 719 | + 657 | + 770 | + 417 | + 470 | + 382 | + 360 | + 172 | + 229 | + 435 | + 487 | + 464 |
| 3 | + 450 | + 716 | + 611 | + 780 | + 397 | + 451 | + 369 | + 351 | + 167 | + 225 | + 421 | + 471 | + 451 |
| 4 | + 446 | + 730 | + 593 | + 829 | + 390 | + 436 | + 374 | + 354 | + 168 | + 211 | + 405 | + 463 | + 450 |
| 5 | + 480 | + 766 | + 597 | + 850 | + 428 | + 474 | + 379 | + 346 | + 168 | + 207 | + 409 | + 465 | + 464 |
| 6 | + 518 | + 796 | + 622 | + 897 | + 489 | + 535 | + 397 | + 352 | + 174 | + 215 | + 448 | + 476 | + 493 |
| 7 | + 537 | + 842 | + 670 | + 907 | + 559 | + 591 | + 419 | + 374 | + 169 | + 210 | + 478 | + 515 | + 523 |
| 8 | + 601 | + 897 | + 760 | + 879 | + 629 | + 622 | + 410 | + 397 | + 181 | + 217 | + 501 | + 567 | + 555 |
| 9 | + 689 | + 975 | + 855 | + 904 | + 717 | + 692 | + 487 | + 474 | + 202 | + 211 | + 538 | + 636 | + 615 |
| 10 | + 747 | + 992 | + 905 | + 911 | + 766 | + 742 | + 597 | + 538 | + 249 | + 282 | + 608 | + 688 | + 669 |
| 11 | + 720 | + 966 | + 855 | + 864 | + 694 | + 696 | + 602 | + 532 | + 221 | + 271 | + 578 | + 705 | + 642 |
| Noon | + 681 | + 899 | + 773 | + 749 | + 646 | + 650 | + 564 | + 498 | + 199 | + 235 | + 562 | + 712 | + 597 |
| $13^h$ | + 614 | + 856 | + 713 | + 693 | + 592 | + 578 | + 521 | + 437 | + 193 | + 233 | + 544 | + 686 | + 555 |
| 14 | + 584 | + 851 | + 699 | + 677 | + 564 | + 542 | + 497 | + 418 | + 171 | + 226 | + 493 | + 668 | + 532 |
| 15 | + 649 | + 889 | + 682 | + 690 | + 555 | + 542 | + 508 | + 432 | + 187 | + 239 | + 463 | + 703 | + 545 |
| 16 | + 746 | + 959 | + 676 | + 713 | + 569 | + 559 | + 513 | + 429 | + 236 | + 277 | + 470 | + 728 | + 573 |
| 17 | + 763 | +1030 | + 718 | + 761 | + 645 | + 596 | + 519 | + 440 | + 256 | + 302 | + 464 | + 731 | + 602 |
| 18 | + 742 | +1057 | + 788 | + 800 | + 662 | + 623 | + 515 | + 456 | + 269 | + 295 | + 473 | + 710 | + 616 |
| 19 | + 709 | +1051 | + 835 | + 879 | + 644 | + 626 | + 539 | + 476 | + 261 | + 295 | + 459 | + 709 | + 624 |
| 20 | + 686 | +1017 | + 857 | + 904 | + 641 | + 621 | + 550 | + 478 | + 254 | + 301 | + 410 | + 691 | + 618 |
| 21 | + 695 | + 978 | + 844 | + 894 | + 647 | + 657 | + 553 | + 494 | + 266 | + 297 | + 415 | + 709 | + 621 |
| 22 | + 654 | + 917 | + 830 | + 849 | + 619 | + 655 | + 504 | + 493 | + 247 | + 291 | + 348 | + 698 | + 592 |
| 23 | + 586 | + 853 | + 778 | + 761 | + 571 | + 609 | + 443 | + 479 | + 229 | + 282 | + 306 | + 674 | + 548 |
| 24 | + 506 | + 798 | + 676 | + 669 | + 530 | + 550 | + 393 | + 437 | + 206 | + 255 | + 274 | + 640 | + 494 |
| Means $0^h.-23^h.$ | + 617 | + 886 | + 744 | + 817 | + 575 | + 585 | + 481 | + 437 | + 210 | + 251 | + 462 | + 625 | + 558 |
| Means $1^h.-24^h.$ | + 615 | + 887 | + 739 | + 809 | + 576 | + 584 | + 478 | + 436 | + 210 | + 252 | + 456 | + 628 | + 556 |
| Number of Days employed. | 8 | 16 | 11 | 7 | 14 | 20 | 15 | 19 | 16 | 15 | 11 | 17 | ... |

ROYAL OBSERVATORY, GREENWICH.

# OBSERVATIONS

OF

# LUMINOUS METEORS.

1913.

| Month and Day, 1913. | 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 | | ° | ° ° ° ° |
| April 2 | 20. 36. 30 | D | 1 | White | 3·0 | None | 29 | 243 + 43 to 203 + 36 |
| April 22 | 21. 16. 4 | D | 3 | White | 0·2 | None | 13 | 218 + 47 to 200 + 45 |
| ,, | 21. 19. 39 | D | 2 | Bluish-white | 0·2 | None | 12 | 189 + 43 to 176 + 36 |
| ,, | 21. 24. 49 | FB | 2 | Bluish-white | 0·5 | Faint: 1 sec. | 32 | 270 + 37 to 248 + 65 |
| ,, | 21. 30. 9 | FB | 3 | Yellow | 0·2 | None | 15 | 252 + 52 to 230 + 59 |
| ,, | 21. 49. 17 | D | 3 | Yellow | 0·2 | None | 17 | 168 + 56 to 146 + 47 |
| ,, | 21. 52. 35 | FB | 3 | Yellow | 0·2 | None | 5 | 266 + 56 to 260 + 52 |
| ,, | 22. 2. 53 | FB | 2 | Bluish-white | 0·5 | Faint | 19 | 102 + 73 to 84 + 55 |
| ,, | 22. 23. 28 | FB | 2 | Yellow | 0·7 | None | 18 | 258 + 52 to 248 + 35 |
| ,, | 22. 31. 33 | FB | 3 | Bluish-white | 0·4 | None | 18 | 276 + 54 to 305 + 51 |
| ,, | 22. 36. 28 | FB | 2 | Yellow | 0·3 | None | 10 | 281 + 54 to 285 + 45 |
| ,, | 22. 50. 56 | D | 3 | White | 0·3 | None | 11 | 212 + 47 to 228 + 44 |
| ,, | 22. 51. 54 | D | 2 | Bluish-white | 0·6 | Faint | 17 | 206 + 56 to 234 + 59 |
| ,, | 22. 55. 16 | D | 2 | White | 0·2 | None | 12 | 237 + 44 to 220 + 45 |
| ,, | 23. 3. 40 | D | 3 | White | 0·4 | None | 15 | 200 + 58 to 228 + 57 |
| ,, | 23. 8. 59 | FB | 3 | Bluish-white | 0·3 | None | 8 | 281 + 37 to 284 + 30 |
| ,, | 23. 24. 40 | FB | 2 | Bluish-white | 0·4 | Faint | 20 | 218 + 45 to 237 + 32 |
| ,, | 23. 35. 24 | D | 3 | Yellow | 0·2 | None | 13 | 224 + 57 to 200 + 57 |
| ,, | 23. 41. 30 | D | 3 | White | 0·3 | None | 10 | 218 + 52 to 234 + 51 |
| ,, | 23. 42. 13 | D | 3 | White | 0·2 | None | 13 | 219 + 53 to 240 + 49 |
| ,, | 23. 45. 39 | FB | 3 | Bluish-white | 0·3 | None | 9 | 258 + 32 to 269 + 35 |
| ,, | 23. 54. 15 | D | 2 | Yellow | 0·4 | None | 16 | 230 + 66 to 189 + 66 |
| April 23 | 0. 12. 51 | FB | 3 | White | 0·3 | None | 10 | 249 + 45 to 257 + 38 |
| ,, | 0. 15. 7 | FB | 3 | Yellow | 0·3 | None | 13 | 242 + 42 to 255 + 35 |
| ,, | 0. 37. 19 | D | 3 | White | 0·1 | None | 11 | 266 + 43 to 252 + 46 |
| ,, | 0. 42. 51 | FB | 3 | Bluish-white | 0·3 | None | 8 | 257 + 29 to 266 + 32 |
| ,, | 0. 48. 11 | D | 1 | White | 0·2 | Faint: 1 sec. | 17 | 212 + 48 to 231 + 38 |
| ,, | 0. 51. 49 | D | 2 | White | 0·8 | Slight: 2 secs. | 14 | 207 + 54 to 230 + 53 |
| ,, | 1. 7. 3 | D & FB | 1 | White | 1·0 | None | 25 | 234 + 68 to 258 + 46 |
| ,, | 1. 11. 4 | D | 2 | Bluish-white | 0·3 | None | 21 | 234 + 68 to 243 + 48 |
| ,, | 1. 12. 50 | FB | 1 | White | 0·6 | None | 23 | 257 + 49 to 222 + 62 |
| ,, | 1. 16. 56 | D | 2 | White | 0·5 | None | 14 | 266 + 41 to 248 + 39 |
| ,, | 1. 30. 39 | D | 3 | White | 0·3 | None | 22 | 207 + 48 to 239 + 46 |
| ,, | 1. 40. 5 | D | >1 | Yellow | 1·5 | Bright: 1 sec. | 24 | 246 + 56 to 203 + 55 |
| ,, | 1. 45. 31 | D | >1 | White | 0·5 | None | 13 | 221 + 52 to 201 + 48 |
| ,, | 1. 51. 41 | FB | 3 | Bluish-white | 0·3 | None | 9 | 296 + 43 to 308 + 42 |
| ,, | 2. 5. 47 | FB | 1 | White | 0·8 | Faint | 21 | 278 + 54 to 260 + 74 |
| ,, | 2. 17. 44 | FB | 2 | Yellow | 0·5 | None | 11 | 323 + 58 to 344 + 64 |
| ,, | 2. 37. 3 | D | 3 | White | 0·3 | None | 9 | 206 + 53 to 221 + 52 |
| ,, | 2. 42. 19 | D | 3 | Bluish-white | 0·3 | None | 10 | 246 + 56 to 260 + 63 |
| ,, | 2. 45. 5 | FB | 3 | White | 0·3 | None | 14 | 294 + 45 to 306 + 35 |
| ,, | 2. 49. 57 | FB | 3 | Bluish-white | 0·3 | None | 9 | 275 + 35 to 269 + 27 |
| ,, | 2. 53. 29 | D | 2 | White | 0·4 | None | 6 | 258 + 53 to 255 + 47* |
| ,, | 3. 9. 35 | D | 3 | Yellow | 0·3 | None | 8 | 279 + 36 to 284 + 29 |
| ,, | 3. 12. 21 | D & FB | 1 | White | 0·7 | None | 24 | 276 + 39 to 245 + 45 |
| ,, | 3. 23. 3 | FB | 3 | Bluish-white | 0·4 | None | 8 | 275 + 34 to 269 + 27 |
| ,, | 3. 46. 27 | FB | 2 | Yellow | 0·3 | None | ... | Stationary at 278 + 39 |
| ,, | 3. 48. 10 | D | 1 | Yellow | 0·3 | None | 16 | 261 + 43 to 246 + 56 |
| ,, | 21. 7. ± | PM | >1 | Yellowish | 5·0 | ... | 65 | 193 + 56 to 20 + 60 |
| April 30 | 1. 9. ± | WB | Very Brilliant Fireball | Bluish-white | ... | Train of Sparks | ... | Commencement of path not observed. Moved on a line 213° + 18° to 172° + 18° |

The time is expressed in civil reckoning, commencing at midnight and counting from $0^h$ to $24^h$.

* Path not straight.

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|---|---|---|---|---|---|---|---|---|
| | h m s | | | | s | | ° | ° ° ° ° |
| August 10 | 21. 23. 5 | D | 1 | White | 0·5 | Slight | 19 | 301 + 34 to 294 + 16 |
| ,, | 21. 29. 54 | D | 2 | White | 0·2 | None | 15 | 326 + 54 to 306 + 47 |
| ,, | 21. 38. 4 | T & D | 3 | Bluish-white | 0·2 | None | 13 | 318 + 36 to 332 + 43 |
| ,, | 21. 53. 14 | D | 1 | White | 1·0 | Faint: 0·5 secs. | 22 | 21 + 67 to 311 + 74 |
| ,, | 22. 35. 49 | T | 1 | Yellow | 1·0 | Faint | 25 | 8 + 62 to 315 + 60 |
| ,, | 22. 51. 55 | T | 1 | Yellow | 1·5 | Faint: 2 secs. | 20 | 0 + 55 to 339 + 41 |
| ,, | 22. 53. 59 | T & D | 2 | White | 0·5 | None | 10 | 353 + 44 to 341 + 38 |
| ,, | 22. 58. 39 | D & T | 3 | Yellow | 0·5 | None | 10 | 15 + 80 to 314 + 82 |
| ,, | 23. 4. 51 | D | 2 | White | 0·2 | None | 11 | 305 + 38 to 294 + 32 |
| ,, | 23. 8. 53 | D | 2 | Yellow | 0·2 | None | 9 | 309 + 44 to 297 + 41 |
| August 11 | 21. 20. 33 | D | 2 | Yellow | 0·5 | None | 17 | 294 + 39 to 281 + 26 |
| ,, | 21. 49. 57 | D | 3 | White | 0·3 | None | 10 | 174 + 65 to 189 + 73 |
| ,, | 22. 6. 28 | D & S | 2 | White | 0·3 | None | 13 | 174 + 64 to 171 + 51 |
| ,, | 22. 13. 17 | D & AB | 1 | White | 0·5 | None | 16 | 233 + 59 to 221 + 44 |
| ,, | 22. 13. 33 | D & AB | 1 | White | 0·5 | None | 15 | 236 + 53 to 220 + 43 |
| ,, | 22. 21. 59 | AB | 2 | White | 0·2 | None | 13 | 38 + 47 to 21 + 54 |
| ,, | 22. 23. 55 | D & AB | 1 | Yellow | 0·7 | Faint: 1 sec. | 13 | 279 + 43 to 297 + 47 |
| ,, | 22. 24. 53 | S | 2 | White | 0·3 | None | 17 | 206 + 52 to 232 + 59 |
| ,, | 22. 25. 36 | S & AB | $>1$ | White | 2·0 | Bright: 2 secs. | 31 | 39 + 49 to 348 + 56 |
| ,, | 22. 31. 23 | D | $>1$ | White | 1·5 | Bright: 1 sec. | 27 | 348 + 58 to 311 + 42 |
| ,, | 22. 31. 57 | S | 3 | Bluish-white | 0·2 | None | 20 | 33 + 47 to 3 + 53 |
| ,, | 22. 33. 33 | S | 1 | White | 1·5 | Bright: 1 sec. | 22 | 305 + 38 to 278 + 36 |
| ,, | 22. 41. 23 | D | 2 | Bluish-white | 0·7 | Faint | 20 | 312 + 38 to 288 + 33 |
| ,, | 22. 43. 12 | S | 1 | Yellow | 0·2 | Faint | 32 | 278 + 18 to 246 + 12 |
| ,, | 22. 43. 23 | S | 1 | White | 0·3 | Bright | 15 | 19 + 30 to 2 + 30 |
| ,, | 22. 49. 17 | D & AB | 1 | Yellow | 1·2 | Faint: 1 sec. | 28 | 36 + 51 to 30 + 23 |
| ,, | 22. 50. 54 | S | 2 | Yellow | 1·5 | None | 43 | 311 + 23 to 264 + 24 |
| ,, | 22. 53. 5 | D & S | 1 | Yellow | 0·8 | None | 31 | 311 + 17 to 279 + 18 |
| ,, | 22. 55. 10 | D & S | 1 | White | 2·0 | None | 32 | 281 + 17 to 249 + 12 |
| ,, | 22. 57. 52 | D | 2 | White | 0·5 | None | 17 | 354 + 27 to 341 + 14 |
| ,, | 23. 5. 37 | D & S | 1 | White | 0·5 | None | 13 | 3 + 63 to 21 + 54 |
| ,, | 23. 5. 48 | D | 1 | White | 0·7 | Bright: 2·5 secs. | 28 | 2 + 64 to 315 + 52 |
| ,, | 23. 9. 50 | S | 1 | White | 2·0 | None | 17 | 291 + 16 to 273 + 15 |
| ,, | 23. 11. 11 | D | 2 | Yellow | 0·3 | None | 12 | 357 + 25 to 348 + 17 |
| ,, | 23. 12. 18 | D | 1 | White | 1·0 | Faint. | 25 | 300 + 41 to 275 + 27 |
| ,, | 23. 14. 19 | S | 1 | Yellow | 1·5 | None | 17 | 291 + 16 to 273 + 15 |
| ,, | 23. 15. 25 | S | 1 | White | 0·5 | None | 20 | 350 + 27 to 332 + 17 |
| ,, | 23. 21. 40 | S | 2 | White | 0·3 | None | 14 | 5 + 64 to 333 + 63 |
| ,, | 23. 28. 55 | D & S | $>1$ | White | 1·5 | 2 secs. | 40 | 306 + 35 to 275 + 8 |
| ,, | 23. 33. 27 | D & S | $>1$ | Bluish-white | 1·0 | Bright: 1 sec. | 32 | 3 + 43 to 323 + 66 |
| ,, | 23. 35. 21 | S | 1 | White | 0·7 | None | 12 | 278 + 49 to 264 + 42 |
| ,, | 23. 35. 31 | S | 2 | White | 0·3 | None | 5 | 275 + 54 to 267 + 54 |
| ,, | 23. 38. 52 | D | 1 | White | 0·5 | None | 15 | 340 + 34 to 321 + 32 |
| ,, | 23. 48. 52 | D & S | 1 | Bluish-white | 1·0 | None | 17 | 35 + 63 to 4 + 78 |
| ,, | 23. 51. 4 | S | 2 | Bluish-white | 0·5 | None | 22 | 276 + 36 to 303 + 42 |
| ,, | 23. 53. 13 | D | 1 | White | 0·3 | None | 10 | 37 + 45 to 24 + 42 |
| ,, | 23. 53. 20 | D | 1 | White | 0·5 | None | 17 | 5 + 54 to 24 + 43 |
| ,, | 23. 57. 44 | S | 2 | White | 0·5 | None | 23 | 302 + 43 to 276 + 33 |
| ,, | 23. 58. 43 | S | 1 | White | 1·0 | Bright: 0·5 sec. | 19 | 303 + 38 to 279 + 42 |
| August 12 | 0. 0. 49 | D & S | 2 | White | 0·5 | None | 23 | 18 + 45 to 355 + 32 |
| ,, | 0. 3. 15 | DE | 2 | White | 0·3 | None | 8 | 0 + 10 to 355 + 3 |
| ,, | 0. 4. 15 | D | 2 | Bluish-white | 0·5 | None | 17 | 12 + 56 to 36 + 47 |
| ,, | 0. 9. 10 | D | 2 | White | 0·3 | None | 10 | 37 + 47 to 24 + 43 |
| ,, | 0. 11. 51 | S | 1 | White | 0·5 | None | 14 | 325 + 63 to 300 + 56 |
| ,, | 0. 20. 59 | DE & S | 1 | White | 0·7 | None | 7 | 312 − 7 to 308 − 13 |
| ,, | 0. 22. 0 | D | 1 | White | 0·7 | None | 30 | 305 + 36 to 292 + 9 |
| ,, | 0. 23. 15 | D | 2 | Bluish-white | 0·2 | None | 14 | 322 + 34 to 309 + 25 |
| ,, | 0. 27. 32 | S | 1 | White | 1·5 | Bright: 0·5 sec. | 37 | 279 + 37 to 260 + 72 |

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|---|---|---|---|---|---|---|---|---|
| | h m s | | | | s | | ° | ° ° ° ° |
| August 12 | 0. 29. 35 | D | 2 | Bluish-white | 0·3 | None | 20 | 311 + 39 to 292 + 27 |
| ,, | 0. 32. 13 | D | >1 | White | 0·5 | Bright : 2·5 secs. | 17 | 47 + 53 to 24 + 66 |
| ,, | 0. 34. 39 | DE & S | 1 | White | 0·7 | Slight | 15 | 345 + 32 to 330 + 25 |
| ,, | 0. 38. 48 | S | 1 | White | 0·5 | None | 13 | 310 + 33 to 294 + 34 |
| ,, | 0. 41. 5 | D | 1 | White | 0·5 | None | 15 | 324 + 9 to 321 − 6 |
| ,, | 1. 56. 8 | S | >1 | Bluish-white | 0·7 | Bright : 1 sec. | 10 | 51 + 69 to 78 + 73 |
| ,, | 1. 58. 28 | D | 1 | White | 0·5 | None | 14 | 26 + 46 to 7 + 43 |
| ,, | 1. 59. 24 | D | 1 | White | 0·5 | None | 25 | 353 + 35 to 327 + 24 |
| ,, | 2. 3. 17 | S | >1 | Bright-blue | 1·5 | Brilliant : 2 sec. | 17 | 354 + 71 to 320 + 59 |
| ,, | 2. 6. 32 | D | 1 | White | 0·5 | Faint | 24 | 339 + 30 to 311 + 33 |
| ,, | 2. 10. 50 | S | 2 | Bluish-white | 1·0 | None | 40 | 303 + 57 to 282 + 19 |
| ,, | 2. 13. 37 | D | 2 | White | 0·7 | None | 25 | 339 + 30 to 315 + 18 |
| ,, | 2. 17. 15 | D & S | >1 | White | 1·0 | Faint : 1 sec. | 39 | 49 + 49 to 2 + 29 |
| ,, | 2. 18. 10 | D | 2 | White | 0·2 | None | 10 | 49 + 43 to 35 + 42 |
| ,, | 2. 19. 38 | D & S | 1 | White | 0·5 | None | 11 | 326 + 47 to 313 + 55 |
| ,, | 2. 20. 12 | D | 1 | Bluish-white | 0·5 | None | 32 | 30 + 42 to 350 + 33 |
| ,, | 2. 27. 55 | S | 1 | Bluish-white | 0·7 | None | 14 | 306 + 32 to 290 + 37 |
| ,, | 2. 31. 26 | D & S | 3 | Bluish-white | 0·3 | None | 10 | 50 + 47 to 35 + 47 |
| ,, | 2. 42. 21 | D & S | 3 | Bluish-white | 0·3 | None | 15 | 44 + 57 to 15 + 60 |
| ,, | 2. 50. 59 | D | 1 | White | 0·5 | None | 24 | 48 + 44 to 22 + 32 |
| ,, | 2. 51. 3 | D | 1 | White | 0·5 | None | 18 | 353 + 47 to 328 + 40 |
| ,, | 2. 58. 41 | S | >1 | Bluish-white | 0·2 | None | 22 | 303 + 33 to 288 + 17 |
| ,, | 3. 1. 17 | D | 1 | Yellow | 0·3 | Faint | 20 | 19 + 57 to 50 + 49 |
| ,, | 3. 14. 37 | S | 2 | Blue | 0·1 | None | 9 | 333 + 63 to 315 + 58 |
| ,, | 21. 4. 22 | T | 2 | Yellow | 0·3 | None | 17 | 311 + 46 to 288 + 52 |
| ,, | 21. 10. 35 | T | 2 | White | 0·3 | None | 20 | 285 + 53 to 264 + 40 |
| ,, | 21. 30. 18 | S | 2 | White | 0·3 | None | 22 | 275 + 48 to 282 + 27 |
| October 29 | 19. 40. ± | AC | >1 | Bright green | <1·0 | None | 27 | 240 + 86 to 135 + 63 |
| November 13 | 23. 5. 37 | D | 2 | White | 0·5 | None | 11 | 123 + 33 to 107 + 34 |
| ,, | 23. 23. 40 | D | 2 | White | 0·3 | None | 12 | 146 + 65 to 146 + 53 |
| ,, | 23. 45. 12 | D | 2 | Bluish-white | 0·5 | None | 14 | 113 + 46 to 92 + 57 |
| November 14 | 0. 1. 4 | D | >1 | Reddish | 2·5 | Bright : 2 secs. | 28 | 170 + 62 to 251 + 85 |
| ,, | 0. 9. 57 | D & S | 1 | White | 0·8 | None | 23 | 110 + 56 to 65 + 65 |
| ,, | 0. 12. 6 | S | 2 | Bluish-white | 0·5 | None | 28 | 164 + 48 to 198 + 73 |
| ,, | 0. 14. 13 | S | >1 | Yellow | 0·8 | Slight | 3 | 146 + 62 to 153 + 62 |
| ,, | 0. 22. 27 | D | 2 | White | 0·5 | None | 16 | 131 + 27 to 114 + 33 |
| ,, | 0. 32. 27 | S | 2 | Blue | 0·3 | None | 13 | 144 + 64 to 174 + 72 |
| ,, | 0. 38. 28 | D & S | 2 | Yellow | 0·3 | None | 38 | 128 + 85 to 99 + 47 |
| ,, | 0. 59. 47 | D & S | 2 | White | 0·5 | None | 12 | 101 + 18 to 90 + 12 |
| ,, | 1. 24. 25 | D | 2 | White | 0·3 | None | 15 | 128 + 37 to 111 + 46 |
| ,, | 1. 31. 14 | S | 2 | White | 0·5 | None | 16 | 138 + 56 to 113 + 67 |
| ,, | 1. 36. 2 | D & S | 2 | Yellow | 0·8 | None | 21 | 125 + 53 to 89 + 63 |
| ,, | 1. 37. 27 | D | 1 | White | 0·5 | Slight | 18 | 143 + 26 to 122 + 32 |
| ,, | 1. 39. 13 | S | 2 | Bluish-white | 0·5 | None | 31 | 170 + 57 to 105 + 72 |
| ,, | 1. 42. 15 | D | 2 | Bluish-white | 0·4 | Slight | 15 | 99 + 19 to 84 + 16 |
| ,, | 1. 44. 14 | D | 2 | White | 0·3 | None | 20 | 102 + 15 to 83 + 9 |
| ,, | 2. 0. 25 | D & S | 1 | Bluish-white | 0·5 | None | 18 | 98 + 56 to 66 + 53 |

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