RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

1892:

UNDER THE DIRECTION OF

W. H. M. CHRISTIE, M.A., F.R.S.,

ASTRONOMER ROYAL.

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ROYAL OBSERVATORY, GREENWICH.

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GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

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INTRODUCTION.

§ 1. *Personal Establishment and Arrangements.*

During the year 1892 the establishment of Assistants in the Magnetical and Meteorological Department of the Royal Observatory consisted of William Ellis, Superintendent, and William Carpenter Nash, Assistant, aided by five Computers. The Computers employed at different times during the year were, Ernest E. McClellan, Richard R. Tweed, George A. Allworth, Thomas F. Claxton, Henry James MacManus, Albert Walter, and Percival D. Beadle.

Mr. Ellis controls and superintends the whole of the work of the Department. Mr. Nash is charged generally with the instrumental adjustments, the determination of the values of instrumental constants, and the more delicate magnetic observations. He also specially superintends the Meteorological Reductions. 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 Magnetical and Meteorological Observatory was erected in the year 1838. Its northern face is distant about 170 feet south-south-east from the nearest point of the South-East Dome, and about 35 feet south from the carpenters' workshop. On its east stands the New Library (erected at the end of the year 1881), in the construction of which non-magnetic bricks were used, and every care was taken to exclude iron. The Magnetical and Meteorological Observatory is based on concrete and built of wood, united for the most part by pegs of bamboo; no iron was intentionally admitted in its construction, or in subsequent alterations. Its form is that of a cross, the arms of the cross being nearly in the direction of the cardinal magnetic points as they were in 1838. The northern arm is longer than the others, and is separated from them by a partition, and used as a computing room; the stove which warms this room, and its flue, are of copper. The remaining portion, consisting of the eastern, southern, and western arms, is known as the Upper Magnet Room. The upper declination magnet and its theodolite, for determination of absolute declination, are placed in the southern arm, an opening in the roof allowing circumpolar stars to be observed by the theodolite for determination of its reading for the astronomical meridian. Both the magnet and its theodolite are supported on piers built from the ground. In the eastern arm is placed the Thomson electrometer for photographic record of the variations of atmospheric electricity, its water cistern rests on four glass insulators supported by a platform fixed to the western side of the southern arm, near the ceiling. The Standard barometer is suspended near the junction of the southern and western arms. The sidereal clock, Grimalde and Johnson, is fixed at the junction of the eastern and southern arms, and there is in addition a mean solar chronometer, McCabe No. 649, for general use. A mean solar clock (Molyneux), transferred from the Astronomical Department, was set up in the northern arm during the year 1883.

Until the year 1863 the horizontal and vertical force magnets were also located in the Upper Magnet Room, the upper declination magnet being up to that time employed for photographic record of the variations of declination, as well as for absolute measure of the element. But experience having shown that the horizontal and vertical force magnets were exposed in the upper room to large variations of temperature, a room known as the Magnet Basement (in which the variations of temperature are very much smaller) was excavated in the year 1864 below the Upper Magnet Room, and the horizontal and vertical force magnets, as well as a new declination magnet for photographic record of declination, were mounted therein. The Magnet Basement is of the same dimensions as the Upper Magnet Room. The lower declination magnet and the horizontal force and vertical force magnets, as now located in the Basement, are used entirely for record of the variations of the respective magnetic elements. The declination magnet is suspended in the southern arm, immediately under the upper declination magnet, to avoid mutual interference; the horizontal and vertical force magnets are placed in the eastern and western arms respectively, in positions nearly underneath those which they occupied when in the Upper Magnet Room. All are mounted on or suspended from supports carried by piers built from the ground. A photographic barometer is fixed to the northern wall of the Basement, and an apparatus for photographic registration of earth currents is placed near the southern wall of the eastern arm. A mean solar clock of peculiar construction for interruption of the photographic traces at each hour is fixed to the pier which supports the upper declination theodolite. Another mean solar clock is attached to the western wall of the southern arm. For better ascertaining the variations of temperature of the Basement a Richard metallic thermograph was added in February, 1886. It is placed on the pier carrying the horizontal force magnet, and gives a continuous register of temperature on a scale of 5° to 1 inch, the scale for time being 24 hours to $5\frac{1}{3}$ inches. On the northern wall, near the photographic barometer, is fixed the Sidereal Standard clock of the Astronomical Observatory, Dent 1906, communicating with the chronograph and with clocks of the Astronomical Department by means of underground wires. This clock is placed in the Magnet Basement, because of its nearly uniform temperature.

The Basement is warmed when necessary by a gas stove (of copper), and ventilated by means of a large copper tube nearly two feet in diameter, which receives the flues from the stove and all gas-lights and passes through the Upper Magnet Room to a revolving cowl above the roof. In January 1889 two additional gas stoves were provided with the object of maintaining a higher temperature during the winter and so rendering the Basement temperature more uniform throughout the year. One of these stoves is placed in the northern corner of the eastern arm, and the other in the middle of the western wall of the western arm. Each of the arms of the Basement has a well window facing the south, but these wells are usually closely stopped up with bags packed with straw or jute. In January 1886 a line of 9-inch pipes was laid underground from the Basement southward to a distance of about 155 feet, at which point there is an inlet from the atmosphere, for the purpose of ventilating the Basement by air which has acquired the temperature of the soil at a depth of several feet below the surface, and of thus obtaining greater uniformity of temperature. The depth of the line of pipes below the surface varies from 5 feet at the inlet in the south ground to 11 feet 6 inches at the entrance to the Basement.

A platform erected above the roof of the Magnet House is used for the observation of meteors. The sunshine instrument and a rain gauge are placed on a table on this platform, and there are also thermometers (placed in a louvre-boarded shed or screen, with free circulation of air) for observation of the temperature of the air in an exposed situation at a height of 20 feet above the ground.

An apparatus for naphthalizing the gas used for the photographic registration is mounted in a small detached zinc-built room adjacent to the computing room on its western side.

The Dip instrument and Deflexion apparatus are placed in the New Library. Each instrument rests on a heavy slate slab supported by strong wooden framework rising from brick work built into the ground.

To the south of the Magnet House, in what is known as the Magnet Ground, is an open shed, consisting principally of a roof supported on four posts, under which is placed the photographic dry-bulb and wet-bulb thermometer apparatus. On the roof of this shed there is fixed an ozone box and a rain gauge, and close to its north-western corner are placed the earth thermometers, the upper portions of which, projecting above the ground, are protected by a small wooden hut. About 25 feet to the west of the photographic thermometers is situated the revolving stand carrying the thermometers used for ordinary eye observations, and adjacent to the thermometer stand on the north side are three rain gauges. Between the rain gauges and the Magnet House are placed the thermometers for solar and terrestrial radiation; they are laid on short grass, and freely exposed to the sky. A little to the east of the thermometer stand is placed a Stevenson screen containing dry bulb, wet bulb, and maximum and minimum thermometers.

The Magnet Ground is bounded on its south side by a range of seven rooms, known as the Magnet Offices. No 1 is used as a general store room, and in it is placed the Watchman's Clock ; Nos. 2, 3, and 4 are used for photographic purposes in connexion with the Photoheliograph, placed in a dome adjoining No. 3, on its south side ; Nos. 5 and 6 are store rooms ; No. 7 forms an ante-room and means of approach to the Lassell dome.

Two Anemometers, Osler's, giving continuous record of direction and pressure of wind, and amount of rain, and Robinson's, giving continuous record of velocity, are fixed, the former above the north-western turret of the Octagon Room (the ancient part of the Observatory), the latter above the small building on the roof of the Octagon Room.

On 1883 March 3 the iron tube of the Lassell reflecting telescope was brought into the South Ground, and on March 9 the iron supports of the same. On 1883 December 31 the iron work of the dome was brought into the same ground, and on 1884 June 26 the iron gutter of the dome, in 16 pieces, weighing together about 2 tons 6 cwt. A careful examination of the magnetic registers on each of these occasions shows that no disturbance of the declination, horizontal force, or vertical force magnets was caused by the location of these masses of iron in the South Ground, at a distance of more than 100 feet from the magnets.

In order to determine the effect of a mass of iron on the magnets, experiments were made on 1884 July 2, with 4, 8, 12, and 16 pieces of the gutter respectively, placed at a distance of 25 feet from the declination magnet in a direction south-east (magnetic) from it, so that the maximum effect would be produced. The following are the results for the deflexions of the Upper Declination magnet :—

	Mean Deflexion.	
	′	″
With 4 pieces of the iron gutter - - - - -	1	4
,, 8 pieces ,, - - - - -	2	2
,, 12 pieces ,, - - - - -	3	12
,, 16 pieces ,, - - - - -	3	40

Each piece weighs nearly 3 cwt.

As the effect of a mass of iron on a magnet varies as the sine of twice its magnetic azimuth divided by the cube of its distance from the magnet, these experiments show that the deflexion caused by the whole of the iron in the Lassell instrument and dome (which is at a distance of 100 feet and very nearly in the magnetic meridian of the declination magnet) would be quite insensible.

Regular observation of the principal magnetical and meteorological elements was commenced in the autumn of the year 1840, and has been continued, with some additions to the subjects of observation, to the present time. Until the end of the year 1847 observations were in general made every two hours, but at the beginning of the year 1848 these were superseded by the introduction of the method of photographic registration, by which means a continuous record of the various elements is obtained.

For information on many particulars concerning the history of the Magnetical and Meteorological Observatory, especially in regard to alterations not recited in this volume, which have been made from time to time, the reader is referred to the Introduction to the Magnetical and Meteorological Observations for the year 1880 and previous years, and to the Descriptions of the Buildings and Grounds, with accompanying Plans, given in the Volumes of Astronomical Observations for the years 1845 and 1862.

§ 3. *Subjects of Observation in the year* 1892.

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, and of the earth currents indicated in two distinct lines of wire; eye observations of the ordinary meteorological instruments, including the barometer, dry and wet bulb thermometers, and radiation and earth thermometers, and of thermometers placed on the roof of the Magnet House; 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, and amount of ozone; observations of some of the principal meteor showers; general record of ordinary atmospheric changes of weather, including numerical estimation of the amount of cloud, and occasional phenomena.

From the beginning of the year 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. In previous years the time used throughout the magnetic section was Greenwich astronomical time, reckoning from noon to noon; and generally, in the meteorological section, Greenwich civil time, reckoning from midnight to midnight.

§ 4. *Magnetic Instruments.*

UPPER DECLINATION MAGNET AND ITS THEODOLITE.—The upper declination magnet, employed solely for the determination of absolute declination, is by Meyerstein of Göttingen: it is a bar of hard steel, 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick, attached by a pinching screw to the magnet carrier, also by Meyerstein, but since altered by Troughton and Simms. To a stalk extending upwards from the magnet carrier is attached the torsion circle, which consists of two circular brass discs, one turning independently of the other on their common vertical axis, the lower and graduated portion being firmly fixed to the stalk of the magnet carrier; to the upper portion carrying the vernier is attached, by a hook, the suspension skein. This is of silk, and consists of several fibres united by juxtaposition, without apparent twist; its length is about 6 feet.

The magnet, with its suspending skein, &c., is carried by a braced wooden tripod stand, whose feet, passing through holes cut in the floor, rest on slates covering brick piers, built from the ground and rising through the Magnet Basement nearly to its ceiling. The upper end of the suspension skein is attached to a short square wooden rod, sliding in the corresponding square hole of a fixed wooden bracket. To the upper end of the rod is fixed a leather strap, which passing over two brass pulleys carried by the upper portion of the tripod stand, is attached to a cord which passes down to a small windlass fixed to the stand. Thus in raising or lowering the magnet, an operation necessary in determinations of its collimation error, no alteration is made in the length of the suspension skein. The magnet is inclosed in a double rectangular wooden box (one box within another), both boxes being covered externally and internally with gilt paper, and having holes at their south and north ends, for illumination of the magnet-collimator and for viewing the collimator with the theodolite telescope respectively. The holes in the outer box are covered with glass. The magnet-collimator is formed by a diagonally placed cobweb-cross, and a lens of 13 inches focal length and nearly 2 inches aperture, carried by two sliding frames fixed by pinching screws to the south and north arms of the magnet respectively. The cobweb-cross is in the principal focus of the lens, and its image in the theodolite telescope is well seen. From the lower side of the magnet carrier a rod extends downwards, terminating below the magnet box in a horizontal brass bar immersed in water, for the purpose of checking small vibrations of the magnet.

The theodolite, by which the position of the upper declination magnet is observed, is by Troughton and Simms. It is planted about 7 feet north of the magnet. The radius of its horizontal circle is 8·3 inches, and the circle is divided to 5′, and read, by three verniers, to 5″. The theodolite has three foot-screws, which rest in brass channels let into the stone pier placed upon the brick pier which rises from the ground through the Magnet Basement. The length of the telescope is 21 inches, and the aperture of its object glass 2 inches : it is carried by a horizontal transit axis 10½ inches long, supported on Y's carried by the central vertical axis of the theodolite. The eye-piece has one fixed horizontal wire and one vertical wire moved by a micrometer-screw, the field of view in the observation of stars being illuminated through the pivot of the transit-axis on that side of the telescope which carries the micrometer-head. The value of one division of the striding level is considered to be equal to 1″·05. The opening in the roof of the Magnet House permits of observation of circumpolar stars as high as δ Ursæ Minoris above the pole and as low as β Cephei below the pole. A fixed mark, consisting of a small hole in a plate of metal, placed on one of the buildings of the Astronomical Observatory, at a distance of about 270 feet from the theodolite, affords an additional check on its continued steadiness.

The inequality of the pivots of the axis of the theodolite telescope was found from several independent determinations made at different times to be very small. It appears that when the level indicates the axis to be horizontal the pivot at the illuminated end of the axis is really too low by 1^{div}·3, equivalent to 1″·4.

The value in arc of one revolution of the telescope-micrometer is 1′. 34″·2.

The reading for the line of collimation of the theodolite telescope was found, by ten double observations, 1891 November 25, to be 100^{r}·337 ; 1892 May 19, 100^{r}·342 ; 1892 August 26, 100^{r}·348; 1892 October 7, 100^{r}·345 ; and 1892 November 29, 100^{r}·336. The value used throughout the year 1892 was 100^{r}·350.

The effect of the plane glass in front of the outer box of the declination-magnet at that end of the box towards the theodolite was determined by ten double observations made on 1890 August 11, which showed that in the ordinary position of the glass the theodolite readings were diminished by 19″·7. Two other sets of observations, made on 1891 November 25 and 1892 November 29, gave 19″·1 and 18″·4 respectively. The mean of these, 19″·1 has been added to all readings throughout the year 1892.

The error of collimation of the magnet collimator is found by observing the position of the magnet, first with its collimator in the usual position (above the magnet), then with the collimator reversed (or with the magnet placed in its carrier with the collimator below), repeating the observations several times. The value used during the year 1892 was 26′. 1″·0, being the mean of determinations made on 1888 December 3, 1889 December 4, 1890 August 12, 1891 November 26, and 1892 November 29, giving respectively 26′. 0″·6, 25′. 54″·2, 26′. 8″·2, 25′. 55″·1, and 26′. 7″·1. With the collimator in its usual position, above the magnet, the quantity 26′. 1″·0 has been subtracted from all readings.

The effect of torsion of the suspending skein is eliminated by turning the lower portion of the torsion-circle until the torsion bar (an oak bar of the same size as the magnet, and weighted with lead weights to be also of equal weight), inserted in place of the magnet, rests in the plane of the magnetic meridian. The bar is thus inserted usually about once a month, and whenever the adjustment is found not to have been sufficiently close, the observed positions of the magnet are corrected for displacement of the magnet from the meridian by the torsion of the skein. Such correction is determined experimentally, with the magnet in position, by changing the reading of the torsion-circle by a definite amount, usually 90°, thus giving the skein that amount of azimuthal twist, and observing, with the theodolite, the change in the position of the magnet thereby produced, from which is derived the ratio of the couple due to torsion of the skein to the couple due to the earth's horizontal magnetic force. This ratio was found to be $\frac{1}{150}$ on 1891 November 26, and $\frac{1}{133}$ on 1892 November 30. During the year 1892 the plane in which the suspension skein was free from torsion so nearly coincided with the magnetic meridian, that no correction of the absolute measures of magnetic declination for deviation of the plane of no torsion was required.

The time of vibration of the upper declination magnet under the influence of terrestrial magnetism was found on 1891 November 25, to be $31^{s}\cdot03$, and on 1892 November 29, $31^{s}\cdot01$.

The reading of the azimuthal circle of the theodolite corresponding to the astronomical meridian is determined about once in each month by observation of the stars Polaris or δ Ursæ Minoris. The fixed mark is usually observed weekly. The concluded mean reading of the circle for the south astronomical meridian (deduced entirely from the observations of the polar stars), used throughout the year was 27°. 6′. 10″·7.

In regard to the manner of making observations with the upper declination magnet:—The observer on looking into the theodolite telescope sees the image of the diagonal cross of the magnet collimator vibrating alternately right and left. The time of vibration of the magnet being about 30 seconds, he first applies his eye to the telescope about one minute, or two vibrations, before the prearranged time of observation, and, with the vertical wire carried by the telescope-micrometer, bisects the magnet-cross at its next extreme limit of vibration, reading the micrometer. He similarly observes the next following extreme vibration, in the opposite direction, and so on, taking in all four readings. The mean of each pair of adjacent readings of the micrometer is taken, giving three means, and the mean of these three is adopted. In practice this is done by adding the first and fourth readings to twice the second and third, and dividing the sum by 6. Should the magnet be nearly free from vibration, two bisections only of the cross are made, one at the vibration next before the pre-arranged time, the other at the vibration following. The verniers of the theodolite-circle are then read. The excess of the adopted micrometer-reading above the reading for the line of collimation of the telescope being converted into arc and applied to the mean circle-reading, and also the corrections for collimation of the magnet and for collimation of the plane glass in front of its box, the concluded circle-reading corresponding to the position of the magnet is found. The difference between this reading and the adopted reading of the circle for the south astronomical meridian gives, when, as is usually the case, no correction for torsion of the skein is necessary, the observed value of absolute declination, afterwards used for determining the value of the photographed base line on the photographic register of the lower declination magnet. The times of observation of the upper declination magnet are usually $9^h. 5^m$, $13^h. 5^m$, $15^h. 5^m$, and $21^h. 5^m$ of Greenwich civil time, reckoning from midnight.

The accuracy of the measure of absolute declination by the upper declination-magnet depends on the condition that this magnet should be vertically over the lower magnet. But the arrangements are such that with the gradual decrease of declination, the upper magnet has to be shifted more and more to the west in order that it may be viewed by its theodolite, the position of which on its pier cannot be altered. In order to determine whether the consequent change in the relative position of the two magnets has in late years increased to such an extent that any measurable mutual influence would exist, the upper magnet has on two different occasions (once in the year 1887 and once in the year 1889) been temporarily removed to the ante-room, where its influence would be quite insensible. On both occasions the photographic register of the lower magnet showed no perceptible change of position. Conversely, the removal of the lower magnet would not influence the position of the upper one, which is used for absolute measure.

LOWER DECLINATION MAGNET.—The lower declination magnet is used simply for the purpose of obtaining photographic register of the variations of magnetic declination. It is by Troughton and Simms, and is of the same dimensions as the upper declination magnet, being 2 feet long, 1½ inch broad, and ¼ inch thick. The magnet is suspended, in the Magnet Basement, immediately below the upper declination magnet, in order that the absolute measure of declination by the upper magnet should not be affected by the proximity of the lower magnet.

The manner of suspension of the magnet is in general similar to that of the upper declination magnet, the suspension pulleys being carried by a small pier built on one of the crossed slates resting on the brick piers rising from the ground. The length of free suspending skein is about 6 feet, but, unlike the arrangement adopted for the upper magnet, the skein is itself carried over the suspension pulleys. The position of the azimuthal plane in which the torsion bar rests, when substituted for the magnet, is examined from time to time, and adjustment made as necessary, to keep this plane in or near the magnetic meridian, such exact adjustment as is required for the upper declination-magnet not being necessary in this case.

To destroy the small accidental vibrations to which the magnet would be otherwise liable, it is encircled by a damper consisting of a copper bar, about 1 inch square, which is bent into a long oval form, the plane of the oval being vertical; a lateral bend is made in the upper bar of the oval to avoid interference with the suspension piece of the magnet. The effect of the damper is to reduce the amplitude of the oscillation after every complete or double vibration of the magnet in the proportion of 5 : 2 nearly.

In regard to photographic arrangements, it may be convenient, before proceeding to speak of the details peculiar to each instrument, to remark that the general principle adopted for obtaining continuous photographic record is the same for all instruments. For the register of each indication a cylinder of ebonite is provided, the axis of the cylinder being placed parallel to the direction of the change of indication to be registered. If, as is usually the case, there are two indications whose movements are in the same direction, both may be registered on the same cylinder: thus the movements in the case of magnetic declination and horizontal magnetic force, being both horizontal, can be registered on different parts of one cylinder with axis horizontal: so also can two different galvanic earth currents. The movements in the case of vertical magnetic force, and of the barometer, being both vertical, can similarly be registered on different parts of one cylinder having its axis vertical, as also can the indications of the dry-bulb and wet-bulb thermometers. In the electrometer the movement being horizontal, a horizontal cylinder is provided.

The cylinder is in each case driven by chronometer or accurate clock-work to ensure uniform motion. The pivots of the horizontal cylinders turn on anti-friction wheels: the vertical cylinders rest each on a circular plate turning on anti-friction wheels, the driving mechanism being placed below. A sheet of sensitized paper being wrapped round the cylinder, and held by a slender brass clip, the cylinder thus prepared is placed in position, and connected with the clock-movement: it is then ready to receive the photographic record, the optical arrangements for producing which will be found explained in the special description of each particular instrument. The sheets are removed from the cylinders and fresh sheets supplied every day, usually at noon. On each sheet, a reference line is also photographed, the arrangements for which will be more particularly described in each special case. All parts of the apparatus and all parts of the paths of light are protected, as found necessary, by wood or zinc casings or tubes, blackened on the inside, in order to prevent stray light from reaching the photographic paper.

In June 1882 the photographic process employed for so many years was discarded, and a dry paper process introduced, the argentic-gelatino-bromide paper, as prepared by Messrs. Morgan and Kidd of Richmond (Surrey), being used with ferrous oxalate development. The greater sensitiveness of this paper permits diminution of the effective surface of the magnet mirrors, and allows also the use of smaller gas flames. In the case of the vertical force magnet the old and comparatively heavy mirror has been replaced by a small and light mirror with manifest advantage, as will be seen in the description of the vertical force magnet. The new paper acts equally well at all seasons of the year, and any loss of register on account of photographic failure is now extremely rare.

Referring now specially to the lower declination magnet, there is attached to the magnet carrier, for the purpose of obtaining photographic register of the motions of the magnet, a concave mirror of speculum metal, 5 inches in diameter (reduced by a stop, on the introduction of the new photographic paper, to an effective diameter of about 1 inch), which thus partakes in all the angular movements of the magnet. The revolving ebonite cylinder is $11\frac{1}{2}$ inches long and $14\frac{1}{4}$ inches in circumference: it is supported, in an approximately east and west position, on brass uprights carried by a metal plate, the whole being planted on a firm wooden platform, the supports of which rest on blocks driven into the ground. The platform is placed midway between the declination and horizontal force magnets, in order that the variations of magnetic declination and horizontal force may both be registered on the same cylinder, which makes one complete revolution in 26 hours.

The light used for obtaining the photographic record is that given by a flame of coal gas, charged occasionally with the vapour of coal naphtha. A vertical slit about $0^{in}\cdot3$ long and $0^{in}\cdot01$ wide, placed close to the light, is firmly supported on the pier which carries the magnet. It stands slightly out of the straight line joining the mirror of the magnet and the registering cylinder, and its distance from the mirror is about 25 inches. The distance of the axis of the registering cylinder from the mirror is 134·4 inches. Immediately above the cylinder, and parallel to its axis, are placed two long reflecting prisms (each 11 inches in length) extending from end to end of the cylinder and facing opposite ways towards the mirrors carried by the declination and horizontal force magnets respectively. The front surface of each prism is convex, being a portion of a horizontal cylinder. The light of the declination lamp, after passing through the vertical slit, falls on the concave mirror and is thence reflected as a converging beam to form an image of the slit on the convex surface of the reflecting prism, by the action of which it is reflected downwards to the paper on the cylinder as a small spot of light. The concave mirror can be so adjusted in azimuth on the magnet that the spot shall fall not at the centre of the cylinder but rather towards its western side, in order that the declination trace shall not interfere with that of horizontal force, which is made to fall towards the eastern side of the cylinder. The special advantage of the arrangement here described is that the registers of both magnets are made at the same part of the circumference of the cylinder, a line joining the two spots being parallel to its axis, so that when the traces on the paper are developed, the parts of the two registers which appear in juxtaposition correspond to the same Greenwich time.

By means of a small prism, fixed near the registering cylinder, the light from another lamp is made to form a spot of light on the cylinder in a fixed position, so that, as the cylinder revolves, a reference or base line is traced out on the paper, from which, in the interpretation of the records, the ordinates are measured.

A clock of special construction, arranged by Messrs. E. Dent and Co., acting upon a small shutter placed near the declination slit, cuts off the light from the mirror two minutes before each hour, and admits it again two minutes after the hour, thus producing at each hour a visible interruption in the trace, and so ensuring accuracy as regards time scale. By means of another shutter the observer occasionally cuts off the light for a few minutes, registering the times at which it was cut off and admitted again. The visible interruptions thus made at definite times in the trace obviate any possibility of error being made by wrong numeration of the hourly breaks.

The usual hour of changing the photographic sheet is noon, but on Sundays, and occasionally on other days, this rule is not strictly followed. To obviate any uncertainty that might arise on such occasions from the interference of the two ends of a trace slightly longer than 24 hours, it has been arranged that one revolution of the cylinder should be made in 26 hours. The actual length of 24 hours on the sheet is about 13·3 inches.

The scale for measurement of ordinates of the photographic curve is thus determined. The distance from the concave mirror carried by the magnet to the surface of the cylinder, in the actual path of the ray of light through the prism, is practically the same as the horizontal distance of the centre of the cylinder from the mirror, 134·4 inches. A movement of 1° of the mirror produces a movement of 2° in the reflected ray. From this it is found that 1° of movement of the mirror, representing a change of 1° of magnetic declination, is equal to 4·691 inches on the photographic paper. A small strip of cardboard is therefore prepared, graduated on this scale to degrees and minutes. The ordinates of the curve as referred to the base line being measured for the times at which absolute values of declination were determined by the upper declination magnet, usually four times daily, the apparent value of the base line, as inferred from each observation, is found. The process assumes that the movements of the upper and lower declination magnets are precisely similar. The separate base line values being divided into groups, usually monthly, a mean base line value is adopted for use through each group. This adopted base line value is written upon every sheet. Then, with the cardboard scale, there is laid down, conveniently near to the photographic trace, a new base line, whose ordinate represents some whole number of degrees or other convenient quantity. Thus every sheet carries its own scale of magnetic measure. From the new base line the hourly ordinates (see page *xxxi*) are measured.

On September 6 the driving clock of the declination and horizontal force registering cylinder having stopped was taken to Messrs. E. Dent & Co. for repair. It was returned on October 3.

HORIZONTAL FORCE MAGNET.—The horizontal force magnet, for measure of the variations of horizontal magnetic force, was made by Meyerstein of Göttingen, and like the two declination magnets, is 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. For support of its suspension skein the back and sides of its brick pier rise through the eastern arm of the Magnet Basement to the upper Magnet Room, being there covered by a slate slab, to the top of which a brass plate is attached, carrying, immediately above the magnet, two brass pulleys, with their axes in the same east and west line; and at the back of the pier, and opposite to these pulleys, two others, with their axes similarly in an east and west line: these constitute the upper suspension piece, and support the upper portions of the two branches of the suspension skein. The two lower pulleys, having their axes in the same horizontal plane, and their grooves in the same vertical plane, are attached to a small horizontal bar which forms the upper portion of the torsion circle: it carries the verniers for reading the torsion circle, and can be turned independently of the lower and graduated portion of the torsion circle, below which, and in rigid connexion with it, is the magnet carrier.

The suspension skein is led under the two pulleys carried by the upper portion of the torsion circle, its two branches then rise up and pass over the front pulleys of the upper suspension piece, thence to and over the back pulleys, thence descending to a single pulley, round which the two branches are tied: from this pulley a cord goes to a small windlass fixed to the back of the pier. The effective length of each of the two branches of the suspension skein is about $7^{ft}\ 6^{in}$. The distance between the branches of the skein, where they pass over the upper pulleys, is $1^{in}{\cdot}14$: at the lower pulleys the distance between the branches is $0^{in}{\cdot}80$. The two branches are not intended to hang in one plane, but are to be so twisted that their torsion will maintain the magnet in a direction very nearly east and west magnetic, the marked end being west. In this state an increase of horizontal magnetic force draws the marked end of the magnet towards the north, whilst a diminution of horizontal force allows the marked end to recede towards the south under the influence of torsion. An oval copper bar, exactly similar to that used with the lower declination magnet, is applied also to the horizontal force magnet, for the purpose of diminishing the small accidental vibrations.

Below the magnet carrier there is attached a small plane mirror to which is directed a small telescope for the purpose of observing by reflexion the graduations of a horizontal opal glass scale, attached to the southern wall of the eastern arm of the basement. The magnet, with its plane mirror, hangs within a double rectangular box, covered with gilt paper in the same way as was described for the upper declination magnet. The numbers of the fixed scale increase from east to west, so that when the magnet is inserted in its usual position, with its marked end towards the west, increasing readings of the scale, as seen in the telescope, denote increasing horizontal force. The normal to the scale that meets the centre of the plane mirror is situated at the division 51 of the scale nearly, the distance of the scale from the centre of the plane mirror being 90·84 inches. The angle between the normal to the scale, which coincides nearly with the normal to the axis of the magnet, and the axis of the fixed telescope is about 38°, the plane of the mirror being therefore inclined about 19° to the axis of the magnet.

To adjust the magnet so that it shall be truly transverse to the magnetic meridian, which position is necessary in order that the indications of the instrument may apply truly to changes in the magnitude of horizontal magnetic force, without regard to changes of direction, the time of vibration of the magnet and the reading of the fixed scale are determined for different readings of the torsion circle. In regard to the interpretation of such experiments the following explanation may be premised.

Suppose that the magnet is suspended in its carrier with its marked end in a magnetic westerly direction, not exactly west but in any westerly direction, and suppose that, by means of the fixed telescope, the reading of the scale is taken. The position of the axis of the magnet is thereby defined. Now let the magnet be taken out of its carrier, and replaced with its marked end easterly. The terrestrial magnetic force will now act, as regards torsion, in the direction opposite to that in which it acted before, and the magnet will take up a different position. But by turning the torsion-circle so as to reverse the direction of the torsion produced by the oblique tension of the two branches of the suspending skein, the magnet may be made to take the same position as before but with poles reversed, which will be proved by the reading of the scale, as seen in the fixed telescope, being the same. We thus obtain two readings of the torsion circle corresponding to the same direction of the magnet axis, but with the marked end opposite ways, without however possessing any information as to whether the magnet axis is accurately transverse to the magnetic meridian, inasmuch as the same operation can be performed whether the magnet axis be transverse or not.

But there is another observation which will indicate whether the magnet axis is or is not accurately transverse. Let, in addition, the time of vibration be taken in each position of the magnet. Resolve the terrestrial magnetic forces acting on the poles of the magnet each into two parts, one transverse to the magnet, the other longitudinal. In the two positions of the magnet, marked end westerly and marked end easterly, the magnitude of the transversal force is the same, and the changes which the torsion undergoes in a vibration of given extent are the same, and, if there were no other force, the time of vibration would also be the same. But there is another force, the longitudinal force, and when the marked end is northerly this tends from the centre of the magnet's length, and when it is southerly it tends towards the centre of the magnet's length, and in a vibration of given extent this force, in one case increases that due to the torsion, and in the other case diminishes it. The times of vibration will therefore be different. There is only one exception to this, which is when the magnet axis is transverse to the magnetic meridian, in which case the longitudinal force vanishes, and the times of vibration in both positions of the magnet become the same.

The criterion then of the position truly transverse to the meridian is this. Find the readings of the torsion circle which, with the magnet in reversed positions, will give the same readings of the scale and the same time of vibration for the magnet. With such readings of the torsion circle the magnet is, in either position, transverse to the meridian, and the difference of circle-readings is the difference between the position in which the terrestrial magnetism acting on the magnet twists it one way and the position in which the same force twists it the opposite way, and is therefore double of the angle of torsion of the suspending lines for which, in either position, the force of terrestrial magnetism is neutralized by the torsion.

The present suspension skein was mounted on 1880 December 30. On 1892 January 1 the following observations were made for determination of the angle of torsion :—

1892, Day.	The Marked End of the Magnet.							
	West.				East.			
	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for change of 1° of Torsion-Circle Reading.	Mean of the Times of Vibration.	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for change of 1° of Torsion-Circle Reading.	Mean of the Times of Vibration.
	°	div.	div.	s	°	div.	div.	s
Jan. 1	146	50·33		21·22	230	47·75		20·60
			8·01				8·40	
	147	58·34		21·00	231	56·15		20·92
			7·61				7·61	
	148	65·95		20·78	232	63·76		21·20

From these observations it appeared that the times of vibration and scale readings were sensibly the same when the torsion circle read 147°. 0′, marked end west, and 231°. 17′, marked end east, the difference being 84°. 17′. Half this difference, or 42°. 8′·5, is therefore the angle of torsion when the magnet is transverse to the meridian. The value adopted in the reduction of the observations during the year 1892 was 42°. 10′.

The adopted reading of torsion-circle, for transverse position of the magnet, the marked end being west, was 147° throughout the year.

The angle through which the magnet turns to produce a change of one division of scale reading, and the corresponding variation of horizontal force in terms of the whole horizontal force, is thus found.

The length of $30^{div}\cdot85$ of the fixed scale is exactly 12 inches, and the distance of the centre of the face of the plane mirror from the scale 90·84 inches; consequently the angle at the mirror subtended by one division of the scale is 14′. 43″·2, or for change of one division of scale-reading the magnet is turned through an angle of 7′. 21″·6.

The variation of horizontal force, in terms of the whole horizontal force, producing angular motion of the magnet corresponding to change of one division of scale reading = cotan. angle of torsion × value of one division in terms of radius. Using the numbers above given, the change of horizontal force corresponding to change of one division of scale-reading was found to be 0·002364, which value has been used throughout the year 1892 for conversion of the observed scale-readings into parts of the whole horizontal force.

In regard to the manner of making observations with the horizontal force magnet. A fine vertical wire is fixed in the field of view of the observing telescope, across which the graduations of the fixed scale, as reflected by the plane mirror carried by the magnet, are seen to pass alternately right and left as the magnet oscillates, and the scale reading for the extreme points of vibration is easily taken. The hours of observation are usually 9^h, 13^h, 15^h, and 21^h of Greenwich civil time (reckoning from midnight). Remarking that the time of vibration of the magnet is about 20 seconds, and that the observer looks into the telescope about 40 seconds before the pre-arranged time, the manner of making the observation is generally similar to that already described for the upper declination magnet.

A thermometer, the bulb of which reaches considerably below the attached scale, is so planted in a nearly upright position on the outer magnet box that the bulb projects into the interior of the inner box containing the magnet. Readings of this thermometer are usually taken at 9^h, 10^h, 11^h, 12^h, 13^h, 14^h, 15^h, 16^h, and 21^h, Greenwich civil time. An index correction of − 0°·3, has been applied to all readings.

The photographic record of the movements of the horizontal force magnet is made on the same revolving cylinder as is used for record of the motions of the lower declination magnet. And, as described for that magnet, there is also attached to the carrier of the horizontal force magnet a concave mirror, 4 inches in diameter, reduced by a stop (on the introduction of the new photographic paper) to an effective diameter of about 1 inch. The arrangements as regards lamp, slit, and other parts are precisely similar to those for the lower declination magnet already described, and may be perfectly understood by reference to that description (pages *xiii* and *xiv*), in which was incidentally included an explanation of some parts specially referring to register of horizontal force. The distance of the vertical slit from the concave mirror of the magnet is about 21 inches, and the distance of the axis of the registering cylinder from the concave mirror is 136·8 inches, the slit standing slightly out of the straight line joining the mirror and the registering cylinder. The same base line is used for measure of the horizontal force ordinates, and the register is similarly interrupted at each hour by the clock, and occasionally by the observer, for determination of time scale, the length of which is of course the same as that for declination.

The scale for measure of ordinates of the photographic curve is thus constructed. The distance from the concave mirror to the surface of the cylinder, in the actual path of the ray of light through the prism is (as for declination) practically the same as the horizontal distance of the centre of the cylinder from the mirror, or 136·8 inches. But, because of the reflexion at the concave mirror, the double of this measure, or 273·6 inches, is the distance that determines the extent of motion on the cylinder of the spot of light, which, in inches, for a change of 0·01 part of the whole horizontal force will therefore be 273·6 × tan. angle of torsion × 0·01. Taking for angle of torsion 42°. 10′ the movement of the spot of light on the cylinder for a change of 0·01 of horizontal force is thus found to be 2·478 inches, and with this unit the cardboard scale for measure of the ordinates was prepared. The ordinates being measured for the times at which eye observations of the scale were made, combination of the measured ordinates with the observed scale readings converted into parts of the whole horizontal force, gives an apparent value of the base line for each observation. These being divided into groups, mean base line values are adopted, written on the sheets, and new base lines laid down, from which the hourly ordinates (see page *xxxi*) are measured, exactly in the same way as described for declination.

The indications of horizontal force are in a slight degree affected by the small changes of temperature to which the Magnet Basement is subject. The temperature coefficient of the magnet was determined by artificially heating the Magnet Basement to different temperatures, and observing the change of position of the magnet thereby produced. This process seems preferable to others in which was observed the effect which the magnet, when enclosed within a copper trough or box and artificially heated by hot water or hot air to different temperatures, produced on another suspended magnet, since the result obtained includes the entire effect of temperature upon all the various parts of the mounting of the magnet, as well as on the magnet itself. Referring to previous volumes for details, it is sufficient here to state that from a series of experiments made between January 3 and February 21 of the year 1868 on the principle mentioned, in temperatures ranging from 48°·2 to 61°·5, it appeared that when the marked end of the horizontal force magnet was to the west (its ordinary position) a change of 1° of temperature (Fahrenheit) produced an apparent change of ·000174 of the whole horizontal force, a smaller number of observations made with the marked end of the magnet east, in temperatures ranging from 49°·0 to 60°·9, indicating that a change of 1° of temperature produced an apparent change of ·000187 of horizontal force, increase of temperature in both cases being accompanied by decrease of magnetic force. It was concluded that an increase of 1° of temperature produces an apparent decrease of ·00018 of horizontal force. In the years 1885 and 1886 further observations on the same general plan were made, with the result that the decrease of horizontal force for increase of 1° of temperature was found to be somewhat greater at the higher than at the lower temperatures. A discussion of all the observations taken in 1885 and 1886, details of which are given at the end of the Introduction for 1886, shows that the correction for reduction to temperature 32° (expressed in terms of the horizontal force) is $(t-32) \times \cdot 0000936 + (t-32)^2 \times \cdot 000002074$ in which t is the temperature in degrees Fahrenheit. The decrease of horizontal force for an increase of 1° of temperature (Fahrenheit) would thus be ·00021 at 60°, ·00023 at 65°, and ·00025 at 70°.

The registration of the variations of horizontal force was interrupted from September 6 to October 3, the driving clock having been, during this period, in the hands of Messrs. E. Dent and Co. (see page *xv*).

VERTICAL FORCE MAGNET.—The vertical force magnet, for measure of the variations of vertical magnetic force, is by Troughton and Simms. It is 1 ft. 6 in. long and lozenge shaped, being broad at the centre and pointed at the ends ; it is mounted on a solid brick pier capped with stone, situated in the western arm of the basement, its position being nearly symmetrical with that of the horizontal force magnet in the eastern arm. The supporting frame consists of two pillars, connected at their bases, on whose tops are the agate planes upon which rest the extreme parts of the continuous steel knife edge, attached to the magnet carrier by clamps and pinching screws. The knife edge, eight inches long, passes through an aperture in the magnet. The axis of the magnet is approximately transverse to the magnetic meridian, its marked end being east ; its axis of vibration is thus nearly north and south magnetic. The magnet carrier is of iron ; at its southern end there is fixed a small plane mirror for use in eye observations, whose plane makes with the vertical plane through the magnet an angle of $52\frac{3}{4}°$ nearly. A telescope fixed to the west side of the brick pier supporting the theodolite of the upper declination magnet is directed to the mirror, for observation by reflexion of the divisions of a vertical opal glass scale fixed to the pier that carries the telescope, very near to the telescope itself. The numbers of this fixed scale increase downwards, so that when the magnet is placed in its usual position with the marked end east, increasing readings of the scale, as seen in the telescope, denote increasing vertical force.

The magnet is placed excentrically between the bearing parts of its knife edge, nearer to the southern side, leaving a space of about four inches in the northern part of the iron frame, in which the concave mirror used for the photographic register is planted. Two screw stalks, carrying adjustable screw weights, are fixed to the magnet carrier, near its northern side ; one stalk is horizontal, and a change in the position of the weight affects the position of equilibrium of the magnet ; the other stalk is vertical, and change in the position of its weight affects the delicacy of the balance, and so varies the magnitude of its change of position produced by a given change in the vertical force of terrestrial magnetism.

In the year 1882 Messrs. Troughton and Simms substituted for the old mirror of 4 inches diameter a much lighter mirror of 1 inch diameter, and also lowered the position of the knife-edge bar with respect to the magnet so as to permit of a diminution of the adjustable counterpoise weights which as well as the mirror appear to largely affect the temperature correction of this balance-magnet. The use of a smaller and much lighter mirror was rendered possible by the greater sensitiveness of the new photographic paper introduced in 1882 June.

The whole is enclosed in a rectangular box, resting upon the pier before mentioned, and having apertures, covered with glass, opposite to the two mirrors carried by the magnet.

The time of vibration of the magnet in the vertical plane is observed usually about once in each week. From 66 observations made during the course of the year this was found to be $19^{s}\cdot172$.

The time of vibration of the magnet in the horizontal plane is determined by suspending the magnet with all its attached parts from a tripod stand, its broad side being in a plane parallel to the horizon, so that its moment of inertia is the same as when in observation. A telescope, with a wire in its focus, being directed to the plane mirror carried by the magnet, a scale of numbers is placed on the floor, at right angles to the long axis of the magnet, so as to be seen, by reflexion, in the fixed telescope. The magnet is observed only when swinging through a small arc.

Observations made in the way described on 1889 December 30 gave for the time of vibration of the magnet in the horizontal plane, $16^{s}\cdot934$. This value has been used throughout the year 1892.

The length of the normal to the fixed vertical scale that meets the face of the plane mirror is 186·07 inches, and $30^{div}\cdot85$ of the scale correspond to 12 inches. Consequently the angle which one division of the scale subtends, as seen from the mirror, is $7'. 11''\cdot2$, or the angular movement of the normal to the mirror, corresponding to a change of one division of scale reading, is $3'. 35''\cdot6$.

But the angular movement of the normal to the mirror is equal to the angular movement of the magnet multiplied by the sine of the angle which the plane of the mirror makes with a vertical plane through the magnet. This angle, as already stated, is $52\frac{3}{4}^{\circ}$, therefore dividing the result just obtained, $3'. 35''\cdot6$, by Sin. $52\frac{3}{4}^{\circ}$, the angular motion of the magnet corresponding to a change of one division of scale reading is found to be $4'. 30''\cdot9$.

The variation of vertical force, in terms of the whole vertical force, producing angular motion of the magnet corresponding to a change of one division of scale reading $=$ cotan. dip $\times \left(\frac{T'}{T}\right)^2 \times$ value of one division in terms of radius, in which T' is the time of vibration of the magnet in the horizontal plane, and T that in the vertical plane. Assuming $T' = 16^{s}\cdot934$, $T = 19^{s}\cdot172$, and dip $= 67^{\circ}. 20'$, the change of vertical force corresponding to change of one division of scale reading was found to be 0·0004279, and this value has been used throughout the year 1892 for conversion of the observed scale readings into parts of the whole vertical force.

The hours of observation of the vertical force magnet are the same as those for the horizontal force magnet, and the method of observation is precisely similar, the time of vertical vibration being substituted for that of horizontal. The wire in the fixed telescope is here horizontal, and as the magnet oscillates the divisions of the scale are seen to pass upwards and downwards in the field of view.

As in the case of the horizontal force magnet a thermometer is provided whose bulb projects into the interior of the magnet box. Readings are taken usually at 9^{h}, 10^{h}, 11^{h}, 12^{h}, 13^{h}, 14^{h}, 15^{h}, 16^{h}, and 21^{h}, Greenwich civil time. An index correction of $-0^{\circ}\cdot3$, has been applied to all readings.

The photographic register of the movements of the vertical force magnet is made on a cylinder of the same size as that used for declination and horizontal force, driven also by chronometer movement. The cylinder is here placed vertical instead of horizontal, and the variations of the barometer are also registered on it. The slit is horizontal, and other arrangements are generally similar to those already described for declination and horizontal force. The concave mirror carried by the magnet is 1 inch in diameter, and the slit is distant from it about 22 inches, being placed a little out of the straight line joining the mirror and the registering cylinder. There is a slight deviation in the further optical arrangements. Instead of falling on a reflecting prism (as for declination and horizontal force) the converging horizontal beam from the concave mirror falls on a system of plano-convex cylindrical lenses, placed in front of the cylinder, with their axes parallel to that of the cylinder. The trace is made on the western side of the cylinder, the position of the magnet being so adjusted that the spot of light shall fall on the lower part of the sheet to avoid interference with the barometer trace. A base line is photographed, and the record is interrupted at each hour by the clock, and occasionally by the observer, for establishment of time scale, in the same way as for the other magnets. The length of the time scale is the same as that for the other magnetic registers.

The scale for measure of ordinates of the photographic curve is determined as follows : — The distance from the concave mirror of the magnet to the surface of the registering cylinder is 100·2 inches. But the double of this measure, or 200·4 inches, is the distance that determines the extent of motion on the cylinder of the spot of light, which, in inches, for a change of 0·01 part of the whole vertical force, will therefore be $= 200{\cdot}4 \times \tan.\ \text{dip} \times \left(\frac{T}{T'}\right)^2 \times 0{\cdot}01$. Using the values of T, T', and of dip, before given, (page *xxii*), the movement of the spot of light on the cylinder for a change of 0·01 of vertical force is thus found to be, 6·151 inches, and with this unit the scale for measure of the ordinates was constructed for use throughout the year. Base line values were then determined, and written on the sheets, and new base lines laid down, from which the hourly ordinates (see page *xxxi*) were measured, exactly in the same way as was described for declination.

In regard to the temperature correction of the vertical force magnet, it is only necessary here to say that, according to a series of experiments made 1882 October 17 to 23, in a similar manner to those for the horizontal force magnet (page *xx*), and in temperatures ranging from 59°·3 to 64°·9 it appeared that an increase of 1° of temperature (Fahrenheit) produced an apparent increase of 0·00020 of vertical force, a value which succeeding experiments have closely confirmed. The value of the coefficient is thus much less than was found in the old state of the magnet with the large mirror, although still not following the ordinary law of increase of temperature producing loss of magnetic power. Further observations made in the years 1885 and 1886, of which particulars are given at the end of the Introduction for 1886, showed that through the range of temperature to which the magnet is usually exposed the increase of vertical force for increase of 1° of temperature is uniformly 0·000212, no term depending on the square of the temperature being here necessary, as in the case of horizontal force.

DIP INSTRUMENT.—The instrument with which the observations of magnetic dip are made is that which is known as Airy's instrument. It was constructed by Messrs. Troughton and Simms, and is mounted in the New Library on a slate slab supported by a braced wooden stand built up from the ground independently of the floor. The plan of the instrument was arranged by the late Sir G. B. Airy so that the points of the needles should be viewed by microscopes and if necessary observed whilst the needles were in a state of vibration; that there should be power of employing needles of different lengths; and that the field of view of each microscope should be illuminated from the side opposite to the observer, in such way that the needle point should form a dark image in the bright field.

The instrument is adapted to the observation of needles of 9 inches, 6 inches, and 3 inches in length. The main portion of the instrument, that in which the needle under observation is placed, consists of a square box made of gun metal (carefully selected to ensure freedom from iron), with back and front of glass. Six microscopes, so planted as to command the points of the three different lengths of needles, turn on a horizontal axis so as to follow the points of the needles in the different positions which in observation they take up. The needle pivots rest on agate bearings. The object glasses and field glasses of the microscopes are within the front glass plate, their eye glasses being outside, and turning with them on the same axis. Upon the plane side of each field glass (the side next the object glass and on which the image of the needle point is formed) a scale is etched by means of which the position of the needle points is noted. And on the inner side of the front glass plate is etched the graduated circle, $9\frac{3}{4}$ inches in diameter, divided to 10′, and read by two verniers to 10″. The verniers (thin plates of metal, with notches instead of lines, for use with transmitted light) are carried by the horizontal axis, inside the front glass plate, their reading lenses, attached to the same axis, being outside. A suitable clamp with slow motion is provided. The microscopes and verniers can be illuminated by one gas lamp, the light from which falling on eight corresponding prisms is thereby directed to each separate microscope and vernier. The prisms are carried behind the back glass plate on a circular frame in such a way that, on reversion of the instrument in azimuth, the whole set of prisms can at one motion of the frame be shifted so as to bring each one again opposite to its proper microscope or vernier.

Since the instrument has been placed in the New Library artificial light has not been employed in making the observation.

The whole of the apparatus is planted upon a circular horizontal plate, admitting of rotation in azimuth : a graduated circle near the circumference of the plate is read by two fixed verniers.

A brass zenith point needle, having points corresponding in position to the three different lengths of dip needles, is used to determine the zenith point for each particular length of needle.

The instrument carries two levels, one parallel to the plane of the vertical circle, the other at right angles to that plane, by means of which the instrument is adjusted in level from time to time. The readings of the first-mentioned level are also regularly employed to correct the apparent value of dip for any small outstanding error of level: the correction seldom exceeds a very few seconds of arc.

Observations are made only in the plane of the magnetic meridian, and the following is a description of the method of proceeding. The needle to be used is first magnetised by double touch, giving it nine strokes on each of its sides : it is then placed in position in the instrument, the microscope scale readings are taken, and the verniers of the vertical graduated circle are read : the readings of the level parallel to the plane of this circle are also read. The instrument is then reversed in azimuth and a second observation made. The needle pivots are then reversed on the agate bearings, and two observations in reversed positions of the instrument again made. The needle is then removed from the instrument and re-magnetised so as to reverse the direction of its poles, and four more observations are made in the way just described. The mean of the eight partial values of dip thus found, corrected for error of level, gives the final value of dip which appears in the printed results.

The needles in regular use are of the ordinary construction ; they are two 9-inch needles, B_1 and B_2, two 6-inch needles, C_1 and C_2, and two 3-inch needles, D_1 and D_2.

The observed dip given by the 9-inch needles is as usual smaller than that given by the 6-inch needles, and that given by the 6-inch needles smaller than that given by the 3-inch needles. In the *Philosophical Magazine* for March 1891, Professor Schuster, referring to a remark of Dr. Joule's, that the flexure of a dip needle tends to diminish the apparent dip, has estimated the effect on the observed dip of the displacement of the centre of gravity by the flexure of the needle, for the Greenwich needles of 3 inches, 6 inches, and 9 inches in length, and finds that a great part of the difference observed at Greenwich could be thus accounted for. It would appear that for absolute determination of dip empirical corrections should be applied to the results found from the longer needles, but there is at present much uncertainty as to the data for computing these corrections.

DEFLEXION INSTRUMENTS.—The observations of deflexion of a magnet in combination with observations of vibration of the deflecting magnet, for determination of the absolute measure of horizontal magnetic force, are made with a *Unifilar Instrument*, Gibson No. 3, which, with the exception of some slight modification of the mechanical arrangements, is similar to those issued from the Kew Observatory. The instrument is adapted to the determination of horizontal force in British (foot-grain-second) measure. It is mounted in the New Library on a slate slab in the same way as the Dip instrument.

The deflected magnet, used merely to ascertain the ratio which the power of the deflecting magnet at a given distance bears to the power of terrestrial magnetism, 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 deflexion the deflecting magnet is placed on the transverse deflexion 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″.

It will be convenient in this case to include with the description of the instrument an account of the method of reduction employed, in which the Kew precepts and generally the Kew notation are followed. Previous to the establishment of the instrument at the Royal Observatory the values of the various instrumental constants, as determined at the Kew Observatory, were kindly communicated by the late Professor Balfour Stewart, and these have been since used in the reduction of all observations made with the instrument at Greenwich.

The instrumental constants as thus furnished are as follows :—

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 = μ = 0·00015587.

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

Moment of inertia of the deflecting magnet = K. At temperature 30°, log. K = 0·66643 : at temperature 90°, log. K = 0·66679.

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

The adopted value of K was confirmed in the year 1878 by a new and entirely independent determination made at the Royal Observatory, giving log. K at temperature 30° = 0·66727.

Let m = Magnetic moment of deflecting or vibrating magnet.

X = Horizontal component of Earth's magnetic force.

Then, if in the two deflexion observations, r_1, r_2, be the apparent distances of centre of deflecting magnet from deflected magnet, corrected for scale error and temperature (about 1·0 and 1·3 foot).

u_1, u_2 the observed angles of deflexion.

$$A_1 = \tfrac{1}{2}\, r_1^3 \sin.\, u_1 \left\{ 1 + \frac{2\mu}{r_1^3} + c \right\}$$

$$A_2 = \tfrac{1}{2}\, r_2^3 \sin.\, u_2 \left\{ 1 + \frac{2\mu}{r_2^3} + c \right\}$$

$P = \dfrac{A_1 - A_2}{\dfrac{A_1}{r_1^2} - \dfrac{A_2}{r_2^2}}$ [P being a constant depending on the distribution of magnetism in the deflecting and deflected magnets],

we have, using for reduction of the observations a mean value of P :—

$\dfrac{m}{X} = A_1 \left(1 - \dfrac{P}{r_1^2}\right)$, from observation at distance r_1.

$\dfrac{m}{X} = A_2 \left(1 - \dfrac{P}{r_2^2}\right)$, from observation at distance r_2.

The mean of these is adopted as the true value of $\dfrac{m}{X}$.

In calculating the value of P as well as the values of the four factors within brackets, the distances r_1 and r_2 are taken as being equal to 1·0 ft. and 1·3 ft. respectively. The expression for P is not convenient for logarithmic computation, and, in practice, its value for each observation has, since the year 1877, been calculated from the expression $\dfrac{\text{Log. } A_1 - \text{Log. } A_2}{\text{modulus}} \times \dfrac{r_1^2 \times r_2^2}{r_2^2 - r_1^2} = (\text{Log. } A_1 - \text{Log. } A_2) \times 5{\cdot}64$.

For determination, from the observed vibrations, of the value of mX :—let T_1 = time of vibration of the deflecting magnet, corrected for rate of chronometer and arc of vibration,

$\dfrac{H}{F}$ = ratio of the couple due to torsion of the suspending thread to the couple due to the Earth's magnetic force. [This is obtained from the formula $\dfrac{H}{F} = \dfrac{\theta}{90° - \theta}$, where θ = the angle through which the magnet is deflected by a twist of 90° in the thread.]

$$\text{Then } T^2 = T_1^{\,2}\left\{ 1 + \frac{H}{F} + \mu\frac{X}{m} - c \right\}$$

$$\text{and } mX = \frac{\pi^2 K}{T^2}.$$

The corrected time of vibration of the deflecting magnet, printed in the tables of results, is the mean of 100 vibrations observed immediately before, and of 100 vibrations observed immediately after the observations of deflexion, corrected for temperature, rate of chronometer, semi-arc of vibration, induction, and torsion force.

From the combination of the values of $\frac{m}{X}$ and mX, m and X are immediately found. The computation is made with reference to English measure, taking as units of length and weight the foot and grain, but it is desirable to express X also in metric measure. If the English foot be supposed equal to α times the millimètre, and the grain equal to β times the milligramme, then for reduction to metric measure $\frac{m}{X}$ and mX must be multiplied by α^3 and $\alpha^2\beta$ respectively, or X must be multiplied by $\sqrt{\frac{\beta}{\alpha}}$. Taking the mètre as equal to 39·37079 inches, and the gramme as equal to 15·43249 grains, the factor by which X is to be multiplied in order to obtain X in metric (millimètre-milligramme-second) measure is $0{\cdot}46108 = \frac{1}{2{\cdot}1689}$. The values of X in metric measure thus derived from those in English measure are given in the proper table. Values of X in terms of the centimètre and gramme, known as the C.G.S. unit (centimètre-gramme-second unit), are readily obtained by dividing those referred to the millimètre and milligramme by 10.

In the year 1891 an additional *Unifilar Instrument*, Elliott No. 75, fitted also as a *Declinometer*, was obtained. The instrument is adapted to the determination of horizontal force in C.G.S. measure: it is of portable character, and, when employed, is mounted on the tripod stand furnished with it. The deflecting and deflected magnets, 75 A and 75 C, respectively, are generally similar in dimension and construction to those of the Gibson instrument. In observations of deflexion the deflecting magnet is placed on the transverse rod at the distances of 30 and 40 centimètres of the engraved scale from the deflected magnet, the observations being otherwise made as with the Gibson instrument. The horizontal circle is 6 inches in diameter: it is graduated to 20′, and read by two verniers to 20″.

The instrumental constants of Elliott No. 75, kindly determined, as for the Gibson instrument, at the Kew Observatory, are as follows :—

The increase in the magnetic moment of the deflecting magnet produced by the inductive action of unit magnetic force in the C.G.S. system of absolute measurement = μ. Log. μ = 0·77768.

The correction for decrease of the magnetic moment of the deflecting magnet required in order to reduce to the temperature 0° centigrade $= c = 0{\cdot}000433\ (t - 0) + 0{\cdot}00000148\ (t - 0)^2$: t representing the temperature (in degrees centigrade) at which the observation is made.

Moment of inertia of the deflecting magnet $= K$. At temperature 0° centigrade, log. $K = 2{\cdot}44750$: at temperature $30° = 2{\cdot}44782$.

The distance on the deflexion rod, from $30^{\text{cms.}}$ east to $30^{\text{cms.}}$ west, and from $40^{\text{cms.}}$ east to $40^{\text{cms.}}$ west of the engraved scale, at temperature 0° centigrade, is in each case too short by $0^{\text{cms.}}{\cdot}020$. The coefficient of expansion of the scale for 1° centigrade is ·000018.

The value of P is calculated from the expression $P = (\text{Log. } A_1 - \text{Log. } A_2) \times 4737$. In other respects the formulæ, as before given, are employed.

EARTH CURRENT APPARATUS.—For observation of the spontaneous galvanic currents which in some measure are almost always discoverable in the earth, and which are occasionally very powerful, two insulated wires having earth connexions at Angerstein Wharf (on the bank of the River Thames near Charlton) and Lady Well for one circuit; and at the Morden College end of the Blackheath Tunnel and the North Kent East Junction of the South-Eastern Railway for the other circuit, have been employed. The connecting wires, which are special and used for no other purpose, pass from the Royal Observatory to the Greenwich Station of the South-Eastern Railway, and thence, by kind permission of the Directors of the South-Eastern Railway Company, along the lines of the Railway to the respective earths, in each case a copper plate. The direct distance between the earth plates of the Angerstein Wharf—Lady Well circuit is 3 miles, and the azimuth of the line, reckoning from magnetic north towards east, 49°; in the Blackheath—North Kent East Junction circuit the direct distance is $2\frac{1}{2}$ miles, and the azimuth, from magnetic north towards west, 47°. The actual lengths of wire in the circuitous courses which the wires necessarily take in order to reach the Observatory registering apparatus are about $7\frac{1}{2}$ miles and 5 miles respectively. The identity of the four branches is tested from time to time as appears necessary.

In each circuit at the Royal Observatory there is placed a horizontal galvanometer, having its magnet suspended by a hair. Each galvanometer coil contains 150 turns of No. 29 copper wire, or the double coil of each instrument consists of 300 turns of wire, the resistance as found by direct measurement being 7·3 ohms. For registration of the larger earth currents, a portion only of the current is allowed to pass through the galvanometer, while the greater part flows through a shunt, consisting of a short coil of fine copper wire, the resistance of which is 1·33 ohms. The amplitude of the movement, having regard to the diminution of resistance in the circuit due to the shunt, is by this reduced in the ratio of 6·3 to 1 nearly in both circuits. On a few days in each month registers on a large scale, for determination of the small diurnal inequality in earth currents, are obtained by removing the shunts, but no discussion of these registers has yet been made, on account of the difficulty of eliminating the effect of certain small dislocations of the Angerstein Wharf—Lady Well register, which occur usually shortly after sunset and before sunrise. It is suspected that these are due to electric lighting in the neighbourhood of the Angerstein Wharf earth-plate. The galvanometers are placed on opposite sides of the registering cylinder which is horizontal. One galvanometer stands towards one end of the cylinder, and the other towards the other end, and each carries, on a light stalk extending downwards from its magnet, a small plane mirror. Immediately above the cylinder are placed two long reflecting prisms which, except that they are each but half the length of the cylinder, and are placed end to end, are generally similar to those used for magnetic declination and horizontal force, the front convex surfaces facing opposite ways, each towards the mirror of its respective galvanometer. In each case the light of a gas lamp, passing through a vertical slit and a cylindrical lens having its axis vertical, falls upon the galvanometer mirror, which reflects the converging beam to the convex surface of the reflecting prism, by whose action it is made to form on the paper on the cylinder a small spot of light; thus all the azimuthal motions of the galvanometer magnet are registered. The extent of trace for each galvanometer is thus confined to half the length of the cylinder, which is of the same size as those used for the magnetic registers. The arrangements for turning the cylinder, automatically determining the time scale, and forming a base line, are similar to those which have been before described. When the traces on the paper are developed the parts of the registers which appear in juxtaposition correspond, as for declination and horizontal force, to the same Greenwich time, and the scale of time is of the same length as for the magnetic registers.

Towards the end of the year 1890 serious disturbances began to be experienced in both earth current registers. These interruptions were found in the early part of the year 1891 to be due to the passage of trains on the new City and South London Electric Railway, distant about 2½ miles from the nearest earth plate (at the North Kent East Junction of the South-Eastern Railway), and about 4½ miles from the Observatory. The abnormal excursions recorded indicate frequent changes of potential, varying from a small fraction of a volt to one-third of a volt or more, and the amount of change is approximately the same both in the Blackheath—North Kent East Junction circuit, which is perpendicular to the course of the electric railway, and in the Angerstein Wharf—Lady Well circuit, which is parallel to the line of railway, with one earth plate (Angerstein Whart) near the river. At night when the trains are not running, the interruptions entirely cease.

§ 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 22 days in the year 1892 which have been classed as days of great disturbance, viz.: January 4–5, 5–6, February 13, 14, March 6, 12, April 25, 26, May 1, 2, 18, 19, June 2–3, 27, July 12–13, 13–14, 16–17, 17–18, August 12–13, November 4, 5, December 5. Other days of lesser disturbance are February 15–16, 20–21, 27, 29–March 1, March 1–2, 2–3, 3–4, 4–5, 7–8, 8–9, 24–25, 25–26, May 16–17, 17–18, 20, August 3, 4, September 5–6, 12–13, 21, 22, October 17–18, 18–19, December 4, 6. 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.

Separating the days of great disturbance, to be spoken of hereafter, the photographic sheets for the remaining available days, including those of lesser disturbance, were thus treated. Through each photographic trace 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, the measures being entered in a form having double argument, the vertical argument ranging through the 24 hours of the civil day (0^h to 23^h), and the horizontal argument through the days of a calendar month, the means of the numbers standing in the vertical columns giving the mean daily value of the element, and the means of the numbers in the horizontal columns the mean monthly value at each hour of the day. Tables I. and II. contain the results for declination, Tables III. to VI. those for horizontal force, with corresponding tables of temperature, and Tables VII. to X. those for vertical force, with corresponding tables of temperature. 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. The omissions actually made on account of disturbed days, or from other causes, in the formation of Tables I. and II., for declination, and Tables III. to VI., for horizontal force, are January 4 to 6, February 13, 14, March 6, 12, April 25, 26, May 1, 2, 18, 19, June 2, 3, 27, July 12 to 14, 16, 17, August 12, September 3, 7 to October 3, November 4, 5, December 5 : with the addition of January 1 in Tables III. to VI. In Tables VII. to X. for vertical force, the omissions are January 4 to 6, February 13, 14, March 6, 12, April 25, 26, May 1, 2, 18, 19, June 2, 3, 27, July 12 to 14, 16, 17, August 12, November 4, 5, December 5 to 10, 31. Table XI. gives the collected monthly values for declination, horizontal force, and vertical force, and Table XII. the mean diurnal inequalities for the year.

The temperature of the horizontal and vertical force magnets was maintained so nearly uniform through each day that the determination of the diurnal inequalities of horizontal and vertical force should possess great exactitude. By means of the two additional stoves placed in the basement at the beginning of the year 1889, as mentioned on page *v*, the temperature of the basement has also been kept nearly constant throughout the year, the endeavour being to keep the temperature as near to 67° as possible. In years preceding 1883 the results for horizontal and vertical force were given uncorrected for temperature, leaving the correction to be applied when the results for series of years are collected for discussion ; but from the beginning of the year 1883 it has been considered desirable to add also, in Tables III., V., VII., and IX., results corrected for temperature, in order to render them more immediately available. In Tables XI. and XII., only results corrected for temperature are given. The corrected mean daily and mean hourly values of horizontal force given in Tables III. and V. respectively are obtained by applying to the uncorrected values the correction $(t-32) \times \cdot 0000936 + (t-32)^2 \times \cdot 000002074$ (page *xx*) where t is the temperature in degrees Fahrenheit, and to those of vertical force, Tables VII. and IX., the correction $-(t-32) \times \cdot 000212$ (page *xxiv*). The corrections applied are founded on the daily and hourly values of temperature given in Tables IV., VI., VIII., and X.

In regard to the formation of the tables of temperature, the hourly readings of the Richard thermograph were entered into a form having double arguments, as for the magnets, the mean hourly values deduced therefrom giving for each month the variation through the day, and the mean daily values the variation through the month. To adapt these to represent the temperature within the horizontal and vertical force magnet boxes respectively, the monthly means of the thermograph readings at 9^h, 10^h, 11^h, 12^h, 13^h, 14^h, 15^h, 16^h, and 21^h, were compared with the corresponding means of the eye readings of the thermometers whose bulbs are within the respective magnet boxes, giving corrections to the thermograph readings at these hours, which were very accordant, and from which by interpolation corrections were obtained for the remaining hours. The nine daily observations gave also the means of reducing the daily thermograph values to the temperature of the interior of the respective magnet boxes. The results are given in Tables IV., VI., VIII., and X.

In order to economise space the daily values as exhibited in Tables III. and VII., both uncorrected and corrected, have been diminished by constants. The division ═══ in these Tables and in Table XI. indicates that the instrument has been disturbed for experiment or adjustment, or that for some reason the continuity of the values has been broken, the constants deducted being different before and after each break. In the interval between two breaks the values of *u* and *c* are each comparable throughout, remarking only that in certain cases it is to be understood that the values are to be taken 1000 greater or less for comparison with adjacent values. See, for example, *c* in Table III. on March 11, which should be taken as 1020 for comparison with preceding and following values, and similarly in other cases. The excess of the value of *c* above that of *u* on any day (supposing *c*, when the smaller value, to be increased by 1000) shows the correction for temperature that has been actually applied. In Tables II., V., IX., and XII. the separate hourly values of the different elements have been simply diminished by the smallest hourly value.

The variations of declination are given in the sexagesimal division of the circle, and those of horizontal and vertical force in terms of ·00001 of the whole horizontal and vertical forces respectively taken as units. In Tables XI. and XII. they have been also expressed in terms of ·00001 of Gauss's absolute unit, as referred to the metrical system of the millimètre-milligramme-second.

The factors for conversion from the former to the latter system of measures are as follows:—

For variation of declination, expressed in minutes, the factor is

$$\text{H.F. in metrical measure} \times \sin 1' = 1{\cdot}8269 \times \sin 1' = 0{\cdot}0005314.$$

For variation of horizontal force, the factor is

$$\text{H.F. in metrical measure} = 1{\cdot}8269,$$

and for variation of vertical force

$$\text{V. F. in metrical measure} = \text{H. F. in metrical measure} \times \tan \text{dip},$$
$$= 1{\cdot}8269 \times \tan 67^{\circ}.20' = 4{\cdot}3745.$$

The measures as referred to the millimètre-milligramme-second system are convertible into measures on the centimètre-gramme-second (C. G. S.) system by dividing by 10.

Table XIII. exhibits the diurnal range of declination and horizontal force on each separate day, as determined from the 24 hourly ordinates of each element measured from the photographic register (as explained on page *xxxi*), and the monthly means of these numbers, the results for horizontal force being corrected for temperature. The first portion of Table XIV. contains the difference between the greatest and least hourly mean values in each month, for declination, horizontal force, and vertical force, as extracted from Table II., and columns *c* of Tables V. and IX. In the second portion of the table there are given for each month the numerical sums of the deviations of the 24 hourly values from the mean, taken without regard to sign.

The magnetic diurnal inequalities of declination, horizontal force, and vertical force, for each month and for the year, have been treated by the method of harmonic analysis, and the results are given in Tables XV. and XVI. The values of the coefficients contained in Table XV. have been thus computed, 0 representing the value at 0^h (midnight), 1 that at 1^h, and so on.

$$m = \frac{1}{24}\,(0+1+2\,\ldots\ldots\,22+23).$$

$$\begin{aligned}12\,a_1 = 0-12 &+ \{(1+23)-(11+13)\}\cos 15^\circ + \{(2+22)-(10+14)\}\cos 30^\circ\\ &+ \{(3+21)-(9+15)\}\cos 45^\circ + \{(4+20)-(8+16)\}\cos 60^\circ\\ &+ \{(5+19)-(7+17)\}\cos 75^\circ.\end{aligned}$$

$$\begin{aligned}12\,b_1 = 6-18 &+ \{(5+7)-(17+19)\}\sin 75^\circ + \{(4+8)-(16+20)\}\sin 60^\circ\\ &+ \{(3+9)-(15+21)\}\sin 45^\circ + \{(2+10)-(14+22)\}\sin 30^\circ\\ &+ \{(1+11)-(13+23)\}\sin 15^\circ.\end{aligned}$$

$$\begin{aligned}12\,a_2 = (0+12)-(6+18) &+ \{(1+11+13+23)-(5+7+17+19)\}\cos 30^\circ\\ &+ \{(2+10+14+22)-(4+8+16+20)\}\cos 60^\circ.\end{aligned}$$

$$\begin{aligned}12\,b_2 = (3+15)-(9+21) &+ \{(2+4+14+16)-(8+10+20+22)\}\sin 60^\circ\\ &+ \{(1+5+13+17)-(7+11+19+23)\}\sin 30^\circ.\end{aligned}$$

$$12\,a_3 = (0+8+16)-(4+12+20)+\{(1+7+9+15+17+23)-(3+5+11+13+19+21)\}\cos 45^\circ.$$

$$12\,b_3 = (2+10+18)-(6+14+22)+\{(1+3+9+11+17+19)-(5+7+13+15+21+23)\}\sin 45^\circ.$$

$$\begin{aligned}12\,a_4 = &(0+6+12+18)-(3+9+15+21)\\ &+ \{(1+5+7+11+13+17+19+23)-(2+4+8+10+14+16+20+22)\}\cos 60^\circ.\end{aligned}$$

$$12\,b_4 = \{(1+2+7+8+13+14+19+20)-(4+5+10+11+16+17+22+23)\}\sin 60^\circ.$$

The values of the coefficients c_1, and of the constant angles α contained in Table XVI., are then determined by means of the following relations :—

$$\frac{a_1}{b_1} = \tan\alpha \qquad\qquad c_1 = \frac{a_1}{\sin\alpha} = \frac{b_1}{\cos\alpha}$$

Similarly for c_2, β, &c.

Finally, the values of the angles α', β', &c. were thus found. Calling the Sun's hour angle east at mean midnight $= h$, then—

$$\begin{aligned}\alpha' &= \alpha + h\\ \beta' &= \beta + 2h\\ \&c. &= \&c.,\end{aligned}$$

a mean value of h for the month being employed.

The values of a_5 and b_5 for the diurnal inequalities for the year were also calculated, but could not be conveniently included in Table XV.; they are as follows :—

1892.	a_5.	b_5.
Declination	−0·06′	−0·04
Horizontal Force	−0·3	−2·3
Vertical Force	+0·8	−0·3

In order to give some indication of the accuracy with which the results of observation are represented by the harmonic formula, the sums of squares of residuals remaining after the introduction of m and of each successive pair of terms of the expression on page (xii), corresponding to the single terms of the expressions on page (xiii), have been calculated for the mean diurnal inequalities for the year (columns 1, 2, and 3 of Table XII.). The respective sums of squares of residuals are as follows :—

SUMS OF SQUARES OF RESIDUALS OF DIURNAL INEQUALITIES.

For the Year 1892.	Declination.	Horizontal Force.	Vertical Force.
Sums of Squares of Observed Values (Table XII.)	373·66′	530226·1	21882·9
Sums of Squares of Residuals after the introduction of m	180·99	91366·9	5902·4
" " a_1 and b_1	54·19	19251·6	2519·5
" " a_2 and b_2	9·38	4203·0	394·5
" " a_3 and b_3	0·87	848·5	41·2
" " a_4 and b_4	0·11	82·1	11·8
" " a_5 and b_5	0·04	19·3	3·0

The unit in the case of horizontal and vertical force being ·00001 of the whole horizontal and vertical forces respectively, it thus appears that there would be no advantage in carrying the approximation (Table XV.) beyond the determination of a_4, b_4.

As regards Magnetic Dip, the result of each complete observation of dip with each of the six needles in ordinary use is given in Table XVII., and in Table XVIII. the concluded monthly and yearly values for each needle.

The results of the observations for Absolute Measure of Horizontal Force contained in Table XIX. require no special remark, the method of reduction and all necessary explanation having been given with the description of the instruments 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, excepting for the observations on September 15 and 16, there being no photographic register on those days. (See page *xx*.)

In order to facilitate the comparison of the diurnal inequalities of magnetism at the different British and other magnetic observatories an arrangement has been made with the Sub-Committee of the Kew Committee of the Royal Society by which five quiet days are to be 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. The particular days selected are given on page (xviii), and the results found for Greenwich are contained in Tables XX., XXI., and XXII., which it is interesting to compare with the values found from the records of all days, as given in Tables II., V., IX. and XII.

No numerical discussion of Earth Current records is contained in the present volume.

In the treatment of disturbed days it was formerly the custom to measure out for each element all salient points of the curves and to print the numerical values. But, since the year 1882, it has been considered preferable to give instead of these tables reduced copies of the actual photographic curves (reproduced by photo-lithography from full-sized tracings of the original photographs), adding thereto copies of the corresponding earth-current curves. In the present year 1892 no copies of earth-current curves have been given because of the interruption produced by the trains running on the City and South London Electric Railway. The registers thus exhibited are those for the days of great and of lesser disturbance mentioned on page *xxxi*.

The list of these days since the year 1889 has been selected in concert with M. Mascart, so that the two Observatories 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 proposed to follow this plan in future years, and if other magnetic observatories should eventually join in the scheme for concerted action, in regard to the publication of their registers, the discussion of magnetic perturbations would be much facilitated.

The plates are preceded 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 1892, affording thereby, it is hoped, facilities for making comparison with solar phenomena.

In regard to the plates, it may be remarked that 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 (xxviii).

An additional plate (XXIII.) 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 earth currents on these days are very small.

The indications of horizontal and vertical force are given precisely 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 page *xxxii*, 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 :—

—	Length in Inches					
	Of 1° of Declination.		Of 0·01 of Horizontal Force.		Of 0·01 of Vertical Force.	
	in.	mm.	in.	mm.	in.	mm.
On the Photographs	4·691	119·15	2·478	62·94	6·151	156·23
On the Plates	2·580	65·53	1·363	34·62	3·383	85·93

The scales actually attached to the plates are, however, so arranged as to correspond with the tables of the magnetic section, that is to say, the units for horizontal force and vertical force are ·00001 of the whole horizontal and vertical forces respectively, the numbers being in some cases increased by 1000 to avoid negative quantities. At the foot of each plate equivalent scales, in C. G. S. measure, are given for each of the magnetic registers. (See page *xxxix.*).

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

= ·0175 of Horizontal Force

and Vertical Force = Horizontal Force × tan. dip [dip = 67°. 20′]

= Horizontal Force × 2·3945

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

—	Length of Unit, Equivalent to 0·01 of Horizontal Force.					
	For Declination Curve.		For Horizontal Force Curve.		For Vertical Force Curve.	
	in.	mm.	in.	mm.	in.	mm.
On the Photographs	2·68	68·1	2·48	62·9	2·57	65·2
On the Plates -	1·47	37·4	1·36	34·6	1·41	35·9

It may be convenient to give also comparative scale values for the different systems of absolute measurement, viz. :—

Foot-grain-second,	or British unit, in terms of which Mean H. F. for 1892		= 3·9621
Millimètre-milligramme-second,	or Metric unit,	,, ,, ,,	= 1·8269
Centimètre-gramme-second,	or C. G. S. unit,	,, ,, ,,	= 0·18269

Dividing therefore the scale values last given by 3·9621, 1·8269, and 0·18269 respectively, the following comparative scale values for each of the elements on the photographs and on the plates as referred to 0·01 of these units respectively are found :—

UNIT.	LENGTH OF 0·01 OF UNIT.											
	Declination.				Horizontal Force.				Vertical Force.			
	On the Photographs.		On the Plates.		On the Photographs.		On the Plates.		On the Photographs.		On the Plates.	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
British - -	0·68	17·2	0·37	9·5	0·63	15·9	0·34	8·7	0·65	16·5	0·36	9·1
Metric - -	1·47	37·3	0·81	20·5	1·36	34·5	0·75	18·9	1·41	35·7	0·77	19·6
C. G. S. - -	14·7	373·	8·1	205·	13·6	345·	7·5	189·	14·1	357·	7·7	196·

Slight interruptions in the traces on the plates are due to various causes. In the originals there are breaks at each hour for time scale, so slight however that, in the copies, the traces could usually be made continuous without fear of error : in a few cases, however, this could not be done. Further, to check the numeration of hours, the observer interrupts the register at definite times for about five minutes, usually at or near 9^h. 30^m, 13^h. 30^m, and 20^h. 30^m, Greenwich civil time, and at somewhat different times on Sundays. A weekly clearing of the gas pipes also causes a somewhat longer interruption, usually at about 10^h, as on March 5, 10^h.

The original photographic records were first traced on thin paper, the separate records on each day being arranged one under another on the same sheet, and great attention being paid to accuracy as regards the scale of time. Each sheet containing the records for one or more days was then reduced by photo-lithography, in the proportion of 20 to 11, to bring it to a convenient size for insertion in the printed volume.

§ 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 readings of this barometer until 1866 August 20 are considered to be coincident with those of the Royal Society's flint-glass standard barometer. It then became necessary to remove the sliding rod, for repair of its slow motion screw, which was completed on August 30. Before the removal of the rod the barometer had been compared with three other barometers, one of which, during repair of the rod, was used for the daily readings. After restoration of the rod a comparison was again made with the same three barometers, from which it appeared that the readings of the standard, in its new state, required a correction of $-0^{in}\cdot006$, all three auxiliary barometers giving accordant results. This correction has been applied to every observation since 1866 August 30.

An elaborate comparison of the standard barometers of the Greenwich and Kew Observatories, made in the spring of the year 1877, under the direction of the Kew Committee, by the late Mr. Whipple, showed that the difference between the two barometers (after applying to the Greenwich barometer readings the correction $-0^{in}\cdot006$) did not exceed $0^{in}\cdot001$. (*Proceedings of the Royal Society*, vol. 27, page 76.)

The height of the barometer cistern above the mean level of the sea is 159 feet, being $5^{ft}\ 2^{in}$ above Mr. Lloyd's reference mark in the then transit room, now the Astronomer Royal's official room. (*Philosophical Transactions*, 1831.)

The barometer is read at 9^h, 12^h (noon), 15^h, 21^h (civil reckoning) on week days, and at 10^h, noon and 20^h on Sundays. Each reading is corrected by application of the index correction above mentioned, and reduced to the temperature 32° by means of Table II. of the "Report of the Committee of Physics" of the Royal Society. 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, the register being arranged to fall on the upper half of the cylinder, on its eastern side. 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 blackened mica, 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 = $4^{in}\cdot39$ 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 *liii*) 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 dry and wet bulb thermometers and maximum and minimum self-registering thermometers, both dry and wet, are mounted on a revolving frame planned by the late Sir G. B. Airy. A vertical axis fixed in the ground, in a position about 35 feet south of the southern arm of the Magnetic Observatory, carries the frame, which consists of a horizontal board as base, of a vertical board projecting upwards from it and connected with one edge of the horizontal board, and of two parallel inclined boards (separated about 3 inches) connected at the top with the vertical board and at the bottom with the other edge of the horizontal board: the outer inclined board is covered with zinc, and the air passes freely between all the boards. The dry and wet bulb thermometers are mounted near the centre of the vertical board, with their bulbs about 4 feet from the ground; the maximum and minimum thermometers for air temperature are placed towards one side of the vertical board, and those for evaporation temperature towards the other side, with their bulbs at about the same level as those of the dry and wet bulb thermometers. A small roof projecting from the frame protects the thermometers from rain. The frame is turned in azimuth several times during the day (whether cloudy or clear) so as to keep the inclined side always towards the sun. In 1878 September, a circular board 3 feet in diameter was fixed, below the frame, round the supporting post, at a height of 2 feet 6 inches above the ground, with the object of protecting the thermometers from radiation from the ground. In the summer of 1886 experiments were made on days of extreme heat with the view of determining the effect of the circular board in this respect, an account of which will be found at the end of the Introduction to the volume for the year 1887. The effect of radiation with the circular board removed was found to be insensible.

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 comparison with the standard thermometer, No. 515, kindly supplied to the Royal Observatory by the Kew Committee of the Royal Society.

The dry and wet bulb thermometers are Negretti and Zambra, Nos. 45354 and 45355 respectively. The correction $-$ 0°·2 has been applied to dry bulb and wet bulb readings throughout the year.

The self-registering thermometers for temperature of air and evaporation are all by Negretti and Zambra. The maximum thermometers are on Negretti and Zambra's principle, the minimum thermometers are of Rutherford's construction. To the readings of No. 8527 for maximum temperature of the air a correction of $-$ 0°·9 has been applied, and to those of No. 38338, for minimum temperature of the air, a correction of + 0°·1 throughout. The readings of No. 68726 for maximum temperature of evaporation, required a correction of + 0°·4, and those of No. 3627 for minimum temperature of evaporation a correction of + 2°·0 throughout.

The dry and wet bulb thermometers are read at 9^h, 12^h (noon), 15^h, 21^h (civil reckoning) on week days, and at 10^h, noon, and 20^h on Sundays. Readings of the maximum and minimum thermometers are taken at 9^h and 21^h on week days, and at 10^h and 20^h on Sundays. Those of the dry and wet bulb thermometers are employed to correct the indications of the photographic dry and wet bulb thermometers.

In January 1887, three thermometers, a dry-bulb, a maximum, and a minimum, to which a wet-bulb thermometer was added in February, were mounted in a Stevenson screen, with double louvre-boarded sides, of the pattern adopted by the Royal Meteorological Society, which is fully described in the *Quarterly Journal* of the Society, Vol. X, page 92. The screen is planted 11 feet to the eastward of the revolving frame carrying the ordinary dry-bulb and wet-bulb thermometers, and its internal dimensions are, length 18 inches, width 11 inches, and height 15 inches, the bulbs of the thermometers placed in it being at a height of about 4 feet above the ground. The dry-bulb thermometer is Hicks No. 262495, to the readings of which a correction of $-$ 0°·1 has been applied. The wet-bulb is Hicks No. 268525, to the readings of which a correction of + 0°·1 has been applied. The maximum thermometer is Hicks No. 233036, to the readings of which a correction of + 0°·1 has been applied. The minimum thermometer is Hicks No. 262739, to the readings of which the following corrections have been applied: below 33° 0°·0, 33° to 35° + 0°·1, 35° to 38° + 0°·2, 38° to 41° + 0°·3, 41° to 43° + 0°·4, 43° to 48° + 0°·5, 48° to 54° + 0°·6, 54° to 62° + 0°·7, and above 62° + 0°·8. The observation of the dry and wet bulb thermometers is omitted on Sundays and a few other days.

Experiments were made in the summer of the year 1887 on days of extreme heat to determine whether, with the door of the screen open, the thermometers were in any way influenced by radiation from external objects, an account of which will be found at the end of the Introduction to the Volume for 1887. The effect of radiation with the door of the screen open was found to be insensible.

At the beginning of the year 1886 three thermometers were mounted on the platform above the Magnet House, in a louvre-boarded shed or screen, so constructed as to give free circulation of air with protection from radiation. No. 45356, by Negretti and Zambra, is for eye observation of the temperature of the air, and required a correction of − 0°·2. No. 37467, also by Negretti and Zambra, is a self-registering maximum thermometer, and required a correction of − 0°·5. No. 342663, by Hicks, is a self-registering minimum thermometer, and required correction as follows: below 35° 0°·0, between 35° and 45° + 0°·1, between 45° and 55° + 0°·2, and above 55° + 0°·3. The bulbs of all these thermometers are 4 feet above the platform, and about 20 feet above the ground. The observation of the thermometer No. 45356 is omitted on Sundays and a few other days.

The order of reading the thermometers in the Stevenson screen and on the roof of the Magnet House is reversed on successive days, the readings being taken alternately before and after those of the thermometers on the revolving stand, in order that the diurnal change may not produce any systematic difference in the comparison of the results.

PHOTOGRAPHIC DRY-BULB AND WET-BULB THERMOMETERS.—The apparatus now in use was constructed in the year 1884 by Messrs. Negretti & Zambra from designs furnished by me, and was mounted in the year 1885, but from various causes it was not brought into regular use until 1887 January 1. Until February 1891 it stood nearly in the centre of the South Ground: it was then removed to the Magnet Ground, being placed in the position formerly occupied by the old apparatus, which had been previously dismantled. It is placed under a shed

8 feet square standing upon posts about 8 feet high. This shed is open to the north and is generally similar to that provided for the old apparatus, excepting that the roof inclines somewhat towards the south and that the protecting boards (fixed as far as necessary on the eastern, southern and western sides) are double, with spaces between to ensure a free circulation of air while screening the thermometers from the direct rays of the sun. The thermometers are further protected from sky and ground radiation by boards on the thermometer stand as described below. The photographic register is received on paper placed on a vertical ebonite cylinder $11\frac{1}{2}$ inches high and $14\frac{1}{4}$ inches in circumference, and I have arranged that the dry and wet bulb traces shall fall on the same part of the cylinder, as regards time-scale, a long air bubble in the wet-bulb thermometer column giving the means of registering the indications of the wet bulb (as well as of such degrees and decades of its scale as fall within the bubble), just below the trace of the dry-bulb thermometer, without any interference of the two records, an arrangement which admits of the time-scale being made equal to that of all the other registers. 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. Two gas lamps, each at a distance of 21 inches, are placed at such an angle that the light from each after passing through its corresponding slit and thermometer tube falls on the photographic paper in one and the same vertical line. Degree lines etched upon the thermometer stems, and painted, interrupt the light sufficiently to produce a clear and sharp indication on the photographic sheet, the line at each tenth degree being thicker than the others as well as those at 32°, 52°, 72°, &c. The length of scale is from 0° to 120° for each thermometer, the length of 1° being about 0·1 inch, and the air bubble in the wet-bulb thermometer is about 12° in length so that it will always include one of the ten-degree lines. The bulbs, which are 2 inches long and of about $\frac{1}{2}$ an inch in internal bore, are separated horizontally by 5 inches, the tubes of the thermometers having a double bend above the bulbs, which are placed about 4 feet above the ground. The thermometers are carried by a vertical frame with independent vertical adjustment for each thermometer so that the register in summer or winter can be brought to a convenient part of the photographic sheet. The revolving cylinder is driven by a pendulum clock contained within the brass case covering the whole apparatus, excepting the thermometer bulbs which project below. It makes one revolution in 26 hours, and the time-scale is the same as that for all the other registers. As the cylinder revolves the light passing through the portion of the thermometer tubes not occupied by mercury imprints on the paper a broad band of photographic trace, corresponding to the dry bulb register, whose breadth in the vertical direction varies with the height of the mercury in the tube, and a narrower band below, corresponding to the wet bulb. When these are developed the traces are seen to be crossed by thin white lines, the

horizontal lines corresponding to degrees and the vertical lines to hours, the lower boundary of each trace indicating the thermometric record corresponding to the upper surface of the thermometric column.

The driving clock is made to interrupt the light for a short time at each hour, producing on the sheet the hour lines above mentioned; the observer also occasionally interrupts the register for a short time for proper identification of the hourly breaks.

The bulbs of the thermometers were at first completely protected from radiation by vertical or inclined boards fixed to the thermometer stand, two on the south side, two on the north side, one at the east end, one at the west end, and one below, but with proper spaces for free circulation of air. Experiments made in the summer of the year 1886, an account of which is given at the end of the Introduction for 1887, showed that the north and south boards were unnecessary, and the two south boards and one north board were in consequence removed before commencing regular work with the instrument at the beginning of the year 1887.

For a description of the apparatus formerly employed reference may be made to the Introduction for 1887 and previous years. A comparison of the results given by the old and new apparatus will be found at the end of the Introduction to the year 1887.

RADIATION THERMOMETERS.—These thermometers are placed in the Magnet Ground, a little south of the Magnet House. 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. Until September 19 the thermometer employed was Negretti and Zambra, No. 38592; after September 20 it was Negretti and Zambra, No. 49230. The thermometer for radiation to the sky is a self-registering spirit minimum thermometer of Rutherford's construction, by Horne and Thornthwaite, No. 3120. The thermometers are laid on short grass; they require no correction for index error.

EARTH THERMOMETERS.—These thermometers were made by Adie, of Edinburgh, under the superintendence of Professor J. D. Forbes. They are placed at the north-west corner of the photographic thermometer shed.

The thermometers are four in number, placed in one hole in the ground, the diameter of which in its upper half is 1 foot and in its lower half about 6 inches, each thermometer being attached in its whole length to a slender piece of wood, The thermometer No. 1 was dropped into the hole to such a depth that the centre of its bulb was 24 French feet (25·6 English feet) below the surface, then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the centre of its bulb was 12 French feet below the surface; Nos. 3 and 4 till the centres of their bulbs were respectively 6 and 3 French feet below the surface; and the hole was then completely filled with dry sand. The upper parts of the tubes carrying the scales were left projecting above the surface; No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, 8·5, 10·0, 11·0, and 14·5 inches respectively are in each case tube with narrow bore. The length of 1° on the scales is 1·9 inch, 1·1 inch, 0·9 inch, and 0·5 inch in each case respectively. The ranges of the scales are for No. 1, 46°·0 to 55°·5; No. 2, 43°·0 to 58°·0; No. 3, 44°·0 to 62°·0; and for No. 4, 37°·0 to 68°·0.

The bulbs of the thermometers are cylindrical, 10 or 12 inches long, and 2 or 3 inches in diameter. The bore of the principal part of each tube, from the bulb to the graduated scale, is very small; in that part to which the scale is attached it is larger; the fluid in the tubes is alcohol tinged red; the scales are of opal glass.

The ranges of scale having in previous years been found insufficient, fluid has at times been removed from or added to the thermometers as necessary, corresponding alterations being made in the positions of the attached scales. Information in regard to these changes will be found in previous Introductions.

The parts of the tubes above the ground are protected by a small wooden hut fixed to the ground; the sides of the hut are perforated with numerous holes, and it has a double roof; in the north face is a plate of glass, through which the readings are taken. Within the hut are two small thermometers, one, No. 5, with bulb one inch in the ground, another, No. 6, whose bulb is freely exposed in the centre of the hut.

These thermometers are read every day at noon, and the readings are given without correction. The index errors of Nos. 1, 2, 3, and 4 are unknown; No. 5 appears to read too high by 0°·2, and No. 6 by 0°·4, but no corrections have been applied.

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.

For the direction of the wind a large vane ($9^{ft.}$ $2^{in.}$ in length), from which a vertical shaft proceeds down to the registering table within the turret, gives motion, by a pinion fixed at its lower end, to a rack-work carrying a pencil. A collar on the vane shaft bears upon anti-friction rollers, running in a cup of oil, rendering the vane very sensitive to changes of direction in light winds. The pencil marks a paper fixed to a board moved horizontally and uniformly by a clock, in a direction transverse to that of the motion of the pencil. The paper carries lines corresponding to the positions of N., E., S., and W. of the vane, with transversal hour-lines. 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. The vane, which had been in use since the year 1841, began in the autumn of 1891 to show signs of weakness; it was taken down in December 1891 and thoroughly repaired. It was satisfactory to find that the anti-friction bearings of the vane, on which the sensitiveness of its motion depends, were in excellent condition, after having been continuously in action for 25 years.

For the pressure of the wind the construction is as follows: at a distance of 2 feet below the vane there is placed a circular pressure plate (with its plane vertical) having an area of $1\frac{1}{3}$ square feet, or 192 square inches, which, moving with the vane in azimuth, and being thereby kept directed towards the wind, acts against a combination of springs in such way that, with a light wind, slender springs are first brought into action, but, as the wind increases, stiffer springs come into play. For a detailed account of the arrangement adopted the reader is referred to the Introduction for the year 1866. [Until 1866 the pressure plate was a square plate, 1 foot square, for which in that year a circular plate, having an area of 2 square feet, was substituted and employed until the spring of the year 1880, when the present circular plate, having an area of $1\frac{1}{3}$ square feet, was introduced.] A short flexible snake chain, fixed to a cross bar in connexion with the pressure plate, and passing over a pulley in the upper part of the shaft is attached to a brass chain (formerly a copper wire) running down the centre of the shaft to the registering table, just before reaching which the chain communicates with a short length of silk cord, which, led round a pulley, gives horizontal motion to the arm carrying the pressure pencil. The substitution, in the year 1882, of the flexible brass chain for the copper wire has greatly increased the delicacy of movement of the pressure pencil, every small movement of the pressure plate being now registered. The scale for pressure, in lbs. on the square foot, is experimentally determined from time to time as appears necessary ; the pressure pencil is brought to zero by a light spiral spring.

Whilst the action of the pressure apparatus has been satisfactory for moderate winds, it is believed that the record of occasional very large pressures in years preceding 1882 was due principally to irregular action, in excessive gusts, of the connecting copper wire, but the brass chain being always in tension, the movements of the recording pencil have since been in complete sympathy with those of the pressure plate, and in this condition of the apparatus, that is since the year 1882, no pressure greater than about 30 lbs. has been recorded.

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

A new sheet of paper is applied to the instrument every day at noon. The scale of time is the same as that of the magnetic registers.

ROBINSON'S ANEMOMETER.—This instrument, made by Mr. Browning, is constructed on the principle described by the late Dr. Robinson in the *Transactions of the Royal Irish Academy*, Vol. XXII., for registration of the horizontal movement of the air, and is mounted above the small building on the roof of the Octagon Room. It was brought into use in 1866, October. The motion is given by the pressure of the wind on four hemispherical cups, each 5 inches in diameter, the centre of each cup being 15 inches distant from the vertical axis of rotation. The foot of the axis is a hollow flat cone bearing upon a sharp cone, which rises up from the base of a cup of oil. An endless screw acts on a train of wheels furnished with indices for reading off the amount of motion of the air in miles, and a pinion on the axis of one of the wheels draws upwards a rack, to which is attached a rod passing down to the pencil, which marks the paper placed on the vertical revolving cylinder in the chamber below. A motion of the pencil upwards through a space of one inch represents horizontal motion of the air through 100 miles. The revolving hemispherical 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.

The cylinder is driven by a clock in the usual way, and makes one revolution in 24 hours. A new sheet of paper is applied every day at noon. The scale of time is the same as that of Osler's Anemometer and of the magnetic registers.

It is assumed, in accordance with the experiments made by Dr. Robinson, that the horizontal motion of the air is three times the space described by the centres of the cups. To verify this conclusion experiments were made in the year 1860 in Greenwich Park with the anemometer by Negretti and Zambra, which was in use from 1859 until the introduction of the larger instrument by Browning in 1866 October. The instrument was fixed to the end of a horizontal arm, which was made to revolve round a vertical axis. For more detailed account of these experiments see the Introduction for 1880 and for previous years. With the arm revolving in the direction N., E., S., W., opposite to the direction of rotation of the cups, for movement of the instrument through one mile 1·15 was registered ; with the arm revolving in the direction N., W., S., E., in the same direction as the rotation of the cups, 0·97 was registered. This was considered to confirm sufficiently the accuracy of the assumption. The hemispherical cups of the instrument with which these experiments were made were each $3\frac{3}{4}$ inches in diameter, the distance between the centres of the opposite cups being 13·45 inches.

From 1889 April 22 to May 8, both of the above instruments were sent to Mr. W. H. Dines, who kindly tested them on his whirling machine then erected at Hersham. The particulars of these experiments are given at the end of the Introduction for 1889. The results appear to show that the instrumental results in the case of high velocities of the wind are too great for both anemometers, but it has been thought better for the sake of continuity not to apply any corrections to the recorded values, which consequently indicate velocities corresponding to three times the space described by the centres of the cups.

RAIN GAUGES.—During the year 1892 eight rain-gauges were employed, placed at different elevations above the ground, complete information in regard to which will be found at page (xciii) of the Meteorological Section.

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 × 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 complete information on the rate of the fall of rain.

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.

Gauges Nos. 3, 4, and 5 are eight-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.

Gauges Nos. 6, 7, and 8 are also eight-inch circular gauges, placed on the ground south of the Magnetic Observatory; No. 6 is the old daily gauge, No. 7 the old monthly gauge, and No. 8 an additional gauge brought into use in July 1881, as a check on the readings of Nos. 6 and 7, the monthly amounts collected by these gauges having occasionally shown greater differences than seemed proper. The positions of these gauges were slightly shifted on April 1, 1884. 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.

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 electrometer, constructed by White, of Glasgow.

For a full description of the principle of the electrometer reference may be made to Sir William Thomson's "Report on Electrometers and Electrostatic Measurements," contained in the *British Association Report* for the year 1867. It will be sufficient here to give a general description of the instrument which, with its registering apparatus, is planted in the Upper Magnet Room on the slate slab which carries the suspension pulleys of the Horizontal Force Magnet. A thin flat needle of aluminium, carrying immediately above it a small light mirror, is suspended, on the bifilar principle, by two silk fibres from an insulated support within a large Leyden jar. A little strong sulphuric acid is placed in the bottom of the jar, and from the lower side of the needle depends a platinum wire, kept stretched by a weight, which connects the needle with the sulphuric acid, that is with the inner coating of the jar. A positive charge of electricity being given to the needle and jar, this charge is easily maintained at a constant potential by means of a small electric machine or replenisher forming part of the instrument, and by which the charge can be either increased or diminished at pleasure. A gauge is provided for the purpose of indicating at any moment the amount of charge. The needle hangs within four insulated quadrants, which may be supposed to be formed by cutting a circular flat brass box into quarters, and then slightly separating them. The opposite quadrants are placed in metallic connexion.

Sir William Thomson's water-dropping apparatus is used to collect the atmospheric electricity. For this purpose a rectangular cistern of copper, capable of holding above 30 gallons of water, is placed near the ceiling on the west side of the south arm of the Upper Magnet Room. The cistern rests on four pillars of glass, each one encircled and nearly completely enclosed by a glass vessel containing sulphuric acid. A pipe passing out from the cistern, through the south face of the building, extends about six feet into the atmosphere, the nozzle (about ten feet above the ground) having a very small hole, through which the water passes and breaks almost immediately into drops. The cistern is thus brought to the same electrical potential as that of the atmosphere, near the nozzle, and this potential is communicated by means of a connecting wire to one of the pairs of electrometer quadrants, the other pair being connected to earth. The varying atmospheric potential thus influences the motions of the included needle, causing it to be deflected from zero in one direction or the other, according as the atmospheric potential is greater or less than that of the earth, that is according as it is positive or negative.

The small mirror carried by the needle is used for the purpose of obtaining photographic record of its motions. The light of a gas-lamp passing through a slit and falling upon the mirror, is thence reflected, and by means of a plano-convex cylindrical lens is brought to a focus at the surface of a horizontal cylinder of ebonite, nearly 7 inches long and 16 inches in circumference, which is turned by clock-work. A second fixed mirror, by means of the same gas-lamp, causes a reference line to be traced round the cylinder. The actual zero is found by cutting off the cistern communication, and placing the pairs of quadrants in metallic connexion with each other and with earth. The break of register at each hour is made by the driving-clock of the electrometer cylinder itself. Other photographic arrangements are generally similar to those which have been described for other instruments.

The scale of time is the same as that of the magnetic registers.

Interruptions sometimes occur through cobwebs making connexion between the cistern or its pipe and the walls of the building, and, in winter, from the occasional freezing of the water in the exit pipe.

The electrometer having been in use for ten years, it was removed by Messrs. Elliott on 1888 July 12 for thorough cleaning and repair. After return it was found that its indications were altogether changed. The instrument was not again brought into use during the year 1888, and it was finally sent to the maker, Mr. White of Glasgow, who restored it to its normal state, excepting that the amplitude of motion of the spot of light is considerably increased. The instrument was brought into use again in October 1889.

SUNSHINE RECORDER.—Until the end of the year 1886 the instrument with which the record given in the printed volume was made was that presented to the Royal Observatory by the late Mr. J. F. Campbell, by whom this method of record was devised. This instrument is fully described in the Introductions to previous volumes. Commencing with the year 1887 the record is that of a modification of the Campbell form of instrument, as arranged by Sir G. G. Stokes for use at the observing stations of the Meteorological Office. By employing this instrument, the manipulation of which is more simple, there is the further advantage that the Greenwich results become strictly comparable with those of the Meteorological Office Stations. A very complete account of the Campbell-Stokes instrument is given in the *Quarterly Journal* of the Royal Meteorological Society, Vol. VI., page 83. The recording cards are supported by carriers no larger than is required for keeping them in proper position; 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 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. The instrument is placed on a table upon the platform above the Magnetic Observatory, about 21 feet above the ground, and 176 feet above mean sea level. A range of trees in Greenwich Park between east and south-east cause a little interruption of the record very shortly after sunrise from early in September to early in November. But very little record is obtained near to sunrise at any part of the year.

A comparison between the two instruments for one complete year, 1886 June 1 to 1887 May 31, will be found at the end of the Introduction to the Volume for the year 1887.

OZONOMETER.—This apparatus is fixed on the south-west corner of the roof of the Photographic Thermometer shed, at a height of about 10 feet from the ground. The box in which the papers are exposed is of wood: it is about 8 inches square, blackened inside, and so constructed that there is free circulation of air through the box, without exposure of the paper to light. The papers exposed at 9^h, 15^h, and 21^h, are collected respectively at 15^h, 21^h, and 9^h, and the degree of tint produced is compared with a scale of graduated tints, numbered from 0 to 10. The value of ozone for the civil day is determined by taking the degree of tint obtained at each hour of collection as proportional to the period of exposure. Thus to form the value for any given civil day, three-fourths of the value registered at 9^h, the values registered at 15^h and 21^h, and one-fourth of that registered at the following 9^h, are added together, the resulting sum (which appears in the tables of "Daily Results of the Meteorological Observations") being taken as the value referring to the civil day on a scale of 0 to 30. The means of the 9^h, 15^h, and 21^h values, as observed, are also given for each month in the foot notes.

§ 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 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 *xxxi*), 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. 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 factors by which the dew-point given in these tables is calculated were found by Mr. Glaisher from the comparison of a great number of dew-point determinations obtained by use of Daniell's hygrometer, with simultaneous observations of dry and wet bulb thermometers, combining observations made at the Royal Observatory, Greenwich, with others made in India and at Toronto. The factors are given in the following table.

TABLE OF FACTORS by which the DIFFERENCE between the READINGS of the DRY-BULB and WET-BULB THERMOMETERS is to be MULTIPLIED in order to PRODUCE the CORRESPONDING DIFFERENCE between the DRY-BULB TEMPERATURE and that of the DEW-POINT.

Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.
° 10	8·78	° 33	3·01	° 56	1·94	° 79	1·69
11	8·78	34	2·77	57	1·92	80	1·68
12	8·78	35	2·60	58	1·90	81	1·68
13	8·77	36	2·50	59	1·89	82	1·67
14	8·76	37	2·42	60	1·88	83	1·67
15	8·75	38	2·36	61	1·87	84	1·66
16	8·70	39	2·32	62	1·86	85	1·65
17	8·62	40	2·29	63	1·85	86	1·65
18	8·50	41	2·26	64	1·83	87	1·64
19	8·34	42	2·23	65	1·82	88	1·64
20	8·14	43	2·20	66	1·81	89	1·63
21	7·88	44	2·18	67	1·80	90	1·63
22	7·60	45	2·16	68	1·79	91	1·62
23	7·28	46	2·14	69	1·78	92	1·62
24	6·92	47	2·12	70	1·77	93	1·61
25	6·53	48	2·10	71	1·76	94	1·60
26	6·08	49	2·08	72	1·75	95	1·60
27	5·61	50	2·06	73	1·74	96	1·59
28	5·12	51	2·04	74	1·73	97	1·59
29	4·63	52	2·02	75	1·72	98	1·58
30	4·15	53	2·00	76	1·71	99	1·58
31	3·70	54	1·98	77	1·70	100	1·57
32	3·32	55	1·96	78	1·69		

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

The excess of the mean temperature of the air on each day above the average of 50 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 fifty years 1841–1890. 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 1890 on 24 hourly readings from the photographic record. The smoothed numbers are given in the following table.

ADOPTED VALUES of MEAN TEMPERATURE of the AIR, deduced from the OBSERVATIONS for the Fifty Years 1841–1890.

Day of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	38.5	39.7	40.2	45.4	49.2	57.2	61.3	62.2	59.7	54.1	46.7	40.6
2	38.5	39.7	40.4	45.7	49.4	57.7	61.4	62.1	59.7	53.8	46.5	40.6
3	38.5	39.7	40.5	46.0	49.7	58.0	61.7	62.1	59.6	53.5	46.3	40.8
4	38.4	39.8	40.7	46.2	50.0	58.2	61.9	62.2	59.4	53.2	46.1	41.1
5	38.3	39.8	40.9	46.2	50.3	58.3	62.1	62.3	59.3	53.0	45.9	41.3
6	38.2	39.7	41.1	46.2	50.6	58.3	62.2	62.4	59.1	52.7	45.5	41.3
7	38.1	39.4	41.0	46.1	50.8	58.2	62.1	62.5	58.9	52.5	45.1	41.0
8	38.0	39.1	40.9	45.9	51.0	58.2	62.0	62.5	58.7	52.1	44.6	40.6
9	37.9	38.7	40.8	45.6	51.2	58.2	62.0	62.5	58.5	51.7	44.0	40.3
10	37.9	38.4	40.7	45.5	51.5	58.2	62.1	62.5	58.3	51.3	43.6	39.9
11	37.9	38.3	40.6	45.5	51.7	58.4	62.3	62.5	58.1	51.0	43.2	39.8
12	37.9	38.5	40.7	45.7	52.0	58.6	62.6	62.5	58.0	50.6	42.9	39.9
13	38.0	38.8	40.9	46.0	52.3	58.8	62.9	62.4	57.9	50.3	42.8	40.1
14	38.2	39.2	41.2	46.4	52.6	58.9	63.1	62.3	57.8	50.1	42.6	40.2
15	38.3	39.6	41.4	46.9	52.8	59.0	63.2	62.1	57.7	49.9	42.5	40.3
16	38.5	39.8	41.5	47.3	53.1	59.0	63.2	62.0	57.5	49.8	42.4	40.2
17	38.5	39.8	41.6	47.7	53.3	59.1	63.1	61.8	57.3	49.6	42.3	40.0
18	38.5	39.7	41.6	48.1	53.6	59.2	63.0	61.6	56.9	49.5	42.2	39.7
19	38.5	39.6	41.5	48.3	53.9	59.5	63.0	61.4	56.5	49.3	42.2	39.3
20	38.4	39.5	41.4	48.5	54.2	59.9	63.0	61.3	56.1	49.0	42.1	39.0
21	38.3	39.5	41.4	48.5	54.6	60.3	63.0	61.1	55.7	48.8	42.1	38.8
22	38.3	39.6	41.5	48.5	55.0	60.7	62.9	61.0	55.4	48.5	42.2	38.6
23	38.4	39.8	41.8	48.4	55.3	61.0	62.8	60.9	55.2	48.2	42.1	38.4
24	38.5	39.9	42.1	48.4	55.6	61.2	62.6	60.8	55.1	47.9	42.1	38.3
25	38.8	40.0	42.4	48.4	55.7	61.3	62.4	60.8	55.0	47.6	42.0	38.3
26	39.0	40.1	42.9	48.4	55.9	61.4	62.3	60.8	54.9	47.4	41.9	38.4
27	39.3	40.1	43.3	48.5	56.0	61.4	62.3	60.7	54.9	47.3	41.6	38.4
28	39.5	40.2	43.7	48.6	56.0	61.3	62.3	60.6	54.8	47.2	41.3	38.5
29	39.7		44.1	48.8	56.2	61.2	62.3	60.3	54.6	47.0	41.0	38.6
30	39.8		44.6	49.0	56.5	61.2	62.3	60.1	54.4	47.0	40.7	38.6
31	39.8		45.0		56.8		62.3	59.9		46.8		38.6
Means	38.5	39.5	41.7	47.2	53.1	59.4	62.4	61.6	57.2	50.0	43.2	39.7
The mean of the twelve monthly values is 49°.5.												

The daily register of rain contained in column 18 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 foot notes, and in the abstract tables, pages (lvii) and (xciii), 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. Occasionally, during interruption of photographic registration, the results depend on eye-observations.

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 foot notes on the right-hand pages (xxxi) to (liii), and in the abstract table, page (lvii), 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	...	*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	denotes	*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	...	*occasional showers*
s	...	*stratus*
sc	...	*scud*
li-sc	...	*light scud*
sl	...	*sleet*
sn	...	*snow*
oc-sn	...	*occasional snow*
slt-sn	...	*slight snow*
so-ha	...	*solar halo*
sq	...	*squall*
sqs	...	*squalls*
fq-sqs	...	*frequent squalls*
hy-sqs	...	*heavy squalls*
fq-hy-sqs	...	*frequent heavy squalls*
oc-sqs	...	*occasional squalls*
t	...	*thunder*
t-sm	...	*thunder storm*
th-cl	...	*thin clouds*
v	...	*variable*
vv	...	*very variable*
w	...	*wind*
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 foot notes, it may be mentioned that comparison is in all cases made with mean values determined from the observations for the fifty years 1841–1890.

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; observations of thermometers in a Stevenson screen and on the roof of the Magnet House, and of the earth thermometers; changes of direction of the wind; hourly values in each month of the horizontal movement of the air derived from Robinson's Anemometer; results derived from the Thomson Electrometer; rain results; and observations of 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 (lviii) and (lix), do not in some cases agree with the monthly means given in the daily results, pages (xxx) to (lii), and in the table on page (lvii), 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 foot notes, 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.

The table "Abstract of the Changes of the Direction of the Wind" as derived from Osler's Anemometer, page (lxxxi), exhibits every change of direction of the wind occurring throughout the year whenever such change amounted to two nautical points or $22\frac{1}{2}°$. It is to be understood that the change from one direction to another during the interval between the times mentioned in each line of the table was generally gradual. All complete turnings of the vane which were evidently of accidental nature, and which in the year 1881 and in previous years had been included, are here omitted. Between any time given in the second column and that next following in the first column no change of direction in general occurred varying from that given by so much as one point or $11\frac{1}{4}°$. From the numbers given in this table the monthly and yearly excess of motion, page (lxxxvii), is formed. By direct motion it is to be understood that the change of direction occurred in the order N, E, S, W, N, &c., and by retrograde motion that the change occurred in the order N, W, S, E, N, &c.

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 $0^{\text{in.}}020$, 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 (xci) and (xcii) 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 1892 were Mr. Ellis, Mr. Bryant, Mr. McClellan, Mr. Allworth, and Mr. Claxton; their observations are distinguished by the initials E, B, M, A, and C respectively.

W. H. M. CHRISTIE.

Royal Observatory, Greenwich,
1894 July 31.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS

(EXCLUDING THE DAYS OF GREAT MAGNETIC DISTURBANCE).

1892.

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

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

1892.

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

TABLE II.—MONTHLY MEAN DIURNAL INEQUALITY OF MAGNETIC DECLINATION WEST.

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

1892.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September. (5 days.)	October.	November.	December.
	′	′	′	′	′	′	′	′	′	′	′	′
Midn.	0·2	0·0	0·0	2·2	3·2	3·9	4·5	3·7	3·7	0·0	0·3	0·0
1ʰ	0·5	0·3	0·0	2·1	3·0	3·8	4·4	3·4	2·9	0·0	0·4	0·4
2	0·7	0·9	0·3	1·9	2·6	4·0	4·1	3·0	1·8	0·0	0·7	1·1
3	0·7	1·1	0·4	1·9	2·3	3·9	3·9	2·8	1·2	0·6	0·6	1·5
4	0·8	1·3	0·4	1·8	2·0	2·6	2·4	2·2	1·1	1·3	0·9	1·7
5	1·1	1·6	0·6	1·9	1·0	0·8	0·7	1·5	1·0	1·8	0·9	1·9
6	1·0	1·7	0·8	1·4	0·2	0·0	0·0	0·5	0·1	2·0	0·9	2·0
7	0·9	2·1	0·6	0·5	0·0	0·0	0·4	0·0	0·0	1·5	0·9	2·1
8	0·9	2·3	0·1	0·0	0·7	0·5	0·5	0·5	1·5	0·8	0·5	2·1
9	1·1	2·3	0·6	0·6	2·3	1·8	1·6	2·3	3·5	0·8	0·3	2·4
10	2·1	3·6	2·7	2·8	4·9	4·2	3·9	5·3	7·1	2·2	1·2	3·1
11	3·4	5·0	6·1	6·1	8·0	7·2	7·1	8·4	9·7	5·3	3·2	4·6
Noon.	4·9	7·1	8·9	9·4	10·5	10·0	10·6	11·2	10·9	8·3	5·1	5·7
13ʰ	5·9	8·0	10·1	11·1	11·4	11·4	12·1	12·2	11·2	9·5	6·0	6·1
14	5·3	7·7	9·8	10·8	10·9	11·7	12·2	11·4	9·9	9·0	5·7	5·7
15	4·3	6·2	8·4	9·0	9·6	10·9	10·8	9·3	8·3	7·3	4·7	5·2
16	3·4	5·0	6·1	7·3	8·0	9·4	9·1	6·6	5·8	4·9	3·7	4·4
17	2·5	3·6	3·8	5·7	6·8	7·7	7·5	4·9	4·6	3·0	3·0	3·7
18	1·9	3·2	2·3	4·6	5·4	6·4	6·0	4·0	4·2	2·2	2·6	3·0
19	1·3	2·9	1·7	4·1	4·4	5·7	5·4	3·7	4·1	2·0	1·9	1·9
20	0·7	2·2	1·2	3·3	4·2	5·4	5·1	3·6	3·4	1·5	1·1	0·7
21	0·2	1·7	0·7	2·8	4·0	5·2	4·8	3·9	3·8	0·8	0·5	0·1
22	0·1	1·3	0·5	2·6	3·7	5·0	4·9	3·5	3·7	0·4	0·0	0·2
23	0·0	0·4	0·5	2·4	3·6	4·5	4·8	3·7	3·0	0·1	0·1	0·1
Means	1′·83	2′·98	2′·78	4′·01	4′·70	5′·25	5′·28	4′·65	4′·44	2′·72	1′·88	2′·49

TABLE III.—MEAN HORIZONTAL MAGNETIC FORCE (diminished by a Constant) FOR EACH CIVIL DAY.

(Each result is the mean of 24 hourly ordinates from the photographic register, expressed in terms of the whole Horizontal Force, the unit in the table being ·00001 of the whole Horizontal Force. The letters u *and* c *indicate respectively values uncorrected for, and corrected for temperature.)*

1892.

Day of Month.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c
d																								
1	...	...	504	086	312	908	482	064	...	...	564	216	582	193	622	226	684	273	...	...	702	274	655	203
2	510	061	478	067	335	919	515	083	...	...	...	...	569	194	611	195	656	255	...	...	622	206	623	203
3	475	074	430	014	388	975	487	067	390	958	...	...	551	211	643	223	...	...	...	...	676	268	655	256
4	...	...	406	986	355	920	564	153	445	044	567	139	543	223	570	157	707	270	586	173	...	...	683	236
5	...	...	422	021	406	986	565	176	525	107	573	172	585	240	503	075	706	252	624	208	...	...	...	...
6	...	...	467	039	...	...	619	203	461	036	626	232	638	256	591	175	719	291	615	202	553	133	330	895
7	293	877	460	066	229	806	568	160	467	032	636	254	636	281	632	228	...	...	650	218	624	182	420	997
8	295	863	496	076	351	933	595	170	422	016	650	268	626	258	528	132	...	...	648	220	601	173	507	070
9	353	937	485	074	371	939	570	154	490	065	644	281	650	280	583	194	...	...	656	236	625	207	523	083
10	351	943	514	101	427	969	510	082	488	063	631	288	590	222	554	141	...	...	666	241	616	212	544	100
11	372	961	491	087	452	020	510	094	544	150	550	220	620	238	598	178	...	...	551	116	703	283	575	159
12	355	942	520	088	...	...	526	098	566	162	574	197	...	...	...	...	...	...	526	106	750	327	521	115
13	357	994	...	...	180	724	530	107	576	160	624	201	...	...	226	846	...	...	510	104	725	326	508	073
14	371	972	...	...	357	913	525	100	616	232	613	185	...	...	398	030	...	...	539	126	706	305	551	114
15	394	978	241	830	417	025	517	085	603	190	659	219	522	109	455	102	...	...	511	103	709	305	619	218
16	356	950	267	844	420	016	530	100	631	220	650	244	...	...	522	167	...	...	605	163	786	366	648	242
17	327	933	343	891	554	126	553	106	581	170	616	179	...	...	553	205	...	...	613	185	673	248	664	260
18	355	947	395	963	560	130	561	124	...	...	602	155	439	021	548	228	...	...	505	089	601	161	719	270
19	417	989	404	981	530	110	567	139	...	...	635	193	514	091	612	274	...	...	528	112	622	197	638	222
20	409	984	413	005	480	069	570	152	508	104	683	260	556	128	640	280	...	...	552	144	623	236	659	248
21	429	025	354	946	491	068	627	216	518	102	630	219	591	161	573	205	...	...	566	150	644	212	680	262
22	439	045	473	060	503	080	677	257	556	162	629	233	554	143	628	265	...	...	594	162	651	216	672	235
23	441	059	488	070	536	113	706	305	521	137	667	268	575	159	649	314	...	...	562	139	646	238	554	119
24	508	085	435	058	565	145	517	104	605	218	676	268	631	218	560	250	...	...	572	128	633	225	572	128
25	512	065	444	033	461	045	...	...	605	235	573	179	583	148	531	206	...	...	542	143	644	221	621	158
26	467	051	434	026	471	060	...	...	647	302	591	236	595	165	540	187	...	...	570	154	670	242	596	119
27	498	092	385	977	541	128	335	912	688	345	...	...	561	148	556	179	...	...	595	191	710	266	613	141
28	498	090	470	045	525	069	450	027	660	335	419	094	600	184	603	219	...	...	682	281	672	264	593	173
29	419	015	485	069	398	985	463	026	607	247	484	164	590	172	627	250	...	...	659	289	682	271	549	148
30	472	064			494	059	448	013	660	285	530	146	586	175	655	280	...	...	675	259	659	241	570	138
31	514	096			461	036			558	208			595	191	640	241			657	253			608	192

At the end of the year experiments were made for determination of the angle of torsion, thus breaking the continuity of the values.

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

1892.

Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d 1	° ...	67°·0	67°·6	67°·0	° ...	69°·9	68°·2	67°·9	67°·3	° ...	66°·6	65°·6
2	65·7	67·3	67·1	66·4	...	...	68·8	67·1	67·7	...	67·1	66·9
3	67·7	67·1	67·2	66·9	66·4	...	70·2	66·9	...	...	67·4	67·8
4	...	66·9	66·3	67·3	67·7	66·6	71·0	67·2	66·2	67·2	...	65·8
5	...	67·7	66·9	68·2	67·0	67·7	70·0	66·6	65·5	67·1	...	...
6	...	66·6	...	67·1	66·7	68·0	68·5	67·1	66·6	67·2	66·9	66·3
7	67·1	68·0	66·8	67·4	66·3	68·5	69·6	67·6	...	66·4	66·0	66·8
8	66·4	66·9	67·0	66·7	67·5	68·5	69·1	67·9	...	66·6	66·6	66·2
9	67·1	67·3	66·4	67·1	66·7	69·3	69·0	68·2	...	66·9	67·0	66·1
10	67·4	67·2	65·3	66·6	66·7	70·1	69·1	67·2	...	66·7	67·6	65·9
11	67·3	67·6	66·4	67·1	68·0	70·6	68·5	66·9	...	66·3	66·9	67·1
12	67·2	66·4	...	66·6	67·6	68·7	...	...	...	66·9	66·8	67·5
13	69·3	...	65·4	66·8	67·1	66·8	...	68·6	...	67·5	67·8	66·3
14	67·8	...	65·9	66·7	68·4	66·6	...	69·1	...	67·2	67·7	66·2
15	67·1	67·3	68·1	66·4	67·2	66·1	67·2	69·7	...	67·4	67·6	67·7
16	67·5	66·8	67·6	66·5	67·3	67·5	...	69·6	...	66·0	66·9	67·5
17	68·0	65·6	66·6	65·8	67·3	66·2	...	69·9	...	66·6	66·7	67·6
18	67·4	66·4	66·5	66·2	...	65·8	67·0	71·0	...	67·1	66·1	65·7
19	66·6	66·8	66·9	66·6	...	66·0	66·8	70·3	...	67·1	66·7	67·1
20	66·7	67·4	67·3	67·0	67·6	66·8	66·6	69·4	...	67·4	68·3	67·3
21	67·6	67·4	66·8	67·3	67·1	67·3	66·5	69·1	...	67·1	66·4	67·0
22	68·0	67·2	66·8	66·9	68·0	67·9	67·3	69·3	...	66·4	66·3	66·2
23	68·5	67·0	66·8	67·7	68·4	67·8	67·1	70·4	...	66·8	67·4	66·3
24	66·8	68·7	66·9	67·2	68·3	67·4	67·2	71·4	...	65·9	67·4	65·9
25	65·8	67·3	67·1	...	69·0	68·0	66·3	70·8	...	67·8	66·8	65·1
26	67·1	67·4	67·3	...	70·0	69·6	66·5	69·7	...	67·1	66·6	64·5
27	67·5	67·4	67·2	66·8	70·1	...	67·2	68·7	...	67·6	65·9	64·7
28	67·4	66·7	65·4	66·8	70·8	70·8	67·1	68·4	...	67·7	67·4	66·9
29	67·6	67·1	67·2	66·2	69·4	71·0	67·0	68·7	...	69·0	67·3	67·7
30	67·4		66·3	66·3	68·8	68·4	67·3	68·8	...	67·1	67·0	66·4
31	67·0		66·7		69·8		67·6	67·8		67·6		67·1
Means	67°·30	67°·13	66°·75	66°·84	67°·97	68°·07	67°·95	68°·71	66°·66	67°·06	66°·97	66°·51

TABLE V.—MONTHLY MEAN DIURNAL INEQUALITY OF HORIZONTAL MAGNETIC FORCE.

(The results are expressed in terms of the whole Horizontal Force, diminished in each case by the smallest hourly value, the unit in the table being ·00001 of the whole Horizontal Force. The letters u *and* c *indicate respectively values uncorrected for, and corrected for temperature.)*

1892.

Hour, Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September. (5 days)		October.		November.		December.	
	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c
Midnight.	69	97	92	116	119	148	220	242	184	196	187	204	245	262	241	260	160	174	199	211	125	135	37	66
1h	74	98	81	100	121	148	209	228	171	181	180	195	228	243	228	245	150	164	203	215	123	133	35	61
2	86	105	73	88	141	163	195	212	159	166	177	192	219	231	210	225	136	148	201	210	116	123	41	63
3	82	96	73	85	153	170	185	197	148	153	182	194	217	227	209	221	136	148	212	221	119	126	53	72
4	92	104	78	88	142	154	177	187	145	148	176	183	213	221	198	208	124	131	219	226	127	132	65	79
5	108	117	102	109	144	151	175	180	133	133	147	152	187	195	182	189	136	140	230	237	139	144	81	91
6	115	122	113	118	148	153	162	162	113	111	114	117	154	157	157	162	102	106	224	228	147	150	88	98
7	115	119	106	109	124	127	136	136	74	72	73	76	118	121	108	111	58	60	193	197	143	146	85	92
8	86	88	79	79	84	84	97	95	33	31	32	35	72	72	46	49	4	4	123	125	109	109	76	81
9	50	52	33	33	24	24	44	42	3	1	3	3	23	23	3	3	10	10	48	50	51	51	39	41
10	10	12	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	14	16
11	0	0	0	0	2	9	15	15	22	20	35	35	21	21	34	34	30	30	3	3	0	0	0	0
Noon.	14	11	14	14	49	52	81	83	72	72	76	76	66	69	97	100	104	104	24	24	25	23	12	12
13h	49	44	44	44	111	116	137	142	106	106	117	120	128	131	154	159	150	150	85	85	61	61	28	30
14	72	67	66	69	150	157	181	186	149	152	169	172	182	187	204	211	154	156	118	118	83	86	33	38
15	78	75	99	104	173	183	205	212	181	186	213	218	238	246	234	244	144	144	135	137	85	88	40	47
16	70	70	126	131	162	174	235	242	217	224	234	241	270	280	264	276	108	112	145	145	104	107	51	58
17	83	83	119	124	170	180	242	252	250	260	251	261	292	302	274	289	112	119	175	175	134	137	70	77
18	93	97	141	144	189	199	260	270	266	276	259	269	316	326	293	308	138	147	195	195	133	136	68	80
19	98	110	133	140	195	207	268	278	260	267	270	280	327	342	307	322	160	172	203	205	127	130	65	84
20	86	105	127	139	185	200	261	271	242	249	268	278	321	336	300	315	152	164	221	225	133	138	67	89
21	80	101	133	148	166	183	250	262	230	237	249	259	298	313	287	304	144	156	224	228	133	140	57	81
22	75	99	120	137	167	186	233	247	221	231	227	239	279	294	282	299	142	154	216	223	127	134	51	77
23	75	103	113	135	165	192	227	246	203	215	213	225	272	289	272	289	144	156	202	211	128	138	45	74
Means corrected for Temperature.	82·3		94·4		140·0		182·8		153·6		167·7		203·7		201·0		118·7		162·2		107·6		62·8	

TABLE VI.—MONTHLY MEAN TEMPERATURE at each HOUR of the DAY within the box inclosing the HORIZONTAL FORCE MAGNET.

1892.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midnight.	68°·1	67°·8	67°·5	67°·4	68°·3	68°·5	68°·3	69°·1	67°·0	67°·4	67°·2	67°·2	67°·82
1h	67·9	67·6	67·4	67·3	68·2	68·4	68·2	69·0	67·0	67·4	67·2	67·1	67·73
2	67·7	67·4	67·2	67·2	68·1	68·4	68·1	68·9	66·9	67·3	67·1	66·9	67·60
3	67·5	67·3	67·0	67·0	68·0	68·3	68·0	68·8	66·9	67·3	67·1	66·8	67·50
4	67·4	67·2	66·8	66·9	67·9	68·1	67·9	68·7	66·7	67·2	67·0	66·6	67·37
5	67·3	67·1	66·6	66·7	67·8	68·0	67·9	68·6	66·6	67·2	67·0	66·4	67·27
6	67·2	67·0	66·5	66·5	67·7	67·9	67·7	68·5	66·6	67·1	66·9	66·4	67·17
7	67·1	66·9	66·4	66·5	67·7	67·9	67·7	68·4	66·5	67·1	66·9	66·3	67·12
8	67·0	66·8	66·3	66·4	67·7	67·9	67·6	68·4	66·4	67·0	66·8	66·2	67·04
9	67·0	66·8	66·3	66·4	67·7	67·8	67·6	68·3	66·4	67·0	66·8	66·1	67·02
10	67·0	66·8	66·3	66·5	67·8	67·8	67·6	68·3	66·4	66·9	66·8	66·1	67·02
11	66·9	66·8	66·6	66·5	67·7	67·8	67·6	68·3	66·4	66·9	66·8	66·0	67·02
Noon.	66·8	66·8	66·4	66·6	67·8	67·8	67·7	68·4	66·4	66·9	66·7	66·0	67·03
13h	66·7	66·8	66·5	66·7	67·8	67·9	67·7	68·5	66·4	66·9	66·8	66·1	67·07
14	66·7	66·9	66·6	66·7	67·9	67·9	67·8	68·6	66·5	66·9	66·9	66·2	67·13
15	66·8	67·0	66·7	66·8	68·0	68·0	67·9	68·7	66·4	67·0	66·9	66·3	67·21
16	66·9	67·0	66·8	66·8	68·1	68·1	68·0	68·8	66·6	66·9	66·9	66·3	67·27
17	66·9	67·0	66·7	66·9	68·2	68·2	68·0	68·9	66·7	66·9	66·9	66·3	67·30
18	67·1	66·9	66·7	66·9	68·2	68·2	68·0	68·9	66·8	66·9	66·9	66·5	67·33
19	67·4	67·1	66·8	66·9	68·1	68·2	68·2	68·9	66·9	67·0	66·9	66·8	67·43
20	67·7	67·3	66·9	66·9	68·1	68·2	68·2	68·9	66·9	67·1	67·0	66·9	67·51
21	67·8	67·4	67·0	67·0	68·1	68·2	68·2	69·0	66·9	67·1	67·1	67·0	67·57
22	67·9	67·5	67·1	67·1	68·2	68·3	68·2	69·0	66·9	67·2	67·1	67·1	67·63
23	68·1	67·7	67·4	67·3	68·3	68·3	68·3	69·0	66·9	67·3	67·2	67·2	67·75

TABLE VII.—MEAN VERTICAL MAGNETIC FORCE (diminished by a Constant) FOR EACH CIVIL DAY.

(*Each result is the mean of* 24 *hourly ordinates from the photographic register, expressed in terms of the whole Vertical Force, the unit in the table being* ·00001 *of the whole Vertical Force. The letters* u *and* c *indicate respectively values uncorrected for, and corrected for temperature.*)

1892.

Day of Month.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	u	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*	*u*	*c*
d 1	937	191	919	179	897	151	827	091	...	...	928	118	911	154	902	164	858	129	754	016	656	912	585	877
2	898	181	911	173	881	145	817	079	...	...	...	...	901	127	882	165	855	111	764	032	662	907	595	851
3	935	176	895	155	860	110	830	075	800	064	...	...	937	127	862	147	845	107	740	998	670	928	611	858
4	...	...	883	139	853	117	828	065	809	061	900	152	965	140	904	185	824	086	738	981	...	...	578	865
5	...	...	911	165	837	089	858	089	803	065	882	106	938	141	859	151	784	069	745	997	...	...	...	...
6	...	...	877	137	...	...	838	092	816	084	895	126	890	125	869	148	780	040	730	986	717	977	...	...
7	930	186	915	160	851	115	838	088	809	071	913	135	912	106	847	118	780	034	717	981	669	946	...	...
8	900	166	885	153	855	111	824	090	805	034	906	126	897	104	876	136	780	032	716	984	662	930	...	...
9	888	142	901	146	813	086	835	093	819	081	926	138	892	118	887	147	782	032	699	957	657	911	...	...
10	885	128	902	154	774	072	829	091	803	063	941	135	900	103	867	131	821	043	700	962	675	929	...	...
11	879	133	906	149	770	041	852	116	818	049	961	142	873	104	855	119	816	047	703	965	649	911	549	803
12	872	122	880	144	...	...	827	100	822	078	912	147	...	...	...	...	803	057	710	964	640	913	568	813
13	894	116	...	...	789	078	813	079	815	071	853	115	...	...	925	156	813	073	697	953	667	919	550	829
14	876	126	...	...	800	079	814	070	854	078	835	097	...	...	918	138	807	071	703	961	685	928	540	800
15	847	107	981	233	810	049	798	064	838	090	810	066	878	138	935	149	828	065	710	962	691	943	577	831
16	851	101	910	170	821	058	784	057	830	082	835	089	...	...	915	133	813	056	686	980	678	938	589	841
17	877	110	859	140	821	087	760	039	850	097	812	087	...	...	919	124	812	062	687	960	690	956	588	844
18	870	122	860	122	817	073	750	014	...	...	802	064	905	159	945	133	787	032	669	933	674	942	555	847
19	838	109	849	109	823	085	766	022	...	...	799	055	875	139	946	147	772	009	685	937	661	921	565	831
20	850	108	860	103	835	087	754	008	862	116	793	049	855	123	933	151	840	023	698	958	695	921	588	842
21	856	101	875	120	835	091	768	020	847	097	802	052	816	084	914	138	828	046	692	958	648	916	585	843
22	868	099	874	130	823	083	770	024	858	093	819	062	878	140	910	128	825	062	668	934	631	889	549	826
23	905	129	870	134	817	073	785	032	861	098	843	084	865	140	931	127	826	063	662	928	632	882	549	803
24	860	110	922	148	817	071	786	046	851	096	840	087	868	143	968	137	834	077	645	920	635	882	536	798
25	848	125	917	171	821	075	...	...	881	082	847	082	862	162	972	151	794	054	671	914	630	892	497	782
26	856	101	907	171	837	084	...	...	915	111	884	072	845	137	923	137	791	045	654	904	605	871	474	751
27	874	121	890	144	849	099	786	042	922	123	...	...	884	159	895	117	804	033	653	900	595	868	461	765
28	880	138	902	158	798	083	825	096	939	114	015	203	877	156	883	112	800	060	652	895	610	864	474	738
29	921	164	886	146	811	071	824	092	929	141	994	173	883	162	876	096	764	039	695	909	625	881	495	742
30	922	172			817	079	788	052	912	134	939	180	886	163	892	133	768	024	688	940	620	878	460	747
31	919	158			833	095			925	126			889	160	873	137			680	938			...	...

At the end of the year the magnet was readjusted, thus breaking the continuity of the values.

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

1892.

Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d 1	67°·2	66°·9	67°·2	66°·7	° ...	70°·2	67°·7	66°·8	66°·4	66°·8	67°·1	65°·4
2	65·8	66·8	66·7	66·8	...	...	68·5	65·8	67·1	66·5	67·6	67·1
3	67·8	66·9	67·4	67·6	66·7	...	70·2	65·7	66·8	67·0	67·0	67·5
4	...	67·1	66·7	68·0	67·3	67·3	70·9	65·9	66·8	67·7	...	65·6
5	...	67·2	67·3	68·3	66·8	68·6	69·6	65·4	65·7	67·3	...	...
6	...	66·9	...	67·2	66·5	68·3	68·1	66·0	66·9	67·1	66·9	...
7	67·1	67·6	66·7	67·4	66·8	68·7	70·0	66·4	67·2	66·7	66·1	...
8	66·6	66·5	67·1	66·6	68·4	68·8	69·4	66·9	67·3	66·5	66·5	...
9	67·2	67·6	66·3	67·0	66·8	69·2	68·5	66·9	67·4	67·0	67·2	...
10	67·7	67·3	65·1	66·8	66·9	70·0	69·6	66·7	68·7	66·8	67·2	...
11	67·2	67·7	66·4	66·7	68·3	70·6	68·3	66·7	68·3	66·8	66·8	67·2
12	67·4	66·7	...	66·3	67·1	68·1	...	...	67·2	67·2	66·3	67·6
13	68·7	...	65·5	66·6	67·1	66·8	...	68·3	66·9	67·1	67·3	66·0
14	67·4	...	66·0	67·1	68·6	66·8	...	68·8	66·7	67·0	67·7	66·9
15	66·9	67·3	67·9	66·6	67·3	67·1	66·9	69·1	68·0	67·3	67·3	67·2
16	67·4	66·9	68·0	66·3	67·3	67·2	...	68·9	67·7	65·3	66·9	67·3
17	68·2	65·9	66·6	66·0	67·5	66·2	...	69·5	67·4	66·3	66·6	67·1
18	67·3	66·8	67·1	66·7	...	66·8	67·2	70·3	67·6	66·7	66·5	65·4
19	66·4	66·9	66·8	67·1	...	67·1	66·7	69·7	68·0	67·3	66·9	66·6
20	67·0	67·7	67·3	67·2	67·2	67·1	66·5	68·9	70·5	66·9	68·5	67·2
21	67·6	67·6	67·1	67·3	67·4	67·4	66·5	68·6	68·9	66·6	66·5	67·0
22	68·3	67·1	66·9	67·2	68·1	67·7	66·8	68·9	68·0	66·6	67·0	66·1
23	68·6	66·7	67·1	67·5	68·0	67·8	66·2	69·9	68·0	66·6	67·4	67·2
24	67·4	68·5	67·2	66·9	67·6	67·5	66·2	71·2	67·7	66·2	67·5	66·8
25	66·1	67·2	67·2	...	69·7	68·1	65·0	70·7	66·9	67·7	66·8	65·7
26	67·6	66·7	67·5	...	69·9	70·3	65·4	69·1	67·2	67·4	66·6	66·1
27	67·5	67·2	67·4	67·1	69·7	...	66·2	68·7	68·4	67·5	66·3	64·8
28	67·0	67·1	65·7	66·4	70·9	70·3	66·0	68·4	66·9	67·7	67·2	66·7
29	67·7	66·9	66·9	66·5	69·2	70·7	66·0	68·8	66·2	69·1	67·1	67·5
30	67·4		66·8	66·7	68·7	67·8	66·1	67·8	67·1	67·3	67·0	65·6
31	67·9		66·8		69·7		66·4	66·7		67·0		...
Means	67°·37	67°·10	66°·85	66°·95	67°·98	68°·24	67°·50	68°·05	67°·46	67°·00	66°·99	66°·57

TABLE IX.—MONTHLY MEAN DIURNAL INEQUALITY OF VERTICAL MAGNETIC FORCE.

(The results are expressed in terms of the whole Vertical Force, diminished in each case by the smallest hourly value, the unit in the table being ·00001 of the whole Vertical Force. The letters u *and* c *indicate respectively values uncorrected for, and corrected for temperature.)*

1892.

Hour, Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c	u	c
Midnight	31	4	34	11	38	18	59	40	61	49	58	49	53	40	38	22	35	24	22	18	25	18	28	5
1h	25	4	23	4	32	16	50	31	54	44	53	44	43	32	30	16	32	21	17	13	20	13	21	0
2	17	0	12	0	21	12	42	26	52	44	49	40	34	25	26	14	29	20	11	9	17	12	16	1
3	13	0	10	0	8	3	41	31	53	45	47	41	27	20	27	17	29	18	7	5	15	10	14	1
4	11	0	12	4	1	0	43	35	59	53	50	46	27	23	31	23	28	19	3	1	14	11	12	1
5	8	0	15	11	6	11	45	41	59	55	56	54	34	30	35	29	28	21	2	0	13	10	10	6
6	7	3	11	9	10	20	46	44	57	55	54	52	39	39	38	34	28	21	5	5	12	11	9	5
7	7	5	11	11	18	28	50	50	54	52	50	48	38	38	41	41	32	28	12	12	13	14	10	8
8	4	4	11	15	20	32	44	46	43	41	44	42	32	34	38	38	28	24	18	20	14	17	9	11
9	2	2	7	11	16	30	29	31	33	31	32	32	23	25	24	26	17	13	16	18	10	13	4	8
10	2	4	3	7	9	21	16	18	15	13	18	18	13	15	10	12	7	5	9	13	4	7	2	6
11	4	8	0	4	0	10	1	3	0	0	2	2	0	0	0	0	0	0	0	6	0	1	0	4
Noon.	0	6	7	9	2	9	0	0	3	1	0	0	3	1	3	1	0	0	4	10	1	0	3	7
13h	7	13	20	22	19	24	11	9	23	21	12	12	14	10	15	9	13	11	16	20	13	12	13	13
14	18	22	36	36	39	42	31	27	41	37	31	31	38	31	36	28	28	26	31	35	21	20	22	20
15	26	26	44	42	58	59	49	45	59	53	47	45	60	53	55	47	44	40	44	50	27	26	28	24
16	27	27	46	44	74	73	62	56	79	71	60	58	76	67	71	59	54	50	53	59	32	31	30	26
17	25	25	46	42	83	82	71	63	93	83	69	65	86	77	78	64	58	51	54	60	34	33	29	25
18	27	23	42	40	84	83	75	67	105	95	74	70	91	82	76	62	58	49	51	57	33	32	33	22
19	31	18	45	37	77	74	75	65	104	96	74	72	85	74	69	55	55	48	48	52	35	32	37	22
20	34	15	47	35	69	64	73	63	96	88	71	69	77	66	62	48	49	42	46	48	34	29	38	19
21	32	11	45	28	65	56	70	58	87	79	64	62	65	54	56	40	43	36	36	38	32	25	36	15
22	29	6	39	20	55	46	64	50	79	69	62	58	60	49	52	36	36	29	28	28	28	21	34	11
23	32	5	38	17	46	30	62	43	74	62	58	54	57	44	43	27	34	25	24	22	26	17	30	7
Means corrected for Temperature.	9·6		19·1		35·1		39·3		51·5		44·3		38·7		31·2		25·9		25·0		17·3		11·1	

TABLE X.—MONTHLY MEAN TEMPERATURE at each HOUR of the DAY within the box inclosing the VERTICAL FORCE MAGNET.

1892.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midnight.	68·3°	67·9°	67·8°	67·5°	68·3°	68·5°	67·8°	68·4°	67·7°	67·3°	67·2°	67·3°	67·83°
1h	68·0	67·7	67·6	67·5	68·2	68·5	67·7	68·3	67·7	67·3	67·2	67·2	67·74
2	67·8	67·4	67·3	67·4	68·1	68·5	67·6	68·2	67·6	67·2	67·1	66·9	67·59
3	67·6	67·3	67·1	67·1	68·1	68·4	67·5	68·1	67·7	67·2	67·1	66·8	67·50
4	67·5	67·2	66·9	67·0	68·0	68·3	67·4	68·0	67·6	67·2	67·0	66·7	67·40
5	67·4	67·0	66·6	66·8	67·9	68·2	67·4	67·9	67·5	67·2	67·0	66·4	67·28
6	67·2	66·9	66·4	66·7	67·8	68·2	67·2	67·8	67·5	67·1	66·9	66·4	67·17
7	67·1	66·8	66·4	66·6	67·8	68·2	67·2	67·6	67·4	67·1	66·8	66·3	67·11
8	67·0	66·6	66·3	66·5	67·8	68·2	67·1	67·6	67·4	67·0	66·7	66·1	67·03
9	67·0	66·6	66·2	66·5	67·8	68·1	67·1	67·5	67·4	67·0	66·7	66·0	66·99
10	66·9	66·6	66·3	66·5	67·8	68·1	67·1	67·5	67·3	66·9	66·7	66·0	66·97
11	66·8	66·6	66·4	66·5	67·7	68·1	67·2	67·6	67·2	66·8	66·8	66·0	66·97
Noon.	66·7	66·7	66·5	66·6	67·8	68·1	67·3	67·7	67·2	66·8	66·9	66·0	67·03
13h	66·7	66·7	66·6	66·7	67·8	68·1	67·4	67·9	67·3	66·9	66·9	66·2	67·10
14	66·8	66·8	66·7	66·8	67·9	68·1	67·5	68·0	67·3	66·9	66·9	66·3	67·17
15	67·0	66·9	66·8	66·8	68·0	68·2	67·5	68·0	67·4	66·8	66·9	66·4	67·22
16	67·0	66·9	66·9	66·9	68·1	68·2	67·6	68·2	67·4	66·8	66·9	66·4	67·28
17	67·0	67·0	66·9	67·0	68·2	68·3	67·6	68·3	67·5	66·8	66·9	66·4	67·32
18	67·2	66·9	66·9	67·0	68·2	68·3	67·6	68·3	67·6	66·8	66·9	66·7	67·37
19	67·6	67·2	67·0	67·1	68·1	68·2	67·7	68·3	67·5	66·9	67·0	66·9	67·46
20	67·9	67·4	67·1	67·1	68·1	68·2	67·7	68·3	67·5	67·0	67·1	67·1	67·54
21	68·0	67·6	67·3	67·2	68·1	68·2	67·7	68·4	67·5	67·0	67·2	67·2	67·62
22	68·1	67·7	67·3	67·3	68·2	68·3	67·7	68·4	67·5	67·1	67·2	67·3	67·68
23	68·3	67·8	67·6	67·5	68·3	68·3	67·8	68·4	67·6	67·2	67·3	67·3	67·78

TABLE XI.—MEAN MAGNETIC DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, in each MONTH.

(The results for Horizontal Force and Vertical Force are corrected for temperature.)

Month, 1892.	DECLINATION WEST in Arc.	HORIZONTAL FORCE in terms of the whole Horizontal Force (diminished by a Constant).	VERTICAL FORCE in terms of the whole Vertical Force (diminished by a Constant).	DECLINATION diminished by 17° and expressed as Westerly Force. (in terms of GAUSS'S METRICAL UNIT)	HORIZONTAL FORCE (diminished by a Constant). (in terms of GAUSS'S METRICAL UNIT)	VERTICAL FORCE (diminished by a Constant). (in terms of GAUSS'S METRICAL UNIT)
January	17°. 20'·9	3	1134	1111	5	4961
February	17. 19·7	19	1150	1047	35	5031
March	17. 19·1	10	1087	1015	18	4755
April	17. 19·1	117	1065	1015	214	4659
May	17. 17·6	159	1089	935	290	4764
June	17. 17·5	211	1109	930	385	4851
July	17. 17·0	185	1135	903	338	4965
August	17. 17·2	188	1139	914	343	4983
September	17. 16·4	268	1056	871	491	4619
October	17. 15·4	175	955	818	320	4178
November	17. 14·6	243	913	776	444	3994
December	17. 14·6	159	814	776	290	3561
Means	17°. 17'·4	......	......	926	......	......
Number of Column	1	2	3	4	5	6

The units in columns 2 and 3 are ·00001 of the whole Horizontal and Vertical Forces respectively; in columns 4, 5, and 6 the unit is ·00001 of the Millimètre-Milligramme-Second Unit, or ·000001 of the Centimètre-Gramme-Second (C.G.S.) Unit, in terms of which units the values of whole Horizontal Force (applicable to columns 4 and 5) are 1·8269 and 0·18269 respectively for the year, and of whole Vertical Force (applicable to column 6) are 4·3745 and 0·43745 respectively for the year.

The results for Declination and Horizontal Force in September depend on observations on 5 days only.

HORIZONTAL FORCE.—At the end of the year experiments were made for determination of the angle of torsion, thus breaking the continuity of the values.

VERTICAL FORCE.—At the end of the year the magnet was readjusted, thus breaking the continuity of the values.

TABLE XII.—MEAN DIURNAL INEQUALITIES OF MAGNETIC DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, for the Year 1892.

(Each result is the mean of the twelve monthly mean values, the annual means for each element being diminished by the smallest hourly value. The results for Horizontal Force and Vertical Force are corrected for temperature.)

Hour, Greenwich Civil Time.	Inequality of			Inequality of		
	DECLINATION WEST in Arc.	HORIZONTAL FORCE in terms of the whole Horizontal Force.	VERTICAL FORCE in terms of the whole Vertical Force.	DECLINATION expressed as WESTERLY FORCE	HORIZONTAL FORCE	VERTICAL FORCE
				in terms of GAUSS'S METRICAL UNIT.		
Midnight.	′ 1·06	171·4	21·6	56·3	313·1	94·5
1h	1·02	163·1	16·6	54·2	298·0	72·6
2	1·01	156·0	13·7	53·7	285·0	59·9
3	0·99	154·7	12·7	52·6	282·6	55·6
4	0·79	150·6	14·8	42·0	275·1	64·7
5	0·48	148·7	19·1	25·5	271·7	83·6
6	0·13	135·8	21·6	6·9	248·1	94·5
7	0·00	109·3	24·7	0·0	199·7	108·0
8	0·12	66·5	23·8	6·4	121·5	104·1
9	0·88	23·3	16·8	46·8	42·6	73·5
10	2·84	0·0	8·4	150·9	0·0	36·7
11	5·43	9·4	0·0	288·6	17·2	0·0
Noon.	7·80	48·8	0·5	414·5	89·2	2·2
13h	8·83	94·5	11·5	469·2	172·6	50·3
14	8·42	128·7	26·4	447·4	235·1	115·5
15	7·08	152·5	39·3	376·2	278·6	171·9
16	5·39	167·2	48·6	286·4	305·5	212·6
17	3·98	183·8	52·6	211·5	335·8	230·1
18	3·07	199·4	53·6	163·1	364·3	234·5
19	2·51	206·9	50·5	133·4	378·0	220·9
20	1·95	204·6	45·6	103·6	373·8	199·5
21	1·63	196·5	38·6	86·6	359·0	168·9
22	1·41	188·8	32·1	74·9	344·9	140·4
23	1·18	184·9	26·2	62·7	337·8	114·6
Means . . .	′ 2·83	135·2	25·8	150·6	247·0	112·9
Number of Column	1	2	3	4	5	6

The units in columns 2 and 3 are ·00001 of the whole Horizontal and Vertical Forces respectively; in columns 4, 5, and 6 the unit is ·00001 of the Millimètre-Milligramme-Second Unit, or ·000001 of the Centimètre-Gramme-Second (C.G.S.) Unit, in terms of which units the values of whole Horizontal Force (applicable to columns 4 and 5) are 1·8269 and 0·18269 respectively, and of whole Vertical Force (applicable to column 6) are 4·3745 and 0·43745 respectively.

TABLE XIII.—DIURNAL RANGE OF DECLINATION AND HORIZONTAL FORCE, on each CIVIL DAY, as deduced from the TWENTY-FOUR HOURLY MEASURES of ORDINATES of the PHOTOGRAPHIC REGISTER.

(The Declination is expressed in minutes of arc; the unit for Horizontal Force is ·00001 of the whole Horizontal Force. The results for Horizontal Force are corrected for temperature.)

1892.

Day of Month.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.	Dec.	H.F.
d	′		′		′		′		′		′		′		′		′		′		′		′	
1	7·6	...	9·3	169	23·2	357	15·2	355	...	...	13·3	285	9·2	317	13·1	340	11·6	110	...	...	8·3	216	8·2	174
2	5·0	69	8·7	284	13·1	220	13·2	324	...	...	...	...	15·8	444	13·7	372	11·8	193	...	...	10·9	312	7·5	164
3	5·9	147	9·8	197	13·5	253	14·3	320	18·3	364	...	...	9·9	377	14·2	427	...	...	...	...	6·9	235	6·6	210
4	...	...	13·7	259	13·0	429	9·6	269	8·7	248	8·8	280	10·1	388	14·6	757	10·7	215	9·0	355	...	...	12·8	337
5	...	...	11·6	276	9·2	154	11·0	210	14·0	343	10·5	240	9·7	332	15·4	482	10·9	234	20·7	374	...	...	...	...
6	...	...	12·0	286	...	...	10·7	168	9·4	274	9·4	251	15·3	314	15·0	417	13·2	263	14·0	301	8·1	270	13·1	196
7	7·0	165	8·6	229	19·7	523	12·7	185	11·1	404	12·2	335	14·5	230	12·9	444	...	...	10·1	307	6·5	234	7·3	212
8	8·2	194	11·8	229	14·0	181	13·6	361	15·3	491	12·5	284	16·1	239	9·0	617	...	...	14·1	262	6·3	260	8·2	162
9	6·9	187	10·2	190	11·8	320	14·1	300	13·1	328	14·8	212	13·7	275	13·8	393	...	...	11·8	231	8·5	135	4·2	130
10	7·1	91	11·2	112	10·8	250	9·2	391	12·3	310	13·8	283	15·3	468	19·8	319	...	...	14·8	190	6·8	222	5·3	171
11	9·0	115	10·1	225	14·1	260	11·0	373	9·5	265	15·7	242	25·8	362	17·3	317	...	...	19·6	363	5·7	151	6·2	148
12	6·6	127	8·3	192	...	...	11·2	324	12·1	222	13·3	299	...	...	...	...	...	...	16·3	380	3·4	117	12·6	125
13	6·1	76	...	...	15·9	488	11·4	277	11·6	256	13·6	277	...	...	9·3	542	...	...	15·7	185	5·2	209	9·3	258
14	6·4	46	...	...	10·3	356	13·8	352	11·8	270	14·1	310	...	...	12·7	362	...	...	17·1	279	9·0	240	7·4	214
15	5·8	194	7·8	386	20·9	284	12·1	332	14·7	328	14·9	257	12·3	387	13·4	347	...	...	16·7	427	8·0	186	4·4	208
16	9·2	244	7·5	215	14·2	333	9·1	282	13·5	371	14·0	301	...	...	12·5	262	...	...	9·2	382	6·6	155	7·2	186
17	8·3	275	9·3	138	8·8	210	12·0	309	18·2	381	15·0	335	...	...	14·9	278	...	...	10·3	333	15·3	361	6·3	207
18	8·4	208	8·4	227	9·7	232	11·2	256	...	...	11·0	337	10·4	582	12·1	241	...	...	18·0	416	12·3	242	6·1	73
19	7·1	164	11·8	208	9·3	246	11·4	218	...	...	8·7	320	12·2	450	10·0	320	...	...	9·1	267	5·8	268	11·1	236
20	6·9	248	12·2	273	9·4	200	10·3	260	8·7	190	8·9	297	11·3	275	13·9	285	...	...	10·7	393	5·6	196	8·0	169
21	6·2	190	13·7	303	10·6	201	9·9	261	8·3	197	13·1	324	16·7	424	13·7	420	...	...	9·8	270	12·4	217	9·5	197
22	8·4	200	7·7	161	10·6	194	9·7	271	11·7	279	12·9	282	13·3	331	11·9	334	...	...	12·7	357	10·7	215	7·6	163
23	7·9	164	6·6	250	10·9	195	11·6	378	10·5	338	12·0	298	13·1	307	9·9	306	...	...	13·5	213	7·7	160	14·5	223
24	7·7	227	14·6	228	10·8	240	22·6	471	15·5	431	16·2	446	11·9	350	19·0	396	...	...	9·8	285	9·8	242	12·5	197
25	7·3	118	13·9	264	18·3	372	...	...	15·6	377	15·9	412	16·2	438	12·7	466	...	...	7·7	234	6·2	219	7·0	149
26	5·4	143	14·8	355	18·1	374	...	...	16·1	332	15·3	462	18·7	448	12·3	375	...	...	8·2	190	12·7	214	6·4	174
27	5·4	96	15·4	420	12·5	294	17·0	527	15·9	393	...	...	16·6	372	13·0	341	...	...	11·3	225	5·4	152	8·3	90
28	8·1	213	9·8	242	19·1	399	14·8	357	18·0	318	15·9	520	11·6	322	9·1	266	...	...	10·0	198	6·7	167	7·7	221
29	15·3	568	9·6	274	19·9	336	14·9	369	16·8	385	14·3	344	14·0	404	10·8	259	...	...	9·4	218	5·9	153	13·0	215
30	8·8	281			16·5	389	18·5	403	14·6	286	9·7	377	13·4	427	13·5	274	...	...	10·3	241	8·2	142	8·5	209
31	10·3	192			17·0	432			9·8	370			14·4	362	16·1	272			7·2	266			6·1	145
Means.....	7·6	183	10·7	244	14·0	301	12·7	318	13·2	324	13·0	319	13·9	370	13·3	374	11·6	203	12·4	291	8·0	210	8·4	185

The mean of the twelve monthly values is, for Declination 11′·57, and for Horizontal Force 276·8.

TABLE XIV.—MONTHLY MEAN DIURNAL RANGE, and SUMS of HOURLY DEVIATIONS from MEAN, for DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, as deduced from the Monthly Mean Diurnal Inequalities, Tables II., V., and IX.

(The Declination is expressed in minutes of arc: the units for Horizontal Force and Vertical Force are ·00001 of the whole Horizontal and Vertical Forces respectively. The results for Horizontal Force and Vertical Force are corrected for temperature.)

Month, 1892.	Difference between the Greatest and Least of the 24 Hourly Values.			Sums of the 24 Hourly Deviations from the Mean Value.		
	Declination.	Horizontal Force.	Vertical Force.	Declination.	Horizontal Force.	Vertical Force.
	′			′		
January	5·9	122	27	34·3	657	189
February	8·0	148	44	45·3	867	309
March	10·1	207	83	67·8	1136	525
April	11·1	278	67	63·9	1579	364
May	11·4	276	96	66·5	1689	481
June	11·7	280	72	66·8	1788	364
July	12·2	342	82	66·6	2120	439
August	12·2	322	64	64·6	2003	362
September	11·2	174	51	63·7	1045	281
October	9·5	237	60	56·3	1548	405
November	6·0	150	33	38·0	856	187
December	6·1	98	26	38·3	523	171
Means	9′·62	219·5	58·8	56′·01	1317·6	339·7

The results for Declination and Horizontal Force in September depend on observations on 5 days only.

TABLE XV.—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 units for Horizontal Force and Vertical Force are ·00001 of the whole Horizontal and Vertical Forces respectively.

Month, 1892.	m	a_1	b_1	a_2	b_2	a_3	b_3	a_4	b_4
	DECLINATION WEST.								
	′	′	′	′	′	′	′	′	′
January	1·83	− 1·98	− 0·70	+ 0·57	+ 0·95	− 0·35	− 0·31	+ 0·21	+ 0·20
February	2·98	− 2·76	− 1·13	+ 0·55	+ 0·80	− 0·59	− 0·53	+ 0·04	+ 0·33
March	2·78	− 3·55	− 1·84	+ 1·43	+ 1·73	− 0·69	− 0·97	+ 0·25	+ 0·22
April	4·01	− 2·66	− 2·52	+ 1·39	+ 1·89	− 0·86	− 0·88	+ 0·42	+ 0·23
May	4·70	− 2·79	− 2·85	+ 1·97	+ 1·45	− 0·74	− 0·32	+ 0·14	− 0·06
June	5·25	− 2·15	− 3·46	+ 1·83	+ 1·82	− 0·67	− 0·33	− 0·20	+ 0·08
July	5·28	− 2·17	− 3·36	+ 2·13	+ 1·95	− 0·60	− 0·48	+ 0·01	+ 0·27
August	4·65	− 2·78	− 2·24	+ 2·57	+ 1·49	− 1·04	− 0·56	+ 0·16	+ 0·12
September	4·44	− 3·14	− 2·10	+ 2·54	+ 0·51	− 0·88	− 0·13	+ 0·27	− 0·09
October	2·72	− 3·19	− 1·25	+ 0·95	+ 1·49	− 0·88	− 1·13	+ 0·38	+ 0·38
November	1·88	− 1·89	− 1·10	+ 0·43	+ 1·14	− 0·43	− 0·39	+ 0·34	+ 0·30
December	2·49	− 2·40	− 0·49	+ 0·22	+ 0·98	− 0·26	− 0·12	+ 0·20	+ 0·03
For the Year	2·83	− 2·62	− 1·92	+ 1·38	+ 1·35	− 0·67	− 0·51	+ 0·19	+ 0·17
	HORIZONTAL FORCE.								
January	82·3	+ 35·6	+ 2·0	− 26·0	+ 4·9	+ 6·6	− 13·2	+ 1·2	+ 10·7
February	94·4	+ 41·1	− 27·4	− 31·1	+ 1·1	+ 11·7	− 16·6	+ 2·6	+ 2·4
March	140·0	+ 52·9	− 43·3	− 31·5	+ 27·5	+ 1·1	− 23·8	− 0·2	+ 11·3
April	182·8	+ 77·1	− 69·1	− 30·7	+ 29·5	+ 5·6	− 19·2	+ 5·2	+ 12·9
May	153·6	+ 69·1	− 88·4	− 29·4	+ 25·8	− 1·6	− 8·3	+ 8·7	− 0·5
June	167·7	+ 74·1	− 87·7	− 28·4	+ 34·2	− 8·4	− 10·4	− 0·5	+ 0·9
July	203·7	+ 98·0	− 95·8	− 40·8	+ 31·2	− 1·3	− 14·8	+ 1·4	+ 4·4
August	201·0	+ 90·4	− 95·9	− 27·1	+ 37·0	− 6·0	− 22·3	+ 7·1	+ 3·8
September	118·7	+ 46·8	− 38·4	+ 4·7	+ 33·2	− 17·5	− 19·7	+ 11·2	+ 12·7
October	162·2	+ 90·0	− 7·0	− 44·4	+ 19·8	+ 0·9	− 27·0	+ 4·2	+ 11·5
November	107·6	+ 47·0	− 5·1	− 32·2	+ 8·2	+ 10·3	− 16·3	+ 5·1	+ 8·6
December	62·8	+ 24·3	+ 0·9	− 26·0	− 1·7	+ 4·1	− 9·2	+ 1·6	+ 4·8
For the Year	135·2	+ 62·2	− 46·3	− 28·6	+ 20·9	+ 0·5	− 16·7	+ 4·0	+ 6·9
	VERTICAL FORCE.								
January	9·6	− 4·5	− 10·7	− 3·2	+ 2·8	+ 2·2	− 0·5	− 0·3	+ 0·4
February	19·1	− 4·3	− 17·7	− 7·8	+ 1·2	+ 3·3	− 3·4	− 1·5	+ 0·8
March	35·1	− 2·7	− 30·0	− 16·6	− 5·0	+ 8·1	+ 1·1	− 2·1	+ 1·4
April	39·3	+ 11·0	− 11·8	− 18·8	− 4·2	+ 7·0	− 2·1	− 1·8	+ 0·6
May	51·5	+ 19·3	− 20·0	− 23·6	− 1·7	+ 3·3	− 2·1	− 0·8	+ 1·2
June	44·3	+ 16·8	− 10·9	− 18·1	− 1·6	+ 5·5	− 2·2	− 1·2	+ 0·2
July	38·7	+ 9·6	− 21·5	− 19·2	− 2·1	+ 9·0	+ 0·2	+ 0·6	+ 0·4
August	31·2	+ 2·7	− 14·2	− 19·2	− 1·1	+ 8·1	− 1·7	− 1·6	− 0·1
September	25·9	+ 5·4	− 14·1	− 12·7	+ 2·0	+ 5·7	− 0·8	− 1·5	+ 1·4
October	25·0	− 2·6	− 24·6	− 9·2	− 0·4	+ 6·4	+ 1·6	− 2·9	+ 1·4
November	17·3	+ 2·6	− 10·3	− 6·6	0·0	+ 3·7	− 0·2	− 1·7	+ 1·3
December	11·1	− 3·7	− 9·6	− 4·7	+ 0·4	+ 1·9	− 1·4	− 1·2	+ 0·6
For the Year	25·8	+ 4·1	− 16·3	− 13·3	− 0·8	+ 5·3	− 1·0	− 1·3	+ 0·8

The results for Declination and Horizontal Force n September depend on observations on 5 days only.

TABLE XVI.—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 units for Horizontal Force and Vertical Force are ·00001 of the whole Horizontal and Vertical Forces respectively.

Month, 1892.	m	c_1	α	α'	c_2	β	β'	c_3	γ	γ'	c_4	δ	δ'
	DECLINATION WEST.												
	′	′	° ′	° ′	′	° ′	° ′	′	° ′	° ′	′	° ′	° ′
January	1·83	2·10	250. 25	252. 46	1·11	30. 57	35. 39	0·47	228. 27	235. 30	0·29	45. 56	55. 20
February	2·98	2·97	247. 44	251. 13	0·97	34. 24	41. 22	0·80	228. 6	238. 33	0·33	7. 10	21. 6
March	2·78	4·00	242. 36	244. 43	2·25	39. 38	43. 52	1·19	215. 31	221. 52	0·34	48. 42	57. 10
April	4·01	3·67	226. 33	226. 33	2·35	36. 19	36. 19	1·23	224. 24	224. 24	0·48	61. 1	61. 1
May	4·70	3·99	224. 21	223. 29	2·45	53. 43	51. 59	0·81	246. 27	243. 51	0·15	112. 5	108. 37
June	5·25	4·08	211. 52	211. 59	2·58	45. 11	45. 25	0·75	243. 38	243. 59	0·21	292. 1	292. 29
July	5·28	4·00	212. 54	214. 17	2·89	47. 32	50. 18	0·76	231. 27	235. 36	0·27	1. 44	7. 16
August	4·65	3·58	231. 7	232. 2	2·97	59. 48	61. 38	1·18	241. 45	244. 30	0·20	52. 59	56. 39
September	4·44	3·78	236. 13	234. 54	2·59	78. 34	75. 56	0·89	261. 48	257. 51	0·28	108. 0	102. 44
October	2·72	3·42	248. 34	245. 2	1·77	32. 24	25. 20	1·43	217. 52	207. 16	0·54	44. 45	30. 37
November	1·88	2·19	239. 48	236. 10	1·22	20. 47	13. 31	0·59	227. 53	216. 59	0·46	48. 24	33. 52
December	2·49	2·45	258. 36	257. 40	1·01	12. 51	10. 59	0·29	245. 57	243. 9	0·20	81. 42	77. 58
For the Year	2·83	3·25	233. 45	233. 45	1·93	45. 41	45. 41	0·84	232. 33	232. 33	0·25	47. 29	47. 29
	HORIZONTAL FORCE.												
			° ′	° ′		° ′	° ′		° ′	° ′		° ′	° ′
January	82·3	35·7	86. 46	89. 7	26·5	280. 46	285. 28	14·8	153. 36	160. 39	10·8	6. 40	16. 4
February	94·4	49·3	123. 41	127. 10	31·2	272. 1	278. 59	20·3	144. 43	155. 10	3·5	47. 46	61. 42
March	140·0	68·4	129. 20	131. 27	41·8	311. 7	315. 21	23·8	177. 27	183. 48	11·3	359. 9	7. 37
April	182·8	103·5	131. 52	131. 52	42·5	313. 51	313. 51	20·0	163. 38	163. 38	13·9	21. 58	21. 58
May	153·6	112·2	141. 59	141. 7	39·1	311. 15	309. 31	8·4	190. 39	188. 3	8·7	93. 20	89. 52
June	167·7	114·8	139. 48	139. 55	44·5	320. 17	320. 31	13·4	218. 53	219. 14	1·0	330. 1	330. 29
July	203·7	137·1	134. 20	135. 43	51·3	307. 22	310. 8	14·9	184. 59	189. 8	4·6	17. 21	22. 53
August	201·0	131·8	136. 42	137. 37	45·9	323. 42	325. 32	23·1	195. 2	197. 47	8·1	61. 46	65. 26
September	118·7	60·6	129. 25	128. 6	33·5	8. 3	5. 25	26·3	221. 39	217. 42	16·9	41. 19	36. 3
October	162·2	90·3	94. 25	90. 53	48·6	293. 59	286. 55	27·0	178. 12	167. 36	12·3	19. 50	5. 42
November	107·6	47·3	96. 13	92. 35	33·3	284. 17	277. 1	19·2	147. 45	136. 51	10·0	30. 49	16. 17
December	62·8	24·4	87. 52	86. 56	26·0	266. 18	264. 26	10·1	156. 6	153. 18	5·0	18. 22	14. 38
For the Year	135·2	77·5	126. 38	126. 38	35·4	306. 9	306. 9	16·7	178. 26	178. 26	8·0	29. 41	29. 41
	VERTICAL FORCE.												
			° ′	° ′		° ′	° ′		° ′	° ′		° ′	° ′
January	9·6	11·6	202. 53	205. 14	4·3	310. 47	315. 29	2·2	103. 12	110. 15	0·5	330. 1	339. 25
February	19·1	18·2	193. 41	197. 10	7·9	278. 36	285. 34	4·8	136. 8	146. 35	1·7	297. 11	311. 7
March	35·1	30·1	185. 4	187. 11	17·4	253. 21	257. 35	8·2	82. 27	88. 48	2·5	302. 54	311. 22
April	39·3	16·1	137. 2	137. 2	19·3	257. 29	257. 29	7·3	107. 2	107. 2	1·9	287. 25	287. 25
May	51·5	27·8	136. 2	135. 10	23·6	265. 49	264. 5	3·9	122. 38	120. 2	1·4	327. 8	323. 40
June	44·3	20·0	122. 51	122. 58	18·2	265. 1	265. 15	5·9	111. 52	112. 13	1·2	280. 10	280. 38
July	38·7	23·6	155. 57	157. 20	19·3	263. 47	266. 33	9·0	88. 47	92. 56	0·7	60. 10	65. 42
August	31·2	14·5	169. 6	170. 1	19·2	266. 43	268. 33	8·3	101. 58	104. 43	1·6	267. 21	271. 1
September	25·9	15·1	159. 0	157. 41	12·8	278. 46	276. 8	5·7	97. 32	93. 35	2·1	313. 52	308. 36
October	25·0	24·8	185. 56	182. 24	9·2	267. 30	260. 26	6·6	75. 39	65. 3	3·2	296. 18	282. 10
November	17·3	10·6	165. 38	162. 0	6·6	270. 0	262. 44	3·7	93. 6	82. 12	2·2	306. 36	292. 4
December	11·1	10·3	201. 22	200. 26	4·7	274. 27	272. 35	2·3	125. 24	122. 36	1·3	296. 14	292. 30
For the Year	25·8	16·8	165. 47	165. 47	13·3	266. 30	266. 30	5·4	100. 16	100. 16	1·6	300. 28	300. 28

The results for Declination and Horizontal Force in September depend on observations on 5 days only.

TABLE XVII.—SEPARATE RESULTS of OBSERVATIONS of MAGNETIC DIP made in the Year 1892.

Greenwich Civil Time, 1892.	Needle.	Magnetic Dip.	Observer.
d h		° ′ ″	
Jan. 2. 12	C 1	67. 18. 52	N
4. 14	D 1	67. 21. 3	N
8. 14	D 2	67. 22. 41	N
9. 12	C 2	67. 21. 58	N
12. 15	B 1	67. 19. 27	N
14. 15	B 2	67. 18. 44	N
18. 15	B 2	67. 18. 10	M
19. 14	B 2	67. 19. 5	N
19. 15	B 1	67. 20. 30	N
21. 15	C 2	67. 20. 47	N
23. 12	D 2	67. 22. 4	N
27. 15	D 1	67. 22. 38	N
28. 14	C 1	67. 20. 6	N
Feb. 3. 12	C 2	67. 21. 54	N
5. 15	B 2	67. 19. 9	N
8. 15	B 1	67. 19. 32	N
9. 14	C 1	67. 22. 24	N
11. 15	D 2	67. 23. 35	N
12. 14	D 1	67. 23. 33	N
17. 15	D 1	67. 24. 49	N
19. 15	D 2	67. 25. 34	N
20. 12	C 1	67. 23. 11	N
22. 15	B 1	67. 19. 58	N
23. 15	B 2	67. 20. 20	N
26. 15	C 2	67. 21. 32	N
Mar. 1. 15	B 1	67. 22. 35	N
3. 15	B 2	67. 20. 15	N
4. 15	C 2	67. 21. 18	N
9. 15	D 1	67. 22. 55	N
10. 15	D 2	67. 21. 49	N
14. 13	C 1	67. 23. 21	N
17. 14	C 1	67. 20. 38	N
21. 15	D 2	67. 21. 28	N
23. 15	D 1	67. 22. 7	N
25. 14	C 2	67. 21. 56	N
28. 16	B 2	67. 19. 25	N
30. 15	B 1	67. 18. 57	N
Apr. 1. 14	C 1	67. 19. 30	N
4. 14	D 1	67. 21. 36	N
6. 15	D 2	67. 20. 3	N
8. 15	C 2	67. 19. 29	N
11. 15	B 1	67. 18. 22	N
12. 15	B 2	67. 16. 59	N
19. 15	B 2	67. 18. 17	N
20. 15	B 1	67. 19. 33	N
22. 15	C 2	67. 17. 19	N
25. 15	D 2	67. 18. 52	N
27. 15	D 1	67. 20. 48	N
28. 15	C 1	67. 20. 52	N

Greenwich Civil Time, 1892.	Needle.	Magnetic Dip.	Observer.
d h		° ′ ″	
May 3. 15	C 2	67. 20. 37	N
5. 15	B 2	67. 17. 41	N
6. 15	B 1	67. 17. 45	N
9. 14	C 1	67. 20. 30	N
11. 15	D 2	67. 20. 7	N
12. 15	D 1	67. 20. 55	N
19. 15	D 1	67. 19. 57	N
20. 15	D 2	67. 21. 12	N
21. 12	C 1	67. 21. 25	N
24. 15	B 1	67. 18. 43	N
26. 15	B 2	67. 17. 44	N
28. 12	C 2	67. 18. 46	N
June 1. 15	B 1	67. 18. 23	N
2. 17	B 2	67. 15. 43	N
7. 15	C 2	67. 19. 13	N
9. 16	D 1	67. 19. 44	N
10. 15	D 2	67. 21. 28	N
13. 14	C 1	67. 18. 21	N
14. 15	B 2	67. 16. 13	N
17. 15	C 1	67. 18. 24	N
20. 15	D 2	67. 19. 38	N
21. 15	D 1	67. 20. 5	N
23. 13	C 2	67. 17. 49	N
28. 15	B 2	67. 17. 44	N
29. 15	B 1	67. 19. 8	N
July 2. 12	C 1	67. 18. 16	N
6. 15	D 1	67. 20. 53	N
8. 14	D 2	67. 19. 14	N
9. 12	C 2	67. 17. 24	N
11. 15	B 1	67. 15. 53	N
13. 15	B 2	67. 18. 30	N
16. 13	C 2	67. 16. 29	N
18. 15	C 2	67. 20. 2	N
20. 15	B 2	67. 17. 30	N
21. 13	B 1	67. 19. 19	N
21. 15	C 2	67. 19. 44	N
22. 15	D 2	67. 20. 48	N
25. 16	D 1	67. 20. 54	N
29. 15	C 1	67. 21. 10	N
Aug. 2. 15	C 2	67. 19. 32	M
4. 14	B 2	67. 19. 9	M
8. 15	B 1	67. 19. 32	M
9. 15	C 1	67. 19. 14	M
10. 15	D 2	67. 20. 18	M
11. 15	D 1	67. 21. 14	M
18. 15	D 1	67. 20. 9	M
22. 15	D 2	67. 19. 19	M
23. 15	C 1	67. 18. 10	M
24. 12	B 1	67. 18. 37	M
26. 14	B 2	67. 17. 37	M
29. 15	C 2	67. 17. 17	M

Greenwich Civil Time, 1892.	Needle.	Magnetic Dip.	Observer.
d h		° ′ ″	
Sept. 1. 14	B 1	67. 19. 43	N
2. 15	B 2	67. 17. 23	N
6. 15	C 2	67. 17. 13	N
8. 15	D 1	67. 20. 23	N
12. 15	D 2	67. 20. 5	N
13. 15	C 1	67. 18. 22	N
14. 15	B 1	67. 18. 35	N
19. 15	C 1	67. 18. 54	N
20. 15	D 2	67. 19. 29	N
22. 15	D 1	67. 20. 21	N
23. 15	C 2	67. 19. 12	N
27. 15	B 2	67. 17. 25	N
29. 15	B 1	67. 16. 52	N
Oct. 3. 15	C 1	67. 19. 4	N
4. 15	D 1	67. 21. 22	N
6. 15	D 2	67. 21. 21	N
10. 15	C 2	67. 18. 38	N
11. 13	B 1	67. 21. 16	N
11. 15	B 2	67. 18. 30	N
17. 15	C 1	67. 19. 26	N
19. 14	B 2	67. 18. 16	N
19. 15	B 1	67. 20. 29	N
21. 14	C 2	67. 22. 17	N
25. 15	D 2	67. 22. 44	N
26. 15	D 1	67. 22. 24	N
28. 15	C 1	67. 20. 34	N
Nov. 1. 15	C 2	67. 18. 35	N
7. 15	B 2	67. 17. 55	N
8. 13	B 1	67. 19. 3	N
8. 15	C 1	67. 20. 9	N
11. 14	D 2	67. 19. 32	N
14. 14	D 1	67. 19. 29	N
17. 14	D 1	67. 20. 51	N
21. 15	D 2	67. 20. 50	N
22. 15	C 1	67. 20. 29	N
23. 15	B 1	67. 19. 21	N
25. 14	B 2	67. 17. 59	N
28. 15	C 2	67. 18. 24	N
Dec. 2. 14	B 1	67. 18. 21	N
6. 15	B 2	67. 20. 8	N
7. 14	C 2	67. 20. 17	N
8. 14	D 1	67. 21. 28	N
9. 15	D 2	67. 22. 19	N
13. 14	C 1	67. 19. 41	N
19. 14	C 1	67. 19. 36	N
21. 14	D 2	67. 19. 27	N
22. 12	D 1	67. 19. 58	N
22. 13	C 2	67. 17. 59	N
23. 13	B 2	67. 18. 19	N
30. 14	B 1	67. 19. 4	N

The needles B 1 and B 2 are 9 inches in length; C 1 and C 2, 6 inches; and D 1 and D 2, 3 inches.
The initials N and M are those of Mr. Nash and Mr. McClellan.

TABLE XVIII.—MONTHLY and YEARLY MEANS of MAGNETIC DIP in the YEAR 1892.

Monthly Means of Magnetic Dip.

Month, 1892.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″	
January	67. 19. 58	2	67. 18. 40	3	67. 19. 29	2
February	67. 19. 45	2	67. 19. 45	2	67. 22. 47	2
March	67. 20. 46	2	67. 19. 50	2	67. 22. 0	2
April	67. 18. 57	2	67. 17. 38	2	67. 20. 11	2
May	67. 18. 14	2	67. 17. 42	2	67. 20. 57	2
June	67. 18. 45	2	67. 16. 33	3	67. 18. 22	2
July	67. 17. 36	2	67. 18. 0	2	67. 19. 43	2
August	67. 19. 2	2	67. 18. 23	2	67. 18. 42	2
September	67. 18. 23	3	67. 17. 24	2	67. 18. 38	2
October	67. 20. 52	2	67. 18. 23	2	67. 19. 41	3
November	67. 19. 12	2	67. 17. 57	2	67. 20. 19	2
December	67. 18. 42	2	67. 19. 13	2	67. 19. 38	2
Means	67. 19. 9	Sum 25	67. 18. 14	Sum 26	67. 20. 2	Sum 25

Month, 1892.	C 2, 6-inch Needle.	Number of Observations.	D 1, 3-inch Needle.	Number of Observations.	D 2, 3-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″	
January	67. 21. 22	2	67. 21. 51	2	67. 22. 22	2
February	67. 21. 43	2	67. 24. 11	2	67. 24. 35	2
March	67. 21. 37	2	67. 22. 31	2	67. 21. 38	2
April	67. 18. 24	2	67. 21. 12	2	67. 19. 27	2
May	67. 19. 42	2	67. 20. 26	2	67. 20. 39	2
June	67. 18. 31	2	67. 19. 55	2	67. 20. 33	2
July	67. 18. 25	4	67. 20. 53	2	67. 20. 1	2
August	67. 18. 24	2	67. 20. 42	2	67. 19. 48	2
September	67. 18. 12	2	67. 20. 22	2	67. 19. 47	2
October	67. 20. 28	2	67. 21. 53	2	67. 22. 2	2
November	67. 18. 30	2	67. 20. 10	2	67. 20. 11	2
December	67. 19. 8	2	67. 20. 43	2	67. 20. 53	2
Means	67. 19. 27	Sum 26	67. 21. 14	Sum 24	67. 21. 0	Sum 24

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.

COLLECTED YEARLY MEANS of MAGNETIC DIP for each of the NEEDLES, and GENERAL MEAN for the Year 1892.

Lengths of the several Sets of Needles.	Needles.	Number of Observations with each Needle.	Mean Yearly Dip from Observations with each Needle.	Mean Yearly Dip from each Set of Needles.	Mean Yearly Dip from all the Sets of Needles.
			° ′ ″	° ′ ″	° ′ ″
9-inch Needles	B 1 B 2	25 26	67. 19. 9 67. 18. 14	67. 18. 42	
6-inch Needles	C 1 C 2	25 26	67. 20. 2 67. 19. 27	67. 19. 45	67. 19. 51
3-inch Needles	D 1 D 2	24 24	67. 21. 14 67. 21. 0	67. 21. 7	

TABLE XIX.—DETERMINATIONS OF THE ABSOLUTE VALUE OF HORIZONTAL MAGNETIC FORCE IN THE YEAR 1892.

Abstract of the Observations of Deflexion of a Magnet for Absolute Measure of Horizontal Force made with the Gibson Instrument.

Greenwich Civil Time, 1892.	Distances of Centres of Magnets.	Temperature Fahrenheit.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature Fahrenheit.	Observer.
d h	ft.	°	° ′ ″	s		°	
January 16. 12	1·0	36·3	10. 13. 42	5·722	100	36·0	N
	1·3		4. 38. 31	5·720	100	37·1	
February 16. 14	1·0	42·9	10. 14. 2	5·723	100	42·2	N
	1·3		4. 38. 50	5·726	100	41·5	
March 15. 15	1·0	44·8	10. 12. 47	5·713	100	42·9	N
	1·3		4. 38. 11	5·720	100	43·1	
April 16. 12	1·0	42·0	10. 12. 35	5·719	100	42·2	N
	1·3		4. 38. 2	5·719	100	42·7	
May 16. 15	1·0	56·9	10. 9. 52	5·727	100	56·7	N
	1·3		4. 36. 41	5·723	100	58·2	
June 15. 15	1·0	57·0	10. 8. 41	5·719	100	57·2	N
	1·3		4. 36. 12	5·722	100	57·9	
July 15. 16	1·0	60·2	10. 9. 7	5·732	100	60·4	N
	1·3		4. 36. 37	5·733	100	61·3	
August 16. 15	1·0	66·7	10. 8. 1	5·738	100	66·6	E
	1·3		4. 35. 50	5·734	100	67·6	
September 15. 15	1·0	62·9	10. 9. 35	5·740	100	63·1	N
	1·3		4. 36. 42	5·734	100	64·1	
October 14. 15	1·0	58·2	10. 11. 11	5·740	100	56·9	N
	1·3		4. 37. 19	5·736	100	56·8	
November 15. 14	1·0	57·8	10. 10. 17	5·739	100	56·9	N
	1·3		4. 36. 41	5·732	100	57·4	
December 16. 14	1·0	53·5	10. 9. 14	5·734	100	52·1	N
	1·3		4. 36. 31	5·730	100	52·8	

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 deflexion given in the table above is the mean of the four deflexions observed in these positions of the magnets.

The initials E and N are those of Mr. Ellis and Mr. Nash.

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

Computation of the Values of Horizontal Force in Absolute Measure.

Greenwich Civil Time, 1892.	In English Measure.									In Metric Measure.	
	Apparent Value of A_1.	Apparent Value of A_2.	Apparent Value of P.	Mean Value of P.	Log $\frac{m}{X}$.	Corrected Time of Vibration of Deflecting Magnet.	Log m X.	Value of m.	Value of Horizontal Force X.	Value of Horizontal Force. As observed.	Value of Horizontal Force. Reduced to Mean of Month.
d h						s					
Jan. 16. 12	0·08879	0·08890	—0·00293		8·94961	5·7287	0·14465	0·3525	3·9584	1·8252	1·8275
Feb. 16. 14	0·08894	0·08910	—0·00446		8·95045	5·7302	0·14446	0·3527	3·9537	1·8230	1·8265
Mar. 15. 15	0·08879	0·08892	—0·00367		8·94965	5·7224	0·14566	0·3529	3·9628	1·8272	1·8258
Apr. 16. 12	0·08872	0·08883	—0·00310		8·94926	5·7251	0·14523	0·3526	3·9626	1·8271	1·8294
May 16. 15	0·08855	0·08862	—0·00203		8·94835	5·7265	0·14511	0·3522	3·9662	1·8288	1·8274
June 15. 15	0·08838	0·08847	—0·00248	—0·00283	8·94755	5·7220	0·14580	0·3521	3·9730	1·8319	1·8306
July 15. 16	0·08849	0·08865	—0·00446		8·94828	5·7327	0·14419	0·3517	3·9624	1·8270	1·8262
Aug. 16. 15	0·08844	0·08850	—0·00186		8·94777	5·7334	0·14412	0·3515	3·9643	1·8279	1·8280
Sept. 15. 15	0·08860	0·08872	—0·00333		8·94872	5·7357	0·14375	0·3517	3·9583	1·8251	1·8251
Oct. 14. 15	0·08876	0·08884	—0·00231		8·94940	5·7396	0·14312	0·3518	3·9524	1·8224	1·8245
Nov. 15. 14	0·08862	0·08864	—0·00039		8·94856	5·7368	0·14355	0·3516	3·9582	1·8251	1·8256
Dec. 16. 14	0·08841	0·08852	—0·00299		8·94773	5·7346	0·14385	0·3514	3·9633	1·8274	1·8262
Means ...	...	...	...	...	...	...	...	...	3·9613	1·8265	1·8269

The value of X in English Measure is referred to the Foot-Grain-Second Unit, and in Metric Measure to the Millimètre-Milligramme-Second Unit. To obtain X in the Centimètre-Gramme-Second (C.G.S.) Unit, the values in Metric Measure must be divided by 10.

TABLE XIX.—*continued*—DETERMINATIONS OF THE ABSOLUTE VALUE OF HORIZONTAL MAGNETIC FORCE IN THE YEAR 1892.

Abstract of the Observations of Deflexion of a Magnet for Absolute Measure of Horizontal Force made with the Elliott Instrument.

Greenwich Civil Time. 1892.	Distances of Centres of Magnets.	Temperature Centigrade.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature Centigrade.	Observer.
d h	cms.	°	° ′ ″	s		°	
January 22. 14	30	6·4	20. 18. 35	4·209	100	5·8	N
	40		8. 25. 25	4·211	100	6·5	
January 29. 14	30	10·4	20. 18. 32	4·213	100	9·8	N
	40		8. 25. 15	4·212	100	10·1	
February 18. 15	30	5·4	20. 26. 45	4·207	100	4·9	N
	40		8. 26. 7	4·210	100	5·1	
March 16. 14	30	9·4	20. 18. 40	4·209	100	7·6	N
	40		8. 23. 57	4·209	100	9·2	
April 14. 14	30	8·5	20. 15. 20	4·207	100	7·3	N
	40		8. 23. 0	4·211	100	9·0	
May 17. 15	30	14·8	20. 10. 45	4·215	100	14·3	N
	40		8. 21. 2	4·211	100	14·7	
June 16. 15	30	14·6	20. 6. 17	4·220	100	14·1	N
	40		8. 19. 40	4·215	100	14·6	
July 19. 15	30	15·2	20. 10. 55	4·216	100	15·0	N
	40		8. 21. 22	4·222	100	15·1	
September 16. 15	30	18·0	20. 7. 20	4·229	100	17·5	N
	40		8. 19. 30	4·226	100	18·1	
October 20. 14	30	10·5	20. 11. 27	4·225	100	9·8	N
	40		8. 21. 12	4·220	100	10·5	
November 16. 14	30	14·2	20. 7. 32	4·221	100	13·6	N
	40		8. 19. 17	4·223	100	14·1	
December 15. 14	30	10·6	20. 12. 48	4·229	100	9·6	N
	40		8. 20. 18	4·217	100	10·7	

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 deflexion given in the table above is the mean of the four deflexions observed in these positions of the magnets.
The initial N is that of Mr. Nash.
In the subsequent calculations every observation is reduced to the temperature 0° Centigrade.

Computation of the Values of Horizontal Force in Absolute Measure.

Greenwich Civil Time, 1892.	In C.G.S. Measure.									In Metric Measure.	
	Apparent Value of A_1.	Apparent Value of A_2.	Apparent Value of P.	Mean Value of P.	Log. $\frac{m}{X}$	Corrected Time of Vibration of Deflecting Magnet.	Log. m X.	Value of m.	Value of Horizontal Force X.	Value of Horizontal Force. As observed.	Value of Horizontal Force. Reduced to Mean of Month.
d h						s					
Jan. 22 14	4698·1	4699·9	− 0·81	+ 4·49	3·67031	4·2072	2·19387	855·2	0·18272	1·8272	1·8276
Jan. 29 14	4707·5	4708·1	− 0·28		3·67112	4·2060	2·19417	856·3	0·18261	1·8261	1·8283
Feb. 18 15	4725·9	4704·0	+ 9·52		3·67178	4·2068	2·19394	856·8	0·18242	1·8242	1·8258
Mar. 16 14	4705·7	4693·6	+ 5·26		3·67037	4·2045	2·19446	855·9	0·18283	1·8283	1·8278
April 14 14	4691·3	4682·7	+ 3·74		3·66920	4·2048	2·19440	854·7	0·18306	1·8306	1·8310
May 17 15	4689·4	4679·7	+ 4·26		3·66897	4·2027	2·19490	854·9	0·18321	1·8321	1·8311
June 16. 15	4672·3	4666·6	+ 2·51		3·66757	4·2074	2·19392	852·6	0·18330	1·8330	1·8330
July 19. 15	4690·9	4683·7	+ 3·17		3·66923	4·2082	2·19376	854·1	0·18292	1·8292	1·8293
Sept. 16. 15	4684·7	4673·4	+ 4·97		3·66846	4·2137	2·19267	852·2	0·18285	1·8285	1·8285
Oct. 20. 14	4681·6	4670·8	+ 4·74		3·66820	4·2165	2·19201	851·3	0·18277	1·8277	1·8292
Nov. 16. 14	4676·0	4662·0	+ 6·16		3·66752	4·2121	2·19296	851·6	0·18311	1·8311	1·8294
Dec. 15. 14	4686·7	4662·6	+ 10·61		3·66805	4·2166	2·19198	851·2	0·18279	1·8279	1·8271
Means ...	...	...	...	...	...	...	...	...	0·18288	1·8288	1·8290

Comparison of the Results for Absolute Horizontal Force in Metric Measure (reduced to Mean of Month) as determined from the Gibson and Elliott Instruments respectively.

Year.	Gibson Instrument.	Elliott Instrument.	Excess by Elliott Instrument.
1891	1·8254	1·8288	0·0034
1892	1·8269	1·8290	0·0021

MONTHLY MEAN DIURNAL INEQUALITIES OF MAGNETIC ELEMENTS 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 for comparison with results at other British Observatories. The days included are January 2, 9, 20, 22, 30, February 3, 8, 17, 18, 22, March 10, 14, 17, 18, 23, April 5, 16, 17, 20, 22, May 12, 13, 15, 23, 26, June 8, 9, 12, 14, 15, July 5, 6, 8, 20, 23, August 11, 14, 15, 19, 30, September 4, 5, 9, 12, 25, October 9, 17, 23, 26, 28, November 8, 11, 12, 16, 27, December 3, 9, 18, 26, 27. Owing to want of photographic register the results in September for Declination and Horizontal Force depend on observations on September 4 and 5 only, and for Vertical Force in December on observations on December 3, 18, 26, and 27 only.

The results for Declination are given in minutes of arc: those for Horizontal Force and Vertical Force are given both in terms of the whole Horizontal or Vertical Force and in terms of the Millimètre-Milligramme-Second (Metric) Unit. The letter *f* indicates values in terms of the whole Horizontal or Vertical Force, and the letter *m* values in terms of the Metric Unit, the unit for the former values being ·00001 of the whole Horizontal or Vertical Force, and for the latter ·00001 of the Metric Unit, or ·000001 of the Centimètre-Gramme-Second (C.G.S.) Unit. The values of the whole Horizontal and Vertical Forces expressed in terms of the Metric Unit are 1·8269 and 4·3745 respectively for the year.

TABLE XX.—MONTHLY MEAN DIURNAL INEQUALITY OF MAGNETIC DECLINATION WEST.

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

1892.

Hour Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September. (2 days.)	October.	November.	December.	For the Year.
Midnight	′ 0·8	′ 0·6	′ 2·0	′ 4·5	′ 5·4	′ 5·5	′ 5·6	′ 4·5	′ 4·8	′ 1·1	′ 0·8	′ 1·2	′ 2·49
1h	0·8	0·2	2·0	4·5	5·1	5·3	5·2	4·3	4·6	1·5	1·1	1·7	2·45
2	0·9	0·4	2·2	4·1	5·0	5·2	4·1	4·1	3·3	1·6	1·2	2·1	2·27
3	0·0	0·2	2·3	4·0	4·6	5·0	3·8	3·6	2·6	1·9	1·1	2·2	2·03
4	0·1	0·8	2·8	3·6	3·7	3·7	2·8	3·1	2·2	1·9	1·3	2·2	1·77
5	0·8	0·9	3·0	3·2	2·1	2·0	1·2	2·0	1·4	1·9	0·9	2·1	1·21
6	0·7	1·8	2·6	2·4	0·7	0·3	0·1	0·6	0·6	1·7	0·9	1·7	0·60
7	0·7	2·1	1·2	1·0	0·0	0·0	0·1	0·0	0·0	1·2	0·7	1·6	0·14
8	0·4	2·1	0·0	0·0	0·7	0·5	0·0	0·1	1·1	0·1	0·3	1·7	0·00
9	0·6	2·0	0·6	0·2	2·5	2·4	1·3	1·9	3·3	0·0	0·0	2·1	0·83
10	2·0	3·0	2·2	2·2	5·4	5·0	3·4	5·2	6·4	1·4	0·7	2·9	2·74
11	3·2	4·5	5·6	5·5	8·7	8·3	6·7	8·7	9·5	4·8	2·4	4·5	5·45
Noon	5·5	7·0	8·8	8·5	12·0	11·8	10·6	11·9	10·7	7·5	4·1	5·6	8·09
13h	6·4	7·1	9·7	10·1	13·0	13·4	12·4	13·2	10·9	9·5	4·9	6·1	9·14
14	5·8	7·1	8·9	10·2	11·7	13·2	12·6	12·2	10·0	9·5	4·8	5·2	8·69
15	4·3	6·1	7·7	8·7	9·9	11·5	11·2	10·1	8·2	8·3	4·2	4·5	7·31
16	3·7	4·2	5·9	7·2	8·0	9·6	8·9	7·2	6·2	6·5	3·7	3·4	5·63
17	2·9	2·9	4·4	6·2	6·3	8·3	7·0	5·3	4·8	5·0	3·0	3·1	4·35
18	2·3	3·6	3·5	5·5	5·2	7·2	5·8	4·4	4·6	3·9	2·5	2·9	3·70
19	1·7	2·4	3·0	5·3	4·8	6·6	5·6	4·9	5·1	3·2	2·0	2·3	3·33
20	1·1	1·7	2·7	5·2	5·0	6·3	5·6	4·2	4·3	3·0	1·5	1·7	2·95
21	0·6	1·2	2·1	5·1	5·4	6·2	5·8	4·7	4·5	2·7	1·0	1·2	2·79
22	0·5	0·9	2·3	5·0	5·7	6·2	5·7	4·4	5·1	2·0	0·8	0·2	2·65
23	0·4	0·7	2·7	4·7	5·5	5·9	5·4	4·2	4·8	1·5	0·9	0·0	2·48
24	0·5	0·0	3·1	4·5	5·1	5·7	5·3	3·8	3·8	0·9	1·2	0·5	2·29
Means 0h—23h	′ 1·93	′ 2·65	′ 3·67	′ 4·87	′ 5·68	′ 6·23	′ 5·45	′ 5·20	′ 4·96	′ 3·40	′ 1·87	′ 2·59	′ 3·46
Means 1h—24h	′ 1·91	′ 2·62	′ 3·72	′ 4·87	′ 5·67	′ 6·23	′ 5·44	′ 5·17	′ 4·92	′ 3·40	′ 1·88	′ 2·56	′ 3·45

TABLE XXI.—MONTHLY MEAN DIURNAL INEQUALITY OF HORIZONTAL MAGNETIC FORCE.

(The results are corrected for temperature and in each case diminished by the smallest hourly value.)

1892.

Hour Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September. (2 days.)		October.		November.		December.		For the Year.	
	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m
Midn.	105	192	122	223	127	232	204	373	202	369	213	389	222	406	233	426	197	360	165	301	97	177	66	121	152·6	278·7
1^h	114	208	97	177	116	212	204	373	183	334	193	353	213	389	231	422	177	323	159	290	101	185	57	104	143·5	262·1
2	131	239	92	168	118	216	199	364	164	300	194	354	198	362	219	400	174	318	163	298	99	181	60	110	140·7	257·1
3	120	219	70	128	120	219	190	347	162	296	190	347	186	340	216	395	157	287	177	323	106	194	61	111	136·1	248·5
4	132	241	55	100	116	212	188	343	158	289	188	343	182	332	212	387	140	256	172	314	119	217	74	135	134·5	245·4
5	135	247	76	139	139	254	186	340	158	289	167	305	159	290	196	358	137	250	178	325	123	225	83	152	134·5	245·8
6	132	241	74	135	155	283	173	316	145	265	130	237	128	234	181	331	100	183	174	318	126	230	91	166	123·9	226·2
7	126	230	123	225	118	216	144	263	79	144	80	146	100	183	138	252	35	64	166	303	122	223	91	166	100·0	182·6
8	108	197	97	177	81	148	106	194	23	42	28	51	72	132	78	142	0	0	110	201	97	177	78	142	63·0	114·9
9	67	122	61	111	0	0	44	80	0	0	0	0	34	62	10	18	0	0	44	80	43	79	44	80	18·7	34·0
10	29	53	26	47	7	13	0	0	6	11	30	55	0	0	0	0	8	15	0	0	9	16	8	15	0·0	0·0
11	0	0	6	11	2	4	12	22	33	60	78	142	0	0	18	33	56	102	2	4	0	0	3	5	7·3	13·2
Noon	29	53	0	0	26	47	60	110	95	173	134	245	34	62	71	130	151	276	15	27	15	27	0	0	42·3	77·1
13^h	55	100	31	57	75	137	109	199	133	243	175	320	88	161	135	247	211	385	83	152	47	86	20	37	86·6	158·3
14	104	190	61	111	117	214	159	290	172	314	213	389	147	269	182	332	211	385	112	205	91	166	47	86	124·5	227·2
15	118	216	81	148	143	261	185	338	206	376	230	420	193	353	226	413	188	343	120	219	107	195	47	86	143·5	262·0
16	120	219	100	183	137	250	217	396	234	427	202	369	223	407	250	457	147	269	106	194	121	221	61	111	149·6	273·2
17	121	221	118	216	135	247	221	404	246	449	224	409	251	459	266	486	145	265	129	236	137	250	96	175	163·9	299·4
18	149	272	146	267	168	307	242	442	262	479	242	442	271	495	289	528	182	332	145	265	141	258	76	139	182·6	333·5
19	165	301	136	248	205	375	260	475	270	493	254	464	283	517	295	539	222	406	162	296	142	259	84	153	196·3	358·5
20	171	312	159	290	198	362	252	460	254	464	258	471	285	521	301	550	199	364	176	322	147	269	109	199	198·9	363·3
21	152	278	134	245	188	343	248	453	261	477	246	449	271	495	298	544	204	373	182	332	153	280	96	175	192·6	351·6
22	138	252	126	230	181	331	245	448	261	477	238	435	249	455	292	533	179	327	186	340	151	276	88	161	184·3	336·7
23	149	272	155	283	199	364	242	442	250	457	228	417	237	433	304	555	202	369	205	375	133	243	95	174	189·7	346·6
24	153	280	164	300	202	369	240	438	236	431	216	395	248	453	284	519	227	415	202	369	143	261	78	142	189·2	345·6
Means $0^h - 23^h$	111·2	203·1	89·4	163·3	119·6	218·6	170·4	311·3	164·9	301·2	172·3	314·7	167·8	306·5	193·4	353·2	142·6	260·5	130·5	238·3	101·1	184·8	64·0	116·8	125·4	229·0
$1^h - 24^h$	113·3	206·8	91·2	166·5	122·7	224·3	171·9	314·0	166·3	303·7	172·4	314·9	168·8	308·5	195·5	357·1	143·8	262·8	132·0	241·2	103·0	188·3	64·5	117·7	126·9	231·8

TABLE XXII.—MONTHLY MEAN DIURNAL INEQUALITY OF VERTICAL MAGNETIC FORCE.

(*The results are corrected for temperature and in each case diminished by the smallest hourly value.*)

1892.

Hour Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November		December. (4 days.)		For the Year.	
	f	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*	*f*	*m*
Midn.	17	74	15	66	47	206	43	188	66	289	70	306	68	297	27	118	45	197	18	79	20	87	9	39	34·5	150·9
1^h	15	66	2	9	47	206	45	197	70	306	64	280	66	289	27	118	39	171	14	61	20	87	11	48	32·4	141·9
2	10	44	0	0	45	197	39	171	74	324	66	289	62	271	25	109	41	179	8	35	22	96	7	31	30·7	134·2
3	10	44	2	9	52	227	44	192	72	315	66	289	60	262	27	118	41	179	8	35	18	79	16	70	32·1	140·3
4	8	35	12	52	50	219	46	201	78	341	74	324	66	289	32	140	41	179	10	44	22	96	15	66	35·2	154·2
5	8	35	19	83	52	227	46	201	74	324	76	332	72	315	38	166	43	188	16	70	27	118	19	83	38·2	167·2
6	8	35	23	101	46	201	46	201	76	332	70	306	64	280	44	192	45	197	18	79	27	118	18	79	37·8	165·4
7	12	52	23	101	48	210	56	245	70	306	68	297	56	245	54	236	47	206	20	87	29	127	18	79	39·1	171·3
8	17	74	25	109	44	192	50	219	56	245	62	271	50	219	46	201	41	179	22	96	35	153	20	87	36·4	159·1
9	21	92	21	92	36	157	32	140	40	175	44	192	40	175	32	140	25	109	20	87	33	144	20	87	27·7	121·2
10	25	109	9	39	22	96	27	118	18	79	28	122	26	114	16	70	8	35	8	35	19	83	17	74	16·0	69·9
11	15	66	5	22	6	26	8	35	9	39	6	26	14	61	6	26	0	0	2	9	1	4	10	44	4·2	18·5
Noon	9	39	9	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	57	0·0	0·0
13^h	13	57	17	74	14	61	2	9	18	79	16	70	4	17	6	26	11	48	2	9	6	26	24	105	8·5	37·1
14	18	79	25	109	32	140	22	96	38	166	36	157	32	140	18	79	23	101	16	70	18	79	28	122	22·9	100·2
15	24	105	31	136	46	201	36	157	52	227	48	210	46	201	30	131	31	136	32	140	20	87	28	122	32·7	143·1
16	22	96	35	153	59	258	46	201	68	297	62	271	58	254	43	188	41	179	42	184	23	101	34	149	41·8	183·0
17	18	79	35	153	61	267	46	201	74	324	66	289	68	297	47	206	45	197	48	210	29	127	35	153	45·1	197·3
18	17	74	30	131	62	271	44	192	78	341	68	297	74	324	41	179	41	179	46	201	22	96	30	131	43·5	190·0
19	13	57	30	131	53	232	40	175	78	341	64	280	70	306	37	162	41	179	44	192	26	114	30	131	41·2	180·4
20	6	26	24	105	49	214	44	192	76	332	68	297	60	262	37	162	37	162	40	175	22	96	21	92	37·7	164·9
21	2	9	22	96	43	188	40	175	74	324	60	262	58	254	33	144	39	171	36	157	20	87	14	61	34·1	149·4
22	0	0	20	87	41	179	38	166	68	297	62	271	56	245	33	144	37	162	34	149	20	87	13	57	32·6	142·4
23	6	26	12	52	38	166	37	162	68	297	62	271	58	254	25	109	35	153	24	105	16	70	10	44	30·0	131·1
24	0	0	6	26	30	131	39	171	66	289	62	271	60	262	25	109	31	136	6	26	12	52	0	0	25·5	111·5
Means 0^h-23^h	13·1	57·2	18·6	81·2	41·4	180·9	36·5	159·8	58·1	254·2	54·4	237·9	51·2	223·8	30·2	131·8	33·2	145·2	22·0	96·2	20·6	90·1	19·2	83·8	30·6	133·9
1^h-24^h	12·4	54·1	18·2	79·5	40·7	177·8	36·4	159·0	58·1	254·2	54·1	236·4	50·8	222·3	30·1	131·5	32·6	142·7	21·5	94·0	20·3	88·6	18·8	82·2	30·2	132·2

ROYAL OBSERVATORY, GREENWICH.

MAGNETIC DISTURBANCES

AND

EARTH CURRENTS.

1892.

MAGNETIC DISTURBANCES in DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, recorded at the ROYAL OBSERVATORY, GREENWICH, in the Year 1892.

The following notes give a brief description of all magnetic movements (superposed on the ordinary diurnal movement) exceeding 3′ in Declination, 0·001 in Horizontal Force, or 0·0003 in Vertical Force, as taken from the photographic records of the respective Magnetometers. The movements in Horizontal and Vertical Force are expressed in parts of the whole Horizontal and Vertical Forces respectively. 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).

1892.

January 4. 12^h to 6. 12^h. See Plate I.

8. 15^h to 9. 5^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

11. 16^h to 12. 2^h Fluctuations in Dec. (± 3′), with wave 11. 20^h to $22\frac{1}{2}^h$ (− 15′): fluctuations in H.F. (± ·001): in V.F. small.

12. $17\frac{3}{4}^h$ to 20^h Wave in Dec. (− 10′), followed till 13. 9^h by fluctuations (± 3′). 12. $17\frac{3}{4}^h$ to 13. 9^h Fluctuations in H.F. (± ·0015). 12. 18^h to 13. 2^h Small fluctuations in V.F.

16. 0^h to 17. 3^h Fluctuations in Dec. (± 4′), with wave 17. $0\frac{1}{2}^h$ to $1\frac{3}{4}^h$ (+ 12′): fluctuations in H.F. (± ·001), with wave 17. $0\frac{1}{2}^h$ to $1\frac{3}{4}^h$ (+ ·0015). 16. 0^h to 4^h Wave in V.F. (− ·0003). 17. 0^h to 3^h Fluctuations in V.F. (± ·0004).

17. 6^h to 24^h Fluctuations in Dec. (± 4′), with irregular wave $16\frac{1}{2}^h$ to $18\frac{1}{4}^h$ (− 15′): fluctuations in H.F. (± ·002), with wave 20^h to $21\frac{3}{4}^h$ (+ ·004). 17. $11\frac{1}{2}^h$ to 22^h Long wave in V.F. (+ ·0007), with small superposed fluctuations.

18. 16^h to 19^h Wave in Dec. (− 11′): fluctuations in H.F. (± ·001): in V.F. small. $22\frac{1}{2}^h$ to 24^h Wave in Dec. (+ 5′): in H.F. (+ ·002): small decrease in V.F.

19. $17\frac{1}{2}^h$ to 20^h Wave in Dec. (− 8′): small fluctuations in H.F. and V.F.

20. 1^h to 4^h Fluctuations in Dec. (± 3′): in H.F. and V.F. small. 12^h to 19^h Small fluctuations in Dec.: in H.F. (± ·001).

21. $1\frac{1}{2}^h$ to 3^h Wave in Dec. (+ 5′): in H.F. (+ ·0008). 19^h to 21^h Wave in Dec. (− 6′): in H.F. small fluctuations.

23. 12^h to 24. 6^h Fluctuations in Dec. (± 3′): in H.F. small.

24. 12^h to 25. 1^h Fluctuations in Dec. (± 3′): in H.F. (± ·0006): in V.F. small.

28. $18\frac{1}{4}^h$ to 20^h Small fluctuations in Dec. $18\frac{1}{4}^h$ to 19^h Wave in H.F., sharp at commencement (+ ·0015): $18\frac{1}{3}^h$ small wave in V.F. (+ ·0002). 28. 22^h to 29. 1^h Irregular wave in Dec. (− 8′): in H.F. (− ·002): in V.F. small fluctuations.

29. 5^h to 21^h Fluctuations in Dec. (± 5′): in H.F. (± ·001). 8^h to 14^h Long irregular wave in H.F. (− ·005), followed till 21^h by fluctuations (± ·001). 10^h to 22^h Long wave in V.F. (+ ·0006), with small superposed fluctuations.

31. 1^h to 6^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

1892.

February 1. 19^h to $21\frac{1}{4}^h$ Wave in Dec. (− 7′). 19^h to 23^h Irregular wave in H.F. (− ·002).

2. $4\frac{1}{4}^h$ to $6\frac{1}{4}^h$ Wave in Dec. (+ 13′): in H.F. (+ ·0025): in V.F. (− ·0006). 2. $10\frac{3}{4}^h$ to 3. 14^h Frequent fluctuations in Dec. (± 5′): in H.F. (± ·002). 3. 0^h to 1^h Decrease of V.F. (− ·0006).

3. 22^h to 5. 7^h Fluctuations in Dec. (± 5′): in H.F. (± ·002), with wave 3. 22^h to 4. 1^h (+ ·003): fluctuations in V.F. (± ·0002).

5. $18\frac{3}{4}^h$ to 21^h Wave in Dec. (− 8′): small fluctuations in H.F.

6. 0^h to 7^h Fluctuations in Dec. (± 4′): in H.F. (± ·0015). 1^h to 2^h Decrease of V.F. (− ·0005). 6. 17^h to 7. 4^h Fluctuations in Dec. (± 3′): in H.F. small.

7. 8^h to 11^h Wave in H.F. (− ·002). 7. 17^h to 21^h Two successive waves in Dec. (− 10′ and − 8′): fluctuations in H.F. (± ·001): in V.F. small. 7. 23^h to 8. 2^h Wave in Dec. (− 8′): small fluctuations in H.F.

8. 12^h to 22^h Small fluctuations in Dec., H.F. and V.F.

9. 18^h to 21^h Small fluctuations in Dec.: irregular wave in H.F. (− ·002): wave in V.F. (+ ·0003). 9. $23\frac{1}{4}^h$ to 10. 2^h Wave in Dec. (− 10′). 9. $23\frac{1}{2}^h$ to 10. $0\frac{3}{4}^h$ Wave in H.F. (+ ·002).

10. 19^h to 22^h Fluctuations in Dec. (± 3′): in H.F. (± ·001).

11. 10^h to 16^h Long wave in Dec. (+ 7′): small fluctuations in H.F. and V.F.

12. 19^h to 24^h Fluctuations in Dec. (± 3′): in H.F. (± ·0008).

13. 0^h to 15. 0^h. See Plates II. and III.

15. 6^h to 13^h Small rapid fluctuations in Dec.: in H.F. (± ·001): in V.F. small.

15. 13^h to 16. 0^h. See Plate IV.

16. 17^h to 17. 6^h Fluctuations in Dec. (± 4′): in H.F. (± ·001): in V.F. small.

18. 21^h to 19. 3^h Fluctuations in Dec. (± 5′): in H.F. (± ·001): in V.F. (± ·0002).

19. 23^h to 20. 3^h Fluctuations in Dec. (± 3′): in H.F. and V.F. small.

20. 18^h to 21. 4^h. See Plate IV.

21. 4^h to 10^h Fluctuations in Dec. (± 5′): in H.F. (± ·002): in V.F. small. 21. $16\frac{3}{4}^h$ to 18^h Wave in Dec. (− 10′): in H.F. (− ·0045): in V.F. (+ ·0004).

22. 18^h to 23. 2^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

24. 0^h to 10^h Fluctuations in Dec. (± 5′): in H.F. (± ·001): in V.F. (± ·0002). 24. 18^h to 25. 4^h Fluctuations in Dec. (± 5′): in H.F. (± ·0015): in V.F. (± ·0003).

25. 17^h to 26. 4^h Fluctuations in Dec. (± 5′): in H.F. (± ·002): in V.F. (± ·0001).

26. 12^h to 19^h Fluctuations in Dec. (± 7′): in H.F. (± ·0015): in V.F. small.

26. 23^h to 27. 23^h. See Plate IV.

28. 17^h to 29. 5^h Fluctuations in Dec. (± 5′): in H.F. (± ·001).

29. 12^h to March 5. 12^h. See Plates IV., V., and VI.

March 6. 8^h to 9. 8^h. See Plates VI. and VII.

9. 16^h to 24^h Fluctuations in Dec. (± 6′), with wave 17^h to 19^h (− 8′): fluctuations in H.F. (± ·001): in V.F. (± ·0002).

10. 12^h to 18^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

11. 1^h to 21^h Fluctuations in Dec. (± 6′): in H.F. (± ·001): in V.F. small.

11. 21^h to 13. 7^h. See Plates VIII. and IX.

15. 20^h to 16. 3^h Fluctuations in Dec. (± 3′), with wave 15. 22^h to 16. $0\frac{1}{2}^h$ (− 15′): rapid fluctuations in H.F. (± ·0015): in V.F. (± ·0001).

18. 20^h to 22^h Fluctuations in Dec. (± 5′). $20\frac{1}{3}^h$ to $21\frac{2}{3}^h$ Wave in H.F. (+ ·005). $20\frac{1}{2}^h$ to 21^h Decrease of V.F. (− ·0003).

19. 20^h to 24^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

21. 23^h to 22. 2^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

24. 4^h to 11^h Small fluctuations in Dec. and H.F.

24. 19^h to 26. 6^h. See Plate IX.

26. 6^h to 27. 7^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

27. 18^h to 28. 8^h Fluctuations in Dec. (± 6′): in H.F. (± ·002): in V.F. (± ·0002).

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March 28. 14^h to 29. 8^h Fluctuations in Dec. (± 7′), with wave 28. $21\frac{1}{2}^h$ to 29. 2^h (− 10′): fluctuations in H.F. (± ·002): in V.F. (± ·0002).

30. 1^h to 31. 3^h Fluctuations in Dec. (± 5′): in H.F. (± ·0015): in V.F. small.

31. 12^h to April 1. 5^h Fluctuations in Dec. (± 4′): in H.F. (± ·001): in V.F. small.

April 1. $17\frac{1}{2}^h$ to 20^h Wave in Dec. (− 6′). 13^h to 21^h Fluctuations in H.F. (± ·0008). 13^h to 23^h Long wave in V.F. (+ ·0005).

2. 21^h to 3. 3^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F. small.

3. 19^h to 4. 3^h Fluctuations in Dec. (± 3′): in H.F. small.

6. 22^h to 7. 9^h Fluctuations in Dec. (± 3′): small in H.F., with wave 7. 0^h to 1^h (+ ·002). 7. 0^h to 1^h Decrease of V.F (− ·0005).

7. 19^h to 8. 1^h Fluctuations in Dec. (± 4′): in V.F. (± ·0002). 7. $19\frac{3}{4}^h$ to $20\frac{3}{4}^h$ Irregular wave in H.F. (+ ·003). 7. $22\frac{1}{4}^h$ to 8. 0^h Wave in H.F. (+ ·003).

8. $10\frac{1}{2}^h$ Sharp wave in Dec. (− 4′): in H.F. (− ·0015): in V.F. (−·0002). $20\frac{3}{4}^h$ to 22^h Wave in Dec. (−10′): in H.F. (+ ·0015).

9. 5^h to 19^h Rapid fluctuations in Dec. (± 5′): in H.F. (± ·001): in V.F. small, with wave $8\frac{1}{4}^h$ to $9\frac{1}{2}^h$ (− ·0005). 9. 20^h to 10. 11^h Fluctuations in Dec. (± 7′): in H.F. (± ·0015): in V.F. small.

10. 20^h to 11. 12^h Fluctuations in Dec. (± 3′): in H.F. (± ·0007).

11. 22^h to 12. 4^h Fluctuations in Dec. (± 3′): in H.F. (± ·0006): in V.F. (± ·0001).

12. 20^h to 23^h Wave in Dec. (− 7′).

14. 23^h to 15. 5^h Fluctuations in Dec. (± 3′): in H.F. and V.F. small.

15. 20^h to 22^h Wave in Dec. (− 6′): in H.F. (+ ·0015).

23. 22^h to 24. 6^h Fluctuations in Dec. (± 7′): in H.F. (± ·001). 23. 23^h to 24. 7^h Long wave in V.F. (− ·001), with small superposed fluctuations.

24. 19^h to 25. 2^h Fluctuations in Dec. (± 10′). 24. 16^h to 25. 2^h Small fluctuations in H.F., with waves, 24. $21\frac{1}{2}^h$ to $22\frac{1}{2}$ (+ ·005), and 25. $0\frac{3}{4}^h$ to $1\frac{3}{4}^h$ (+ ·003): fluctuations in V.F. (± ·0005).

25. 12^h to 27. 12^h. See Plates X. and XI.

29. 18^h to 30. 5^h Fluctuations in Dec. (± 7′): in H.F. (± ·0015): in V.F. small.

30. $21\frac{1}{2}^h$ to $22\frac{1}{2}^h$ Wave in Dec. (− 4′): in H.F. (+ ·003).

May 1. 0^h to 3. 0^h. See Plates XI. and XII.

3. 0^h to 6^h Fluctuations in Dec. (± 4′): in H.F. (± ·0008): in V.F. (± ·0002). 3. 12^h to 4. 3^h Fluctuations in Dec. (± 6′): in H.F. (± ·0015). 3. $23\frac{3}{4}^h$ to 4. $0\frac{1}{4}^h$ Decrease of V.F. (− ·001).

5. 14^h to 6. 2^h Fluctuations in Dec. (± 4′): in H.F. (± ·0015). 5. 15^h to 23^h Long wave in V.F. (+ ·001).

6. 5^h to 19^h Small rapid fluctuations in Dec., H.F. and V.F.

7. 12^h to 8. 11^h Fluctuations in Dec. (± 8′): in H.F. (± ·0015): in V.F. (± ·0004).

9. 15^h to 10. 1^h Fluctuations in Dec. (± 3′): in H.F. (± ·001). 9. 15^h to 23^h Long wave in V.F. (+ ·0007).

16. 12^h to 20. 12^h. See Plates XII., XIII., and XIV.

21. 23^h to 22. 10^h Fluctuations in Dec. (± 4′): in V.F. (± ·0002). 21. 17^h to 22. 13^h Fluctuations in H.F. (± ·001).

24. 13^h to 25. 2^h Fluctuations in H.F. (± ·0015): in Dec. and V.F. small.

27. 23^h to 28. 3^h Double wave in Dec. (− 4′ to + 4′).

28. 15^h to 21^h Fluctuations in H.F. (± ·001).

30. 21^h to 31. 10^h Fluctuations in Dec. (± 5′): in V.F. (± ·0002). 30. 14^h to 31. 7^h Fluctuations in H.F. (± ·001).

31. 20^h to June 1. 7^h Fluctuations in Dec. (± 3′): in H.F. and V.F. small.

June 2. 12^h to 3. 12^h. See Plate XIV.

3. 12^h to 20^h Fluctuations in Dec. (± 3′): in H.F. (± ·003): in V.F. (± ·0002).

4. 18^h to 24^h Fluctuations in Dec. (± 9′): in H.F. (± ·0025): in V.F. (± ·0004).

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June 16. 15^h to 17. 8^h Fluctuations in Dec. (± 3′) : in H.F. (± ·0015) : in V.F. small.

22. 15^h to 20^h Fluctuations in H.F. (± ·001).

24. 17^h to 25. 4^h Fluctuations in Dec. (± 5′) : in H.F. (± ·0007) : in V.F. small.

27. 4^h to 28. 4^h. See Plate XV.

28. 4^h to 29. 1^h Fluctuations, frequently rapid, in Dec. (± 3′) : in H.F. (± ·001), with wave 28. $15\frac{1}{2}^h$ to $17\frac{1}{2}^h$ (+ ·005) : Fluctuations in V.F. (± ·0002).

29. 12^h to 16^h Fluctuations in H.F. (± ·001) : in Dec. and V.F. small.

30. 3^h to 11^h Fluctuations in Dec. (± 5′) : in H.F. (± ·001) : in V.F. small.

July 1. 1^h to $1\frac{3}{4}^h$ Wave in Dec. (+ 6′), followed till 8^h by small rapid fluctuations both in Dec. and H.F.

2. 22^h to 3. 7^h Fluctuations in Dec. (± 4′). 2. 12^h to 3. 4^h Fluctuations in H.F. (± ·001) : in V.F. small.

9. 13^h to 10. 4^h Fluctuations in H.F. (± ·0015). 10. 2^h to 7^h Fluctuations in Dec. (± 7′). 10. 3^h to 4^h Decrease of V.F. (− ·0005).

10. 20^h to 22^h Wave in Dec. (− 6′). 10. 14^h to 21^h Small fluctuations in H.F.

11. 12^h to 15^h Wave in Dec. (+ 20′) : small fluctuations in H.F. : wave in V.F. (− ·001).

12. 0^h to 3^h Fluctuations in Dec. (± 4′) : in H.F. (± ·0005) : in V.F. (± ·0002).

12. 12^h to 14. 12^h. See Plate XVI.

14. 12^h to 15. 2^h Fluctuations in Dec. (± 4′) : in H.F. (± ·0015). 14. 12^h to 22^h Wave in V.F. (+ ·0015).

16. 12^h to 18. 12^h. See Plates XVII. and XVIII.

19. 12^h to 18^h Fluctuations in Dec. (± 3′) : in H.F (± ·001) : in V.F. small.

21. 0^h to 8^h Small rapid fluctuations in Dec. with wave, $2\frac{1}{2}^h$ to $4\frac{1}{2}^h$ (+ 20′) : fluctuations in H.F. (± ·0025). 2^h to 6^h Wave in V.F. (− 0015). 12^h to 20^h Fluctuations in H.F. (± ·001).

22. 0^h to 14^h Fluctuations in Dec. (± 8′) : in H.F. (± ·002) : in V.F. (± ·0002). $19\frac{1}{2}^h$ to $20\frac{1}{2}^h$ Wave in Dec. (− 8′) : double wave in H.F. (− ·0015 to + ·0015). $19\frac{3}{4}^h$ to $20\frac{1}{2}^h$ Wave in V.F. (+ ·0002).

24. 23^h to 25. 4^h Double wave in Dec. (− 5′ to + 4′). 24. 15^h to 25. 3^h Fluctuations in H.F. (± ·001).

26. 0^h to 27. 3^h Fluctuations in Dec. (± 9′) : in H.F. (± ·002), with wave, 26. 8^h to 14^h (− ·008). Waves in V.F. 26. 0^h to 7^h (− ·0012), and 26. 13^h to 21^h (+ ·002).

27. 20^h to 28. 2^h Fluctuations in Dec. (± 3′), with wave, 28. 0^h to 1^h (+ 15′) : fluctuations in H.F. (± ·0015). 28. 0^h to $0\frac{1}{2}^h$ Decrease of V.F. (− ·0008).

28. 12^h to 17^h Fluctuations in H.F. (± ·0015). 28. 22^h to 30. 1^h Fluctuations in Dec. (± 3′) : in H.F. (± ·003) : in V.F. (± ·0002).

August 3. 13^h to 23^h. See Plate XVIII.

3. 23^h to 4. 2^h Fluctuations in Dec. (± 3′) : in H.F. (± ·001).

4. 14^h to 5. 1^h. See Plate XVIII.

6. 15^h to 7. 7^h Fluctuations in Dec. (± 5′) : in H.F. (± ·0015) : in V.F. (± ·0002).

7. 13^h to 8. 1^h Small rapid fluctuations in Dec., H.F., and V.F.

8. 3^h to 12^h Irregular double wave in Dec. (+ 10′ to − 6′) : fluctuations in H.F. (± ·002). 8. 21^h to 9. 5^h Fluctuations in Dec. (± 3′) : in H.F. (± ·001).

9. $21\frac{1}{2}^h$ to $23\frac{1}{4}^h$ Irregular wave in H.F. (+ ·003).

12. 12^h to 13. 12^h. See Plate XIX.

20. 16^h to 21^h Fluctuations in H.F. (± ·001) : in Dec. and V.F. small.

24. 10^h to 25. 4^h Fluctuations in Dec. (± 3′), with wave, 25. 0^h to $1\frac{1}{2}^h$ + 15′) : fluctuations in H.F. (± ·002). 24. 23^h to 25. 5^h Wave in V.F. (− ·001).

25. 12^h to 26. 3^h Fluctuations in Dec. (± 5′) : in H.F. (± ·001) : in V.F. small.

26. 12^h to 27. 2^h Fluctuations in Dec. (± 5′) : in H.F. (± ·001) : in V.F. small.

31. $21\frac{1}{3}^h$ to 23^h Wave in Dec. (− 7′). 31. 14^h to 23^h Small fluctuations in H.F. and V.F.

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September 1. 23^h to 2. $22\frac{1}{2}^h$ Fluctuations in Dec. (± 4′) : in H.F. (± ·001).
5. 22^h to 6. 8^h. See Plate XX.
6. 12^h to October 3. 12^h. No register of Dec. or H.F.
11. 14^h to 23^h Long wave in V.F. (+ ·001), with rapid superposed fluctuations.
12. 22^h to 13. 9^h. See Plate XX.
14. 12^h to 18^h Fluctuations in V.F. (± ·0002).
16. 1^h to 17. 2^h Fluctuations in V.F. (± ·0002).
21. 14^h to 22. 1^h. See Plate XX.
22. 14^h to 23. 0^h. See Plate XX.
28. 22^h to 29. 1^h Fluctuations in V.F. (± ·0002).

October 3. 17^h to 24^h Fluctuations in Dec. (± 3′) : in H.F. (± ·002) : in V.F. small.
4. 4^h to 11^h Fluctuations in Dec. (± 5′).
5. 21^h to 6. 6^h Fluctuations in Dec. (± 4′) : in H.F. (± ·0015) : in V.F. small.
7. 22^h to 8. 7^h Fluctuations in Dec. (± 3′) : in H.F. and V.F. small.
10. 9^h to 11. 6^h Fluctuations in Dec. (± 3′) : in H.F. (± ·001): in V.F. small.
12. 0^h to 2^h Fluctuations in Dec. (± 3′) : wave in H.F. (+ ·002). 0^h to 1^h Decrease of V.F. (− ·0005). 12. 12^h to 13. 8^h Fluctuations in Dec. (± 12′) : in H.F. (± ·002) : in V.F. (± ·0003), with wave 12. 22^h to 13. 1^h (− ·0012).
13. 15^h to 14. 8^h Fluctuations in Dec. (± 6′) : in H.F. (± ·001), with wave, 13. 20^h to 21^h (+ ·004) : Fluctuations in V.F. (± ·0002).
14. 20^h to 15. 9^h Fluctuations in Dec. (± 7′), with wave, 15. 6^h to $7\frac{1}{2}^h$ (+ 18′): fluctuations in H.F. (± ·002) : in V.F. (± ·0002).
15. 19^h to 16. 6^h Fluctuations in Dec. (± 3′), with wave, 16. $0\frac{3}{4}^h$ to 3^h (+22′): fluctuations in H.F. (± ·0015). 16. 2^h to 4^h Wave in V.F. (− ·001).
17. 12^h to 19. 12^h. See Plates XX. and XXI.
19. 12^h to 23^h Fluctuations in Dec. (± 4′) : in H.F. (± ·0015), with wave, 20^h to $21\frac{1}{3}^h$ (+ ·003) : fluctuations in V.F. (± ·0002), with wave, 20^h to 23^h (− ·0004).
20. 16^h to 21. 6^h Fluctuations in Dec. (± 4′) : in H.F. and V.F. small.
21. 16^h to 18^h Wave in Dec. (− 10′). 16^h to $17\frac{1}{4}^h$ Wave in H.F. (− ·002). 17^h to 18^h Wave in V.F. (+ ·0002).
22. 1^h to 23. 6^h Fluctuations in Dec. (± 5′) : in H.F. and V.F. small.
24. 15^h to 20^h Fluctuations in Dec. (± 4′) : in V.F. small. $17\frac{1}{3}^h$ to 19^h Wave in H.F. (+ ·0025).
27. 17^h to 18^h Wave in Dec. (− 7′). $17\frac{1}{3}^h$ to $18\frac{2}{3}^h$ Wave in H.F. (+·002).
30. 11^h to 18^h Fluctuations in Dec. (± 4′) : in H.F. (± ·001) : in V.F. small.

November 4. 2^h to 5. 13^h. See Plates XXI. and XXII.
14. 14^h to 15. 3^h Fluctuations in Dec. (± 4′) : in H.F. (± ·0015) : in V.F. small.
17. 12^h to 18. 11^h Fluctuations in Dec. (± 8′) : in H.F. (± ·002) : in V.F. small.
18. $15\frac{1}{2}^h$ to 19. 7^h Fluctuations in Dec. (± 5′) : in H.F. (± ·001) : in V.F. small.
21. 20^h to 23^h Irregular wave in Dec. (− 10′) : fluctuations in H.F. (± ·001) : in V.F. small.
22. 23^h to 23. 2^h Fluctuations in Dec. (± 4′) : in H.F. (± ·001) : in V.F. (± ·0002).
24. 10^h to 23^h Fluctuations in Dec. (± 3′) : in H.F. (± ·001).
26. $2\frac{1}{2}^h$ to 5^h Irregular wave in Dec. (− 8′) : wave in H.F. (+ ·002).
30. $17\frac{1}{2}^h$ to $18\frac{3}{4}^h$ Wave in Dec. (− 7′) : in H.F. (− ·002).

December 1. 21^h to 2. 4^h Fluctuations in Dec. (± 3′) : in H.F. (± ·001) : in V.F. small.
4. 20^h to 5. 6^h. See Plate XXII.
5. 14^h to 6. 2^h. See Plate XXII.
6. 13^h to 22^h. See Plate XXII.

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December 7. 0^h to 2^h Wave in H.F. (+ ·002): no register of V.F. 19^h to 22^h Wave in Dec. (— 8′): no register of V.F.

8. 2^h to 24^h Rapid fluctuations in Dec. (± 3′): in H.F. (± ·0015): no register of V.F.

12. 19^h to 21^h Wave in Dec. (— 20′).

13. 12^h to 14. 4^h Fluctuations in Dec. (± 4′): in H.F. (± ·001): in V.F. small.

16. $18\frac{1}{3}^h$ to 20^h Wave in Dec. (— 10′). 18^h to $19\frac{1}{2}^h$ Wave in H.F. (— ·002). $22\frac{1}{2}^h$ to $23\frac{2}{3}^h$ Wave in Dec. (+ 6′).

19. $22\frac{1}{2}^h$ to 20. 2^h Wave in Dec. (— 6′). 19. $22\frac{1}{2}^h$ to 20. $0\frac{1}{2}^h$ Wave in H.F. (— ·001).

21. 20^h to 22^h Wave in Dec. (— 8′).

22. 19^h to 23. 7^h. Fluctuations in Dec. (± 8′): in H.F. (± ·001): in V.F. (± ·0002).

23. 12^h to 24. 7^h Fluctuations in Dec. (± 3′): in H.F. (± ·001): in V.F small.

24. 13^h to 25. 5^h Fluctuations in Dec. (± 3′), with wave, 24. $20\frac{1}{2}^h$ to $22\frac{1}{2}^h$ (— 15′): fluctuations in H.F. (± ·0015): in V.F. small.

25. 22^h to $23\frac{1}{2}^h$ Wave in H.F. (+ ·003).

27. 15^h to 28. 4^h Fluctuations in Dec. (± 5′): in H.F. and V.F. small.

29. 18^h to 24^h Irregular wave in Dec. (— 10′), with superposed fluctuations (± 4′): fluctuations in H.F. (± ·001): in V.F. small.

30. 16^h to 31. 3^h Fluctuations in Dec. (± 2′), with wave, 30. 20^h to 22^h (— 7′): small fluctuations in H.F. and V.F.

EXPLANATION OF THE PLATES.

The magnetic motions figured on the Plates are—

(1.) Those for days of great disturbance—January 4–5, 5–6, February 13, 14, March 6–7, 11–12, 12–13, April 25–26, 26–27, May 1, 2, 17–18, 18–19, June 2–3, 27–28, July 12–13, 13–14, 16–17, 17–18, August 12–13, November 4–5, December 4–5.

(2.) Those for days of lesser disturbance—February 15–16, 20–21, 26–27, 29–March 1, 1–2, 2–3, 3–4, 4–5, 7–8, 8–9, 24–25, 25–26, May 16–17, 19–20, August 3, 4–5, September 5–6, 12–13, 21–22, 22, October 17–18, 18–19, November 5, December 5–6, 6.

(3.) Those for four quiet days, January 30, April 19, August 15, November 13, 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 units for horizontal and vertical force are ·00001 of the whole horizontal and vertical forces respectively, 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 $0^{\text{in}}{\cdot}81 = 20^{\text{mm}}{\cdot}5$ in the declination curve, by $0^{\text{in}}{\cdot}75 = 18^{\text{mm}}{\cdot}9$ in the horizontal force curve, and by $0^{\text{in}}{\cdot}77 = 19^{\text{mm}}{\cdot}6$ in the vertical force curve.

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

The registers of declination and horizontal force being both made on the same cylinder, it happens that, in consequence of the unusually large magnetic motions registered on several occasions during the present year, the two registers are for a time interlaced, so that when preparing the tracings of the curves for engraving, a little difficulty was found in properly separating them; but it is believed that the separation has been satisfactorily accomplished, and that the curves, as given, truly represent the registered motion of the two magnets. Still, it may be desirable to state the times during which the registers were so interlaced, in case any question concerning their accuracy should arise. The times are from February 13, 16^{h} to 18^{h}, July 12, 18^{h} to 20^{h}, July 16, $17\frac{1}{2}^{\text{h}}$ to 20^{h}, and August 12, $17\frac{1}{2}^{\text{h}}$ to 20^{h}.

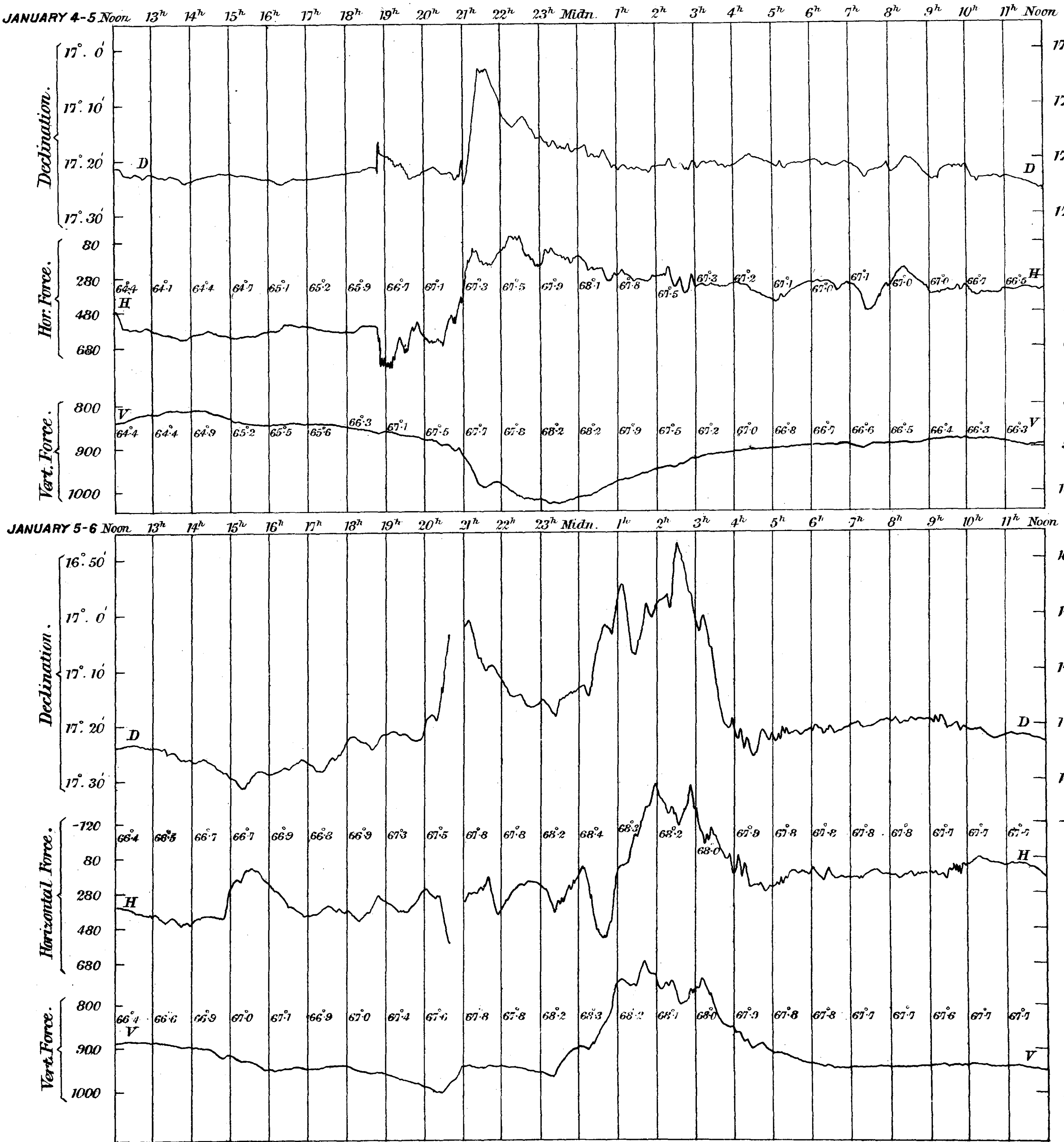
The earth current registers are not given on the plates in consequence of interference with the records caused by the running of trains on the City and South London Electric Railway.

An arrow (↑) indicates that the register was out of range of registration in the direction of the arrow head.

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

Plate I.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Scales for Magnetic Elements in C. G. S. measure.

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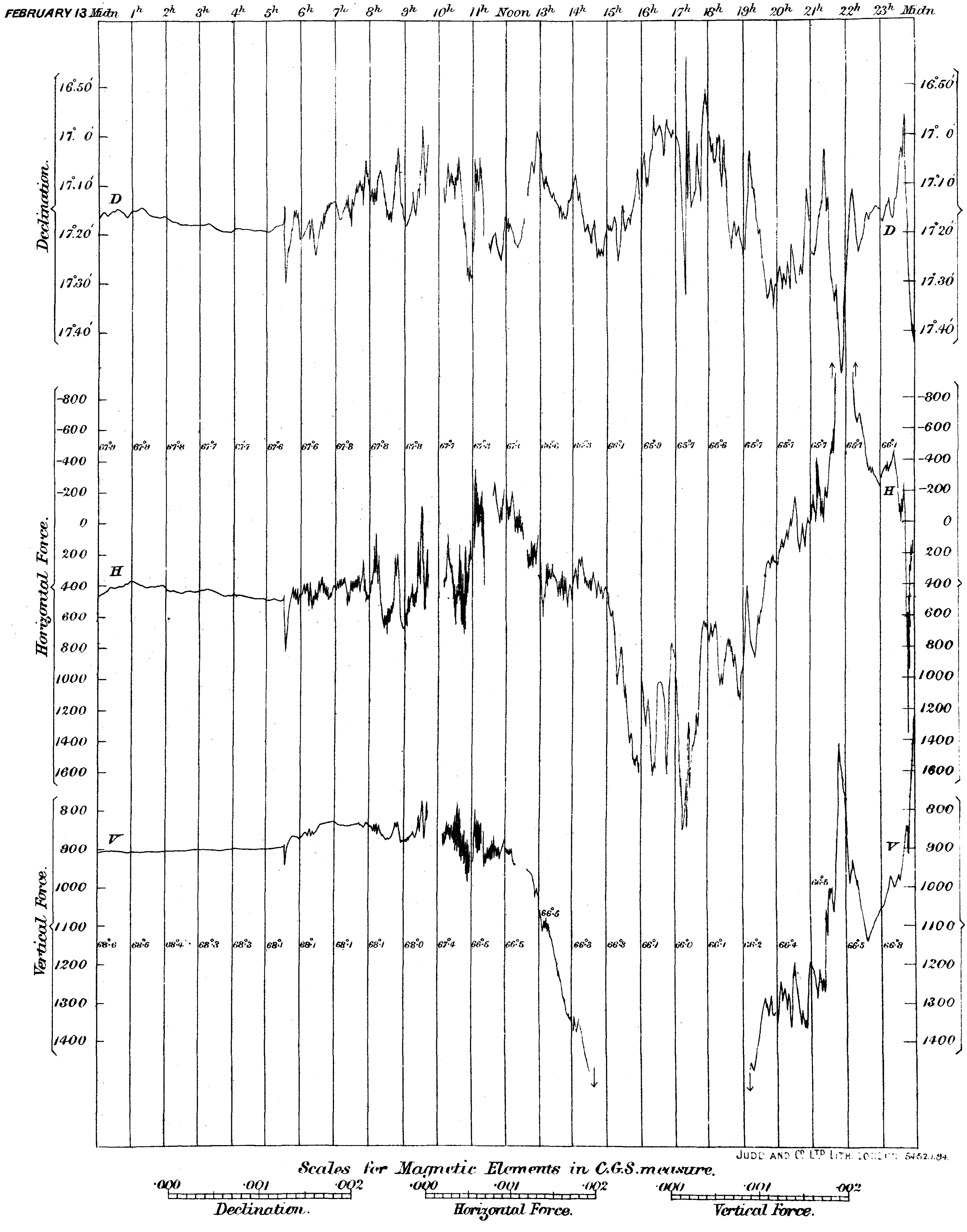
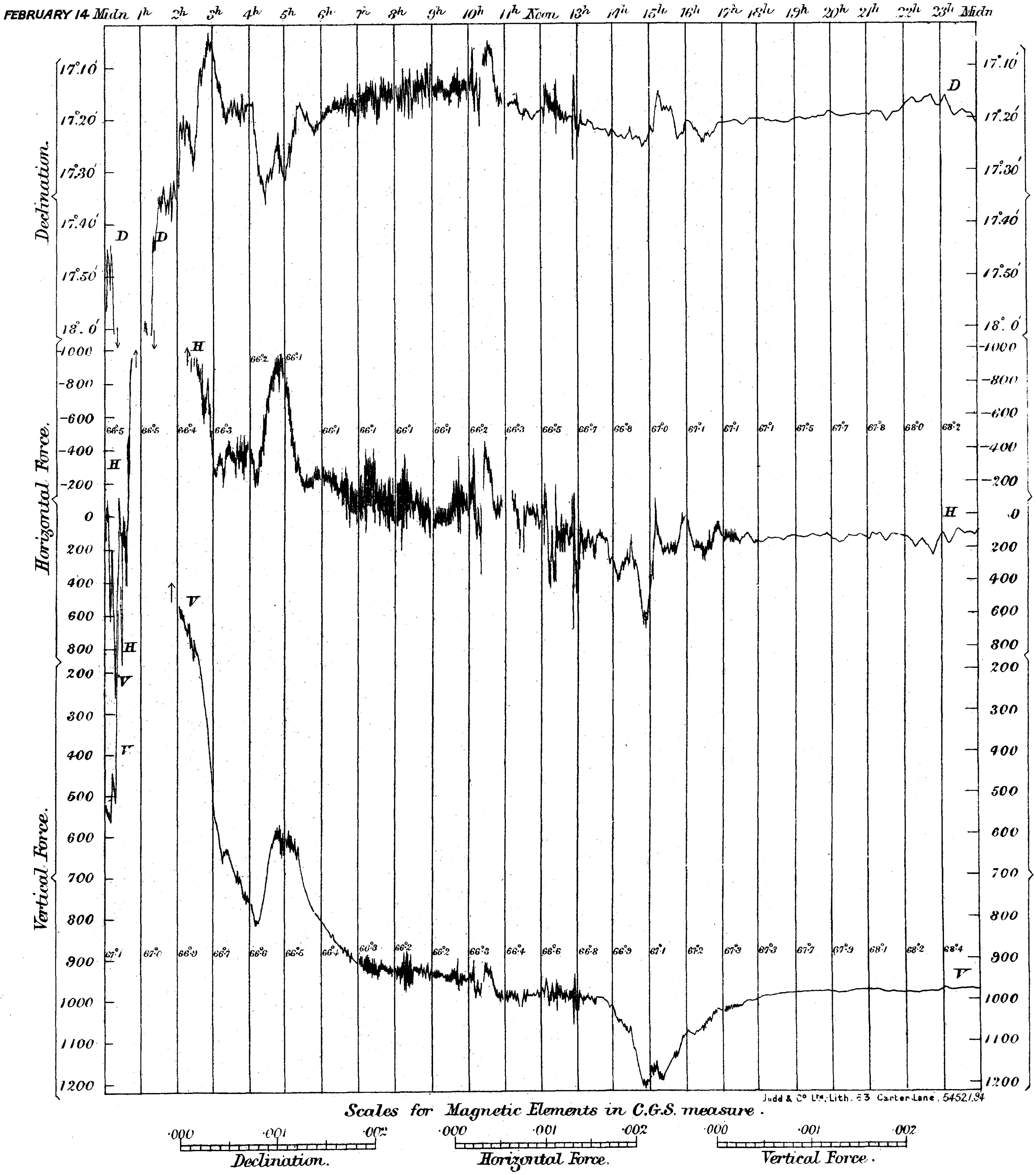
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



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Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.

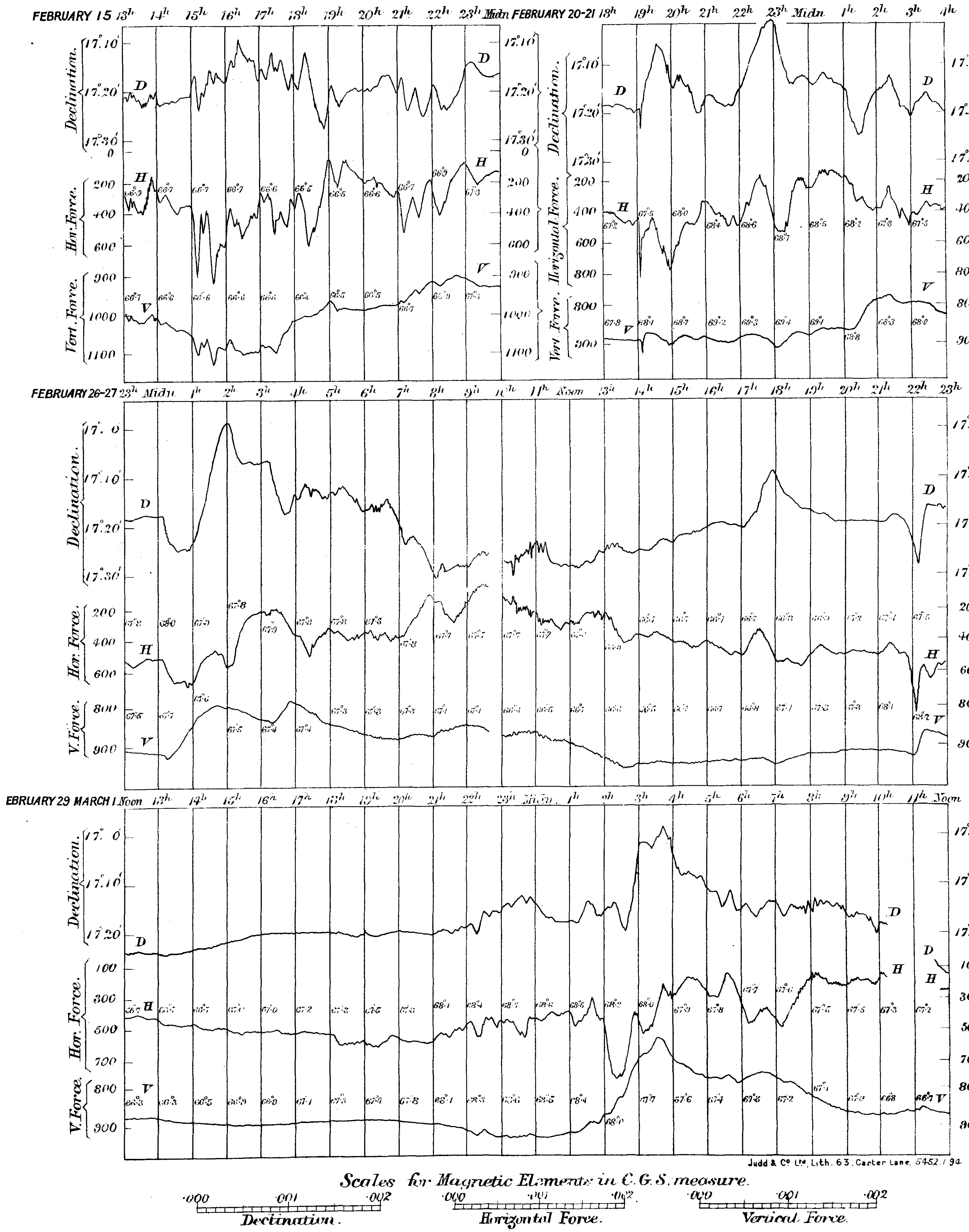

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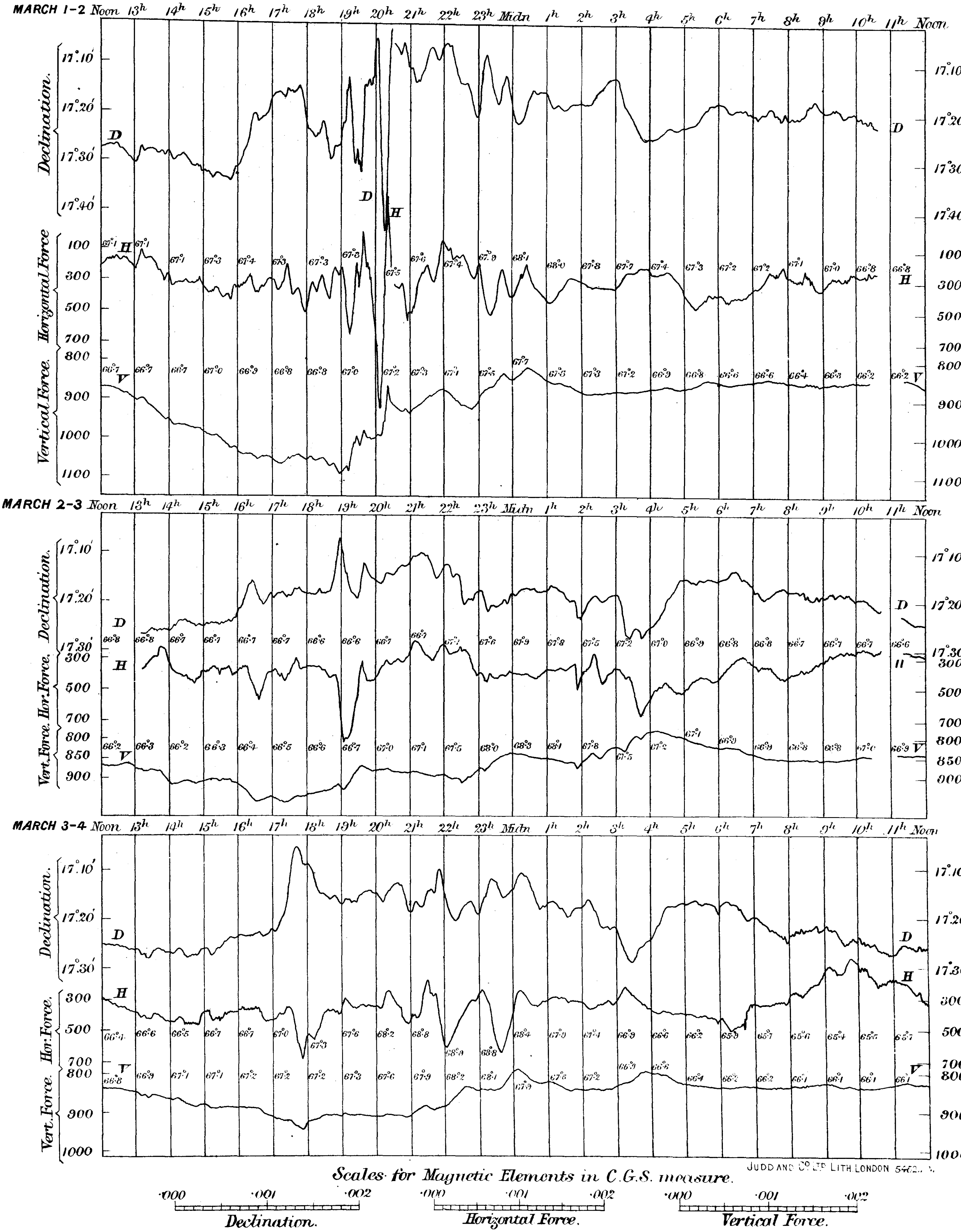
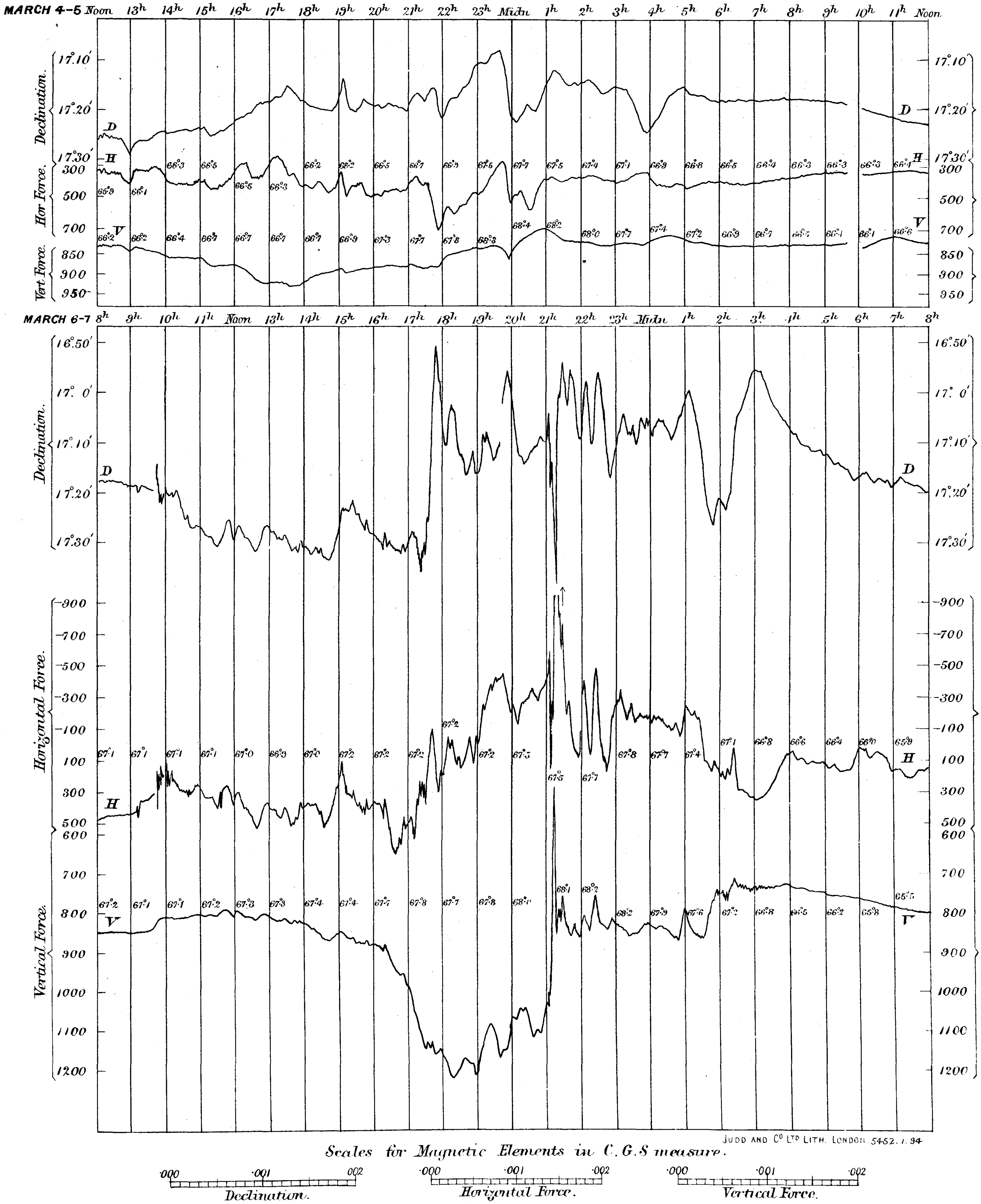
Plate V.

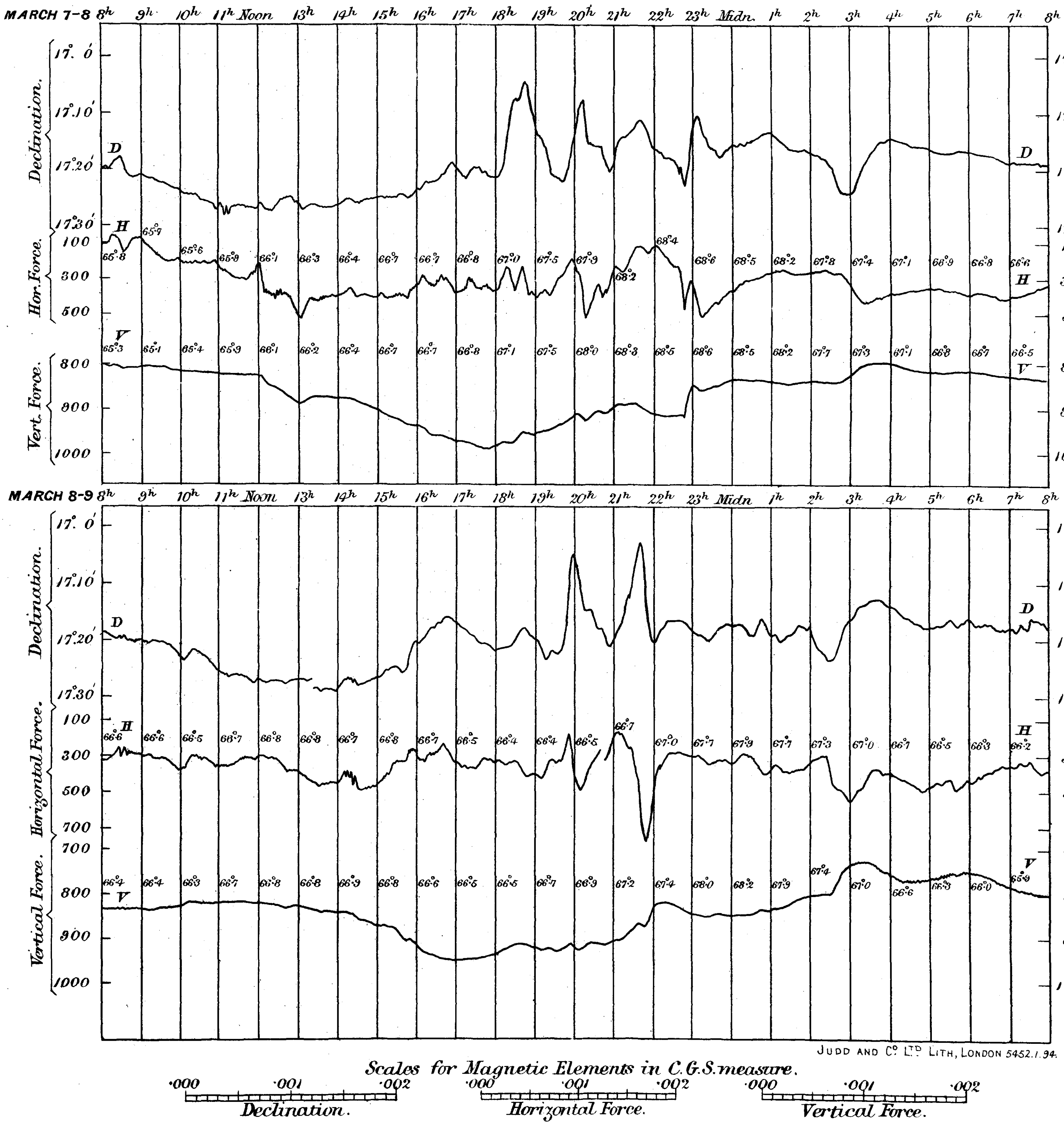
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.

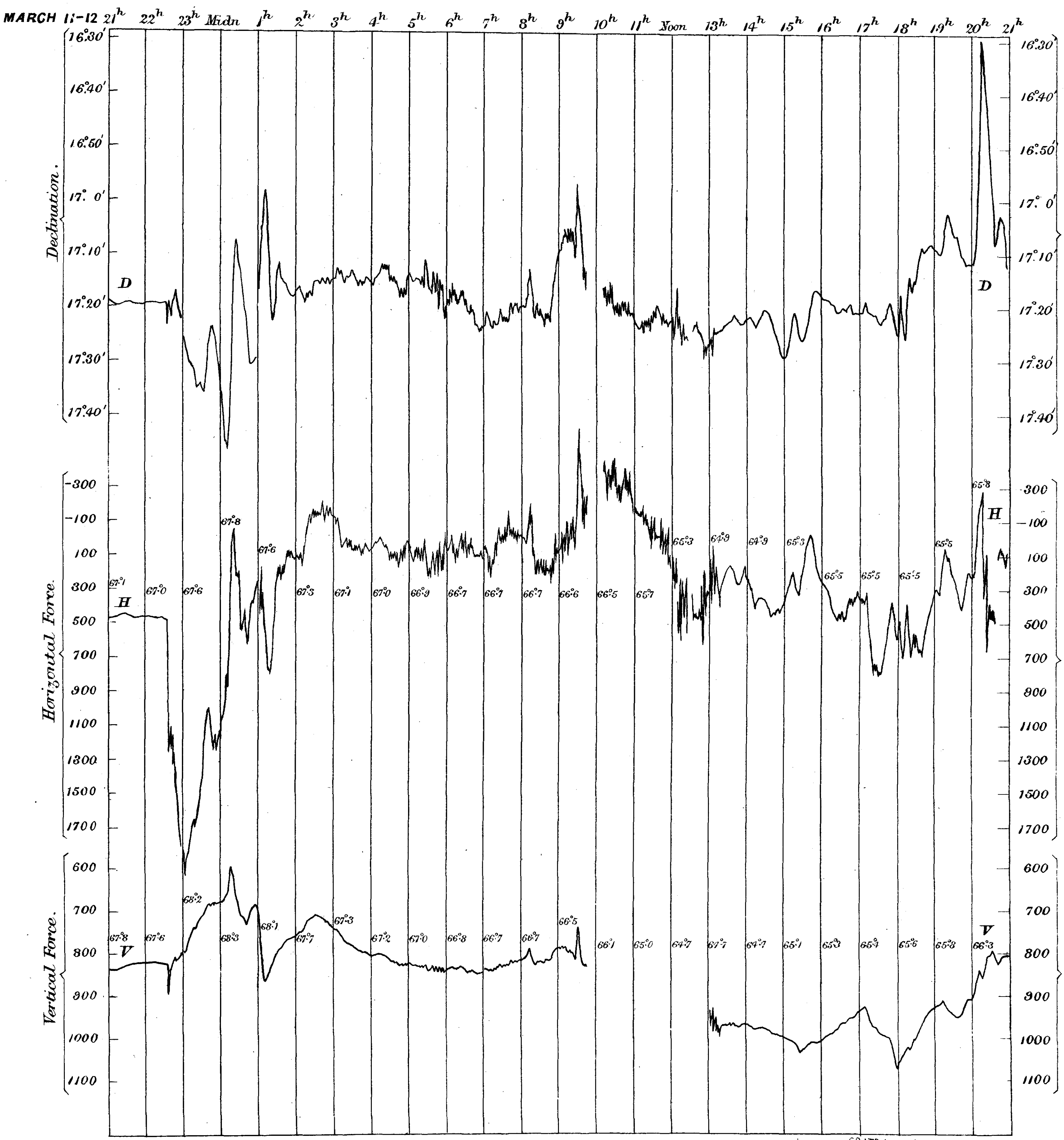


Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



JUDD AND Cº Lᵀᴰ LITH, LONDON 5452.1.94.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Scales for Magnetic Elements in C.G.S. measure.

·000 ·001 ·002 Declination. ·000 ·001 ·002 Horizontal Force. ·000 ·001 ·002 Vertical Force.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.

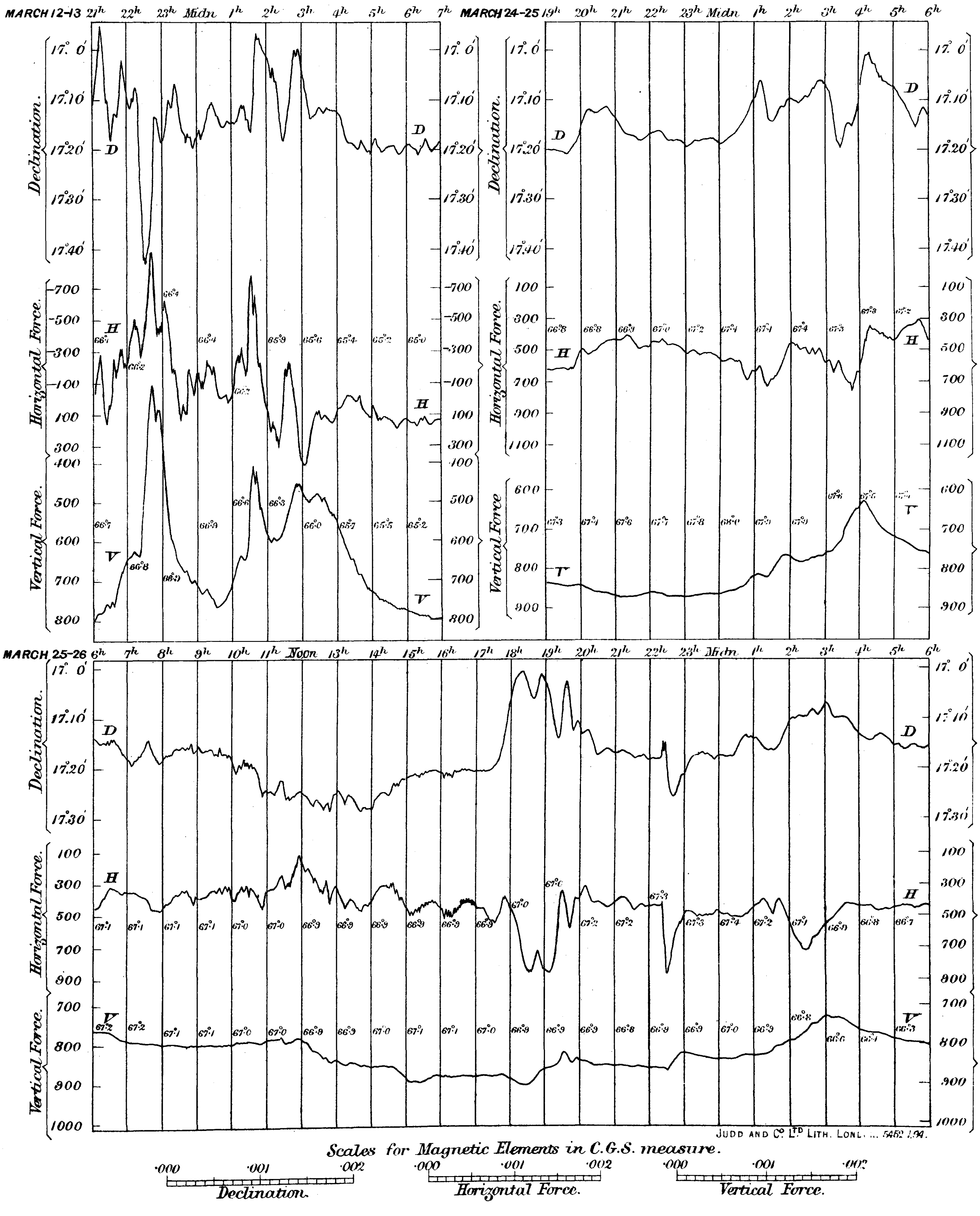
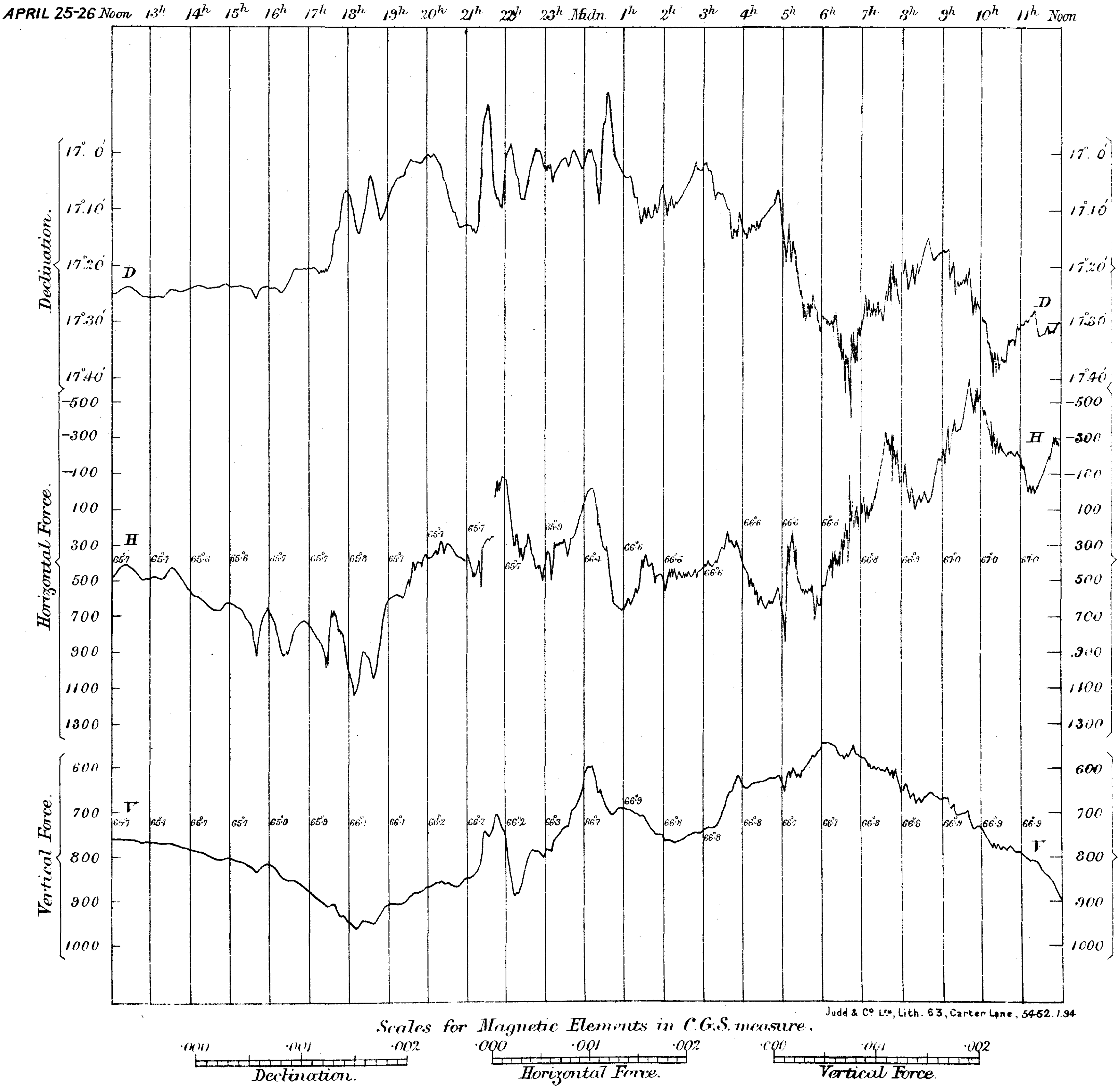
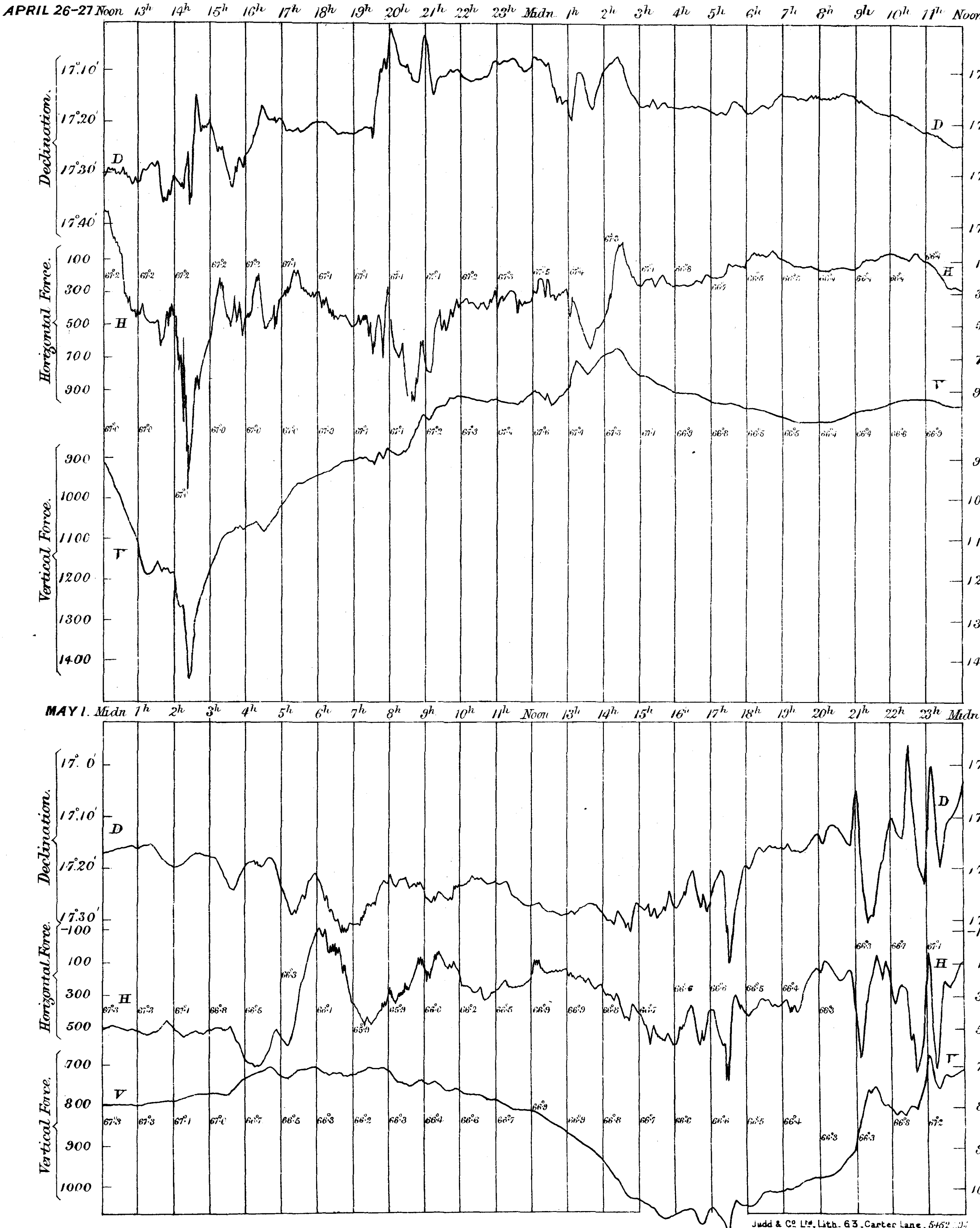


Plate X.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



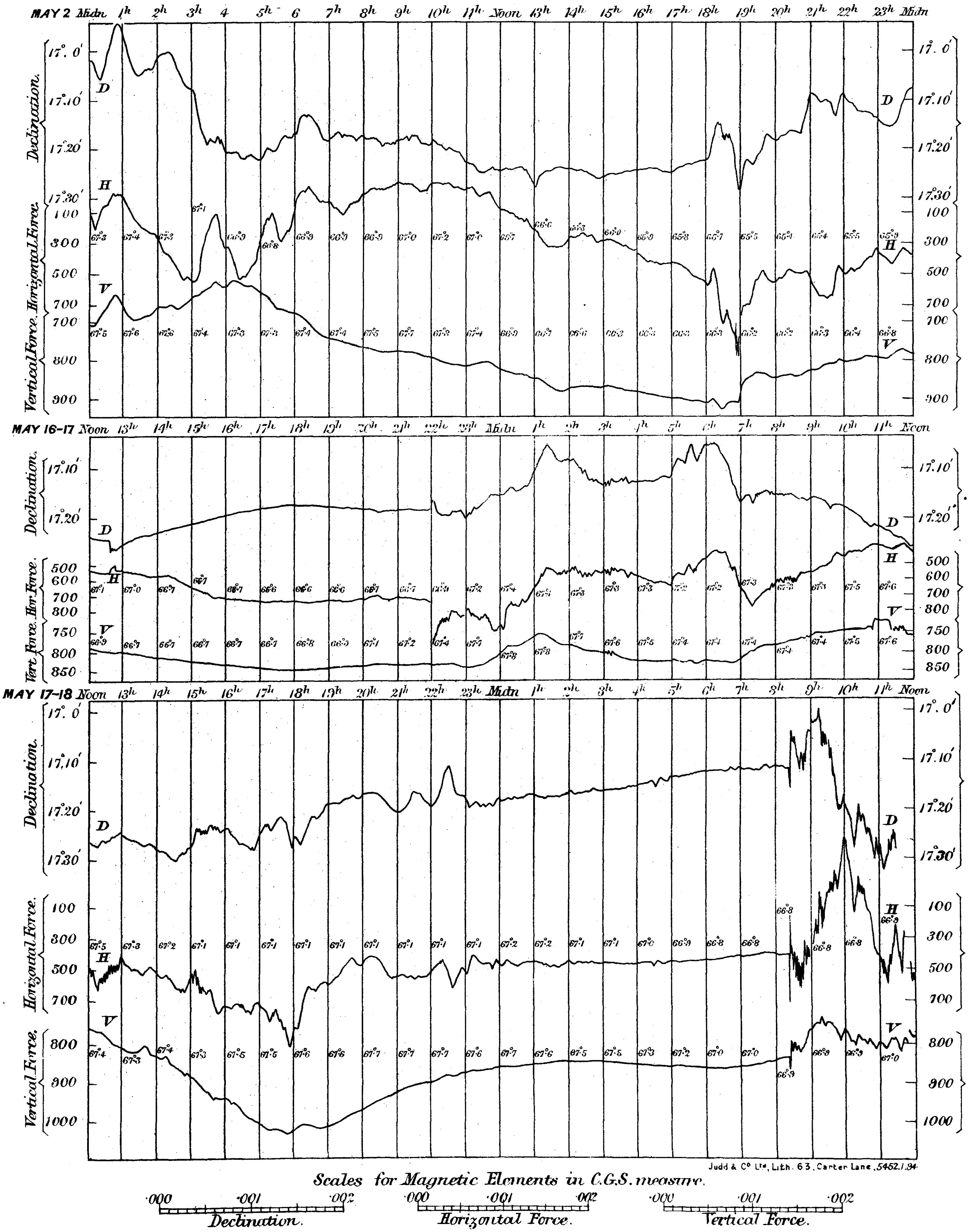
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



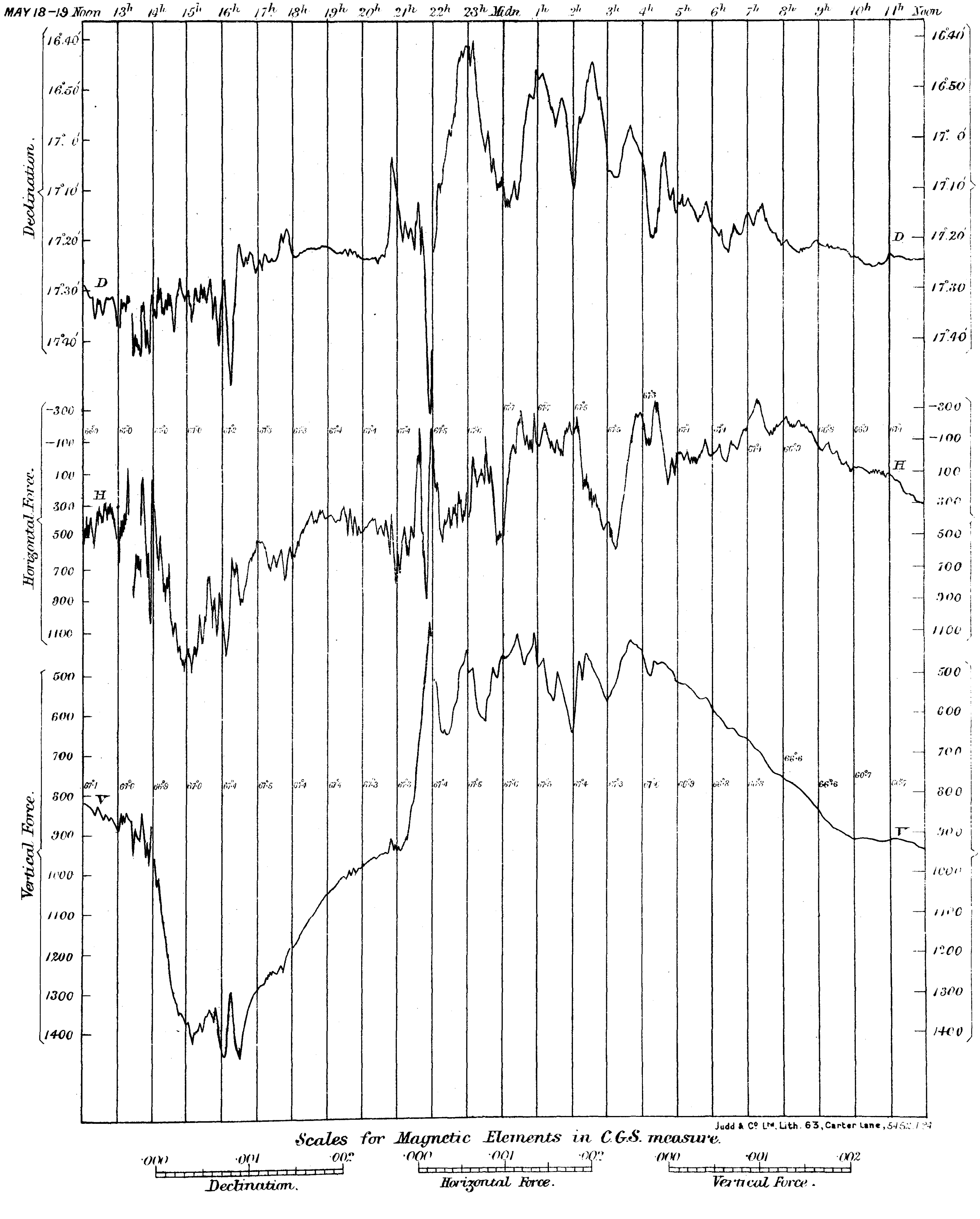
Scales for Magnetic Elements in C. G. S. measure.

Declination. Horizontal Force. Vertical Force.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.

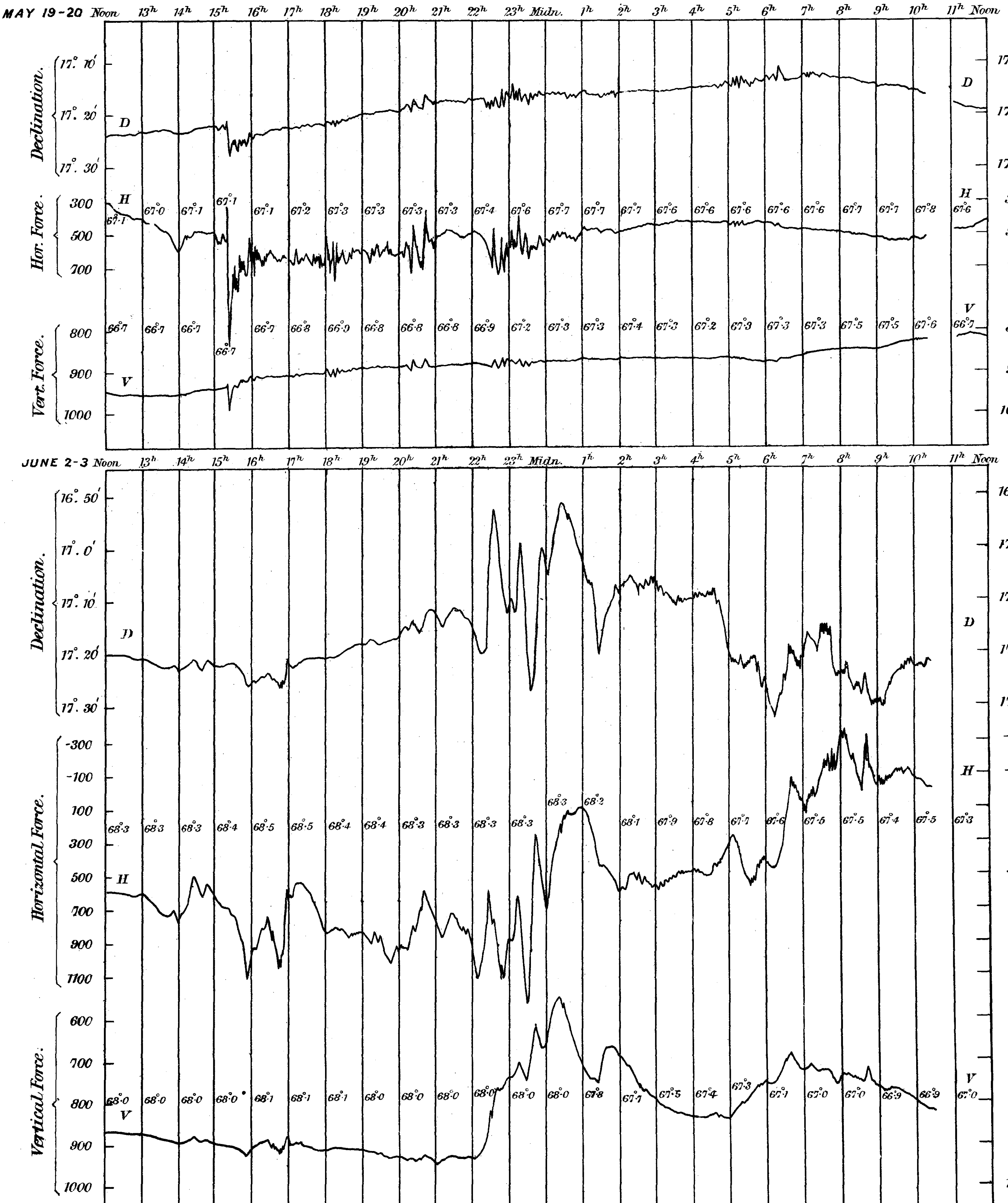


Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Judd & Co. Ltd. Lith. 63, Carter Lane, 5452 1'24

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



JUDD AND C^O L^TD LITH. LONDON 5452.1.94

Scales for Magnetic Elements in C. G. S. measure.

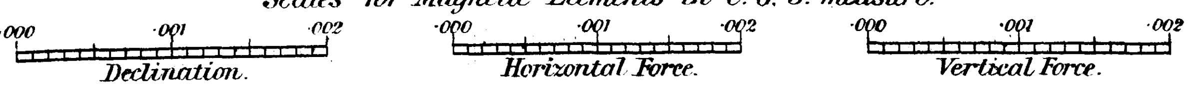
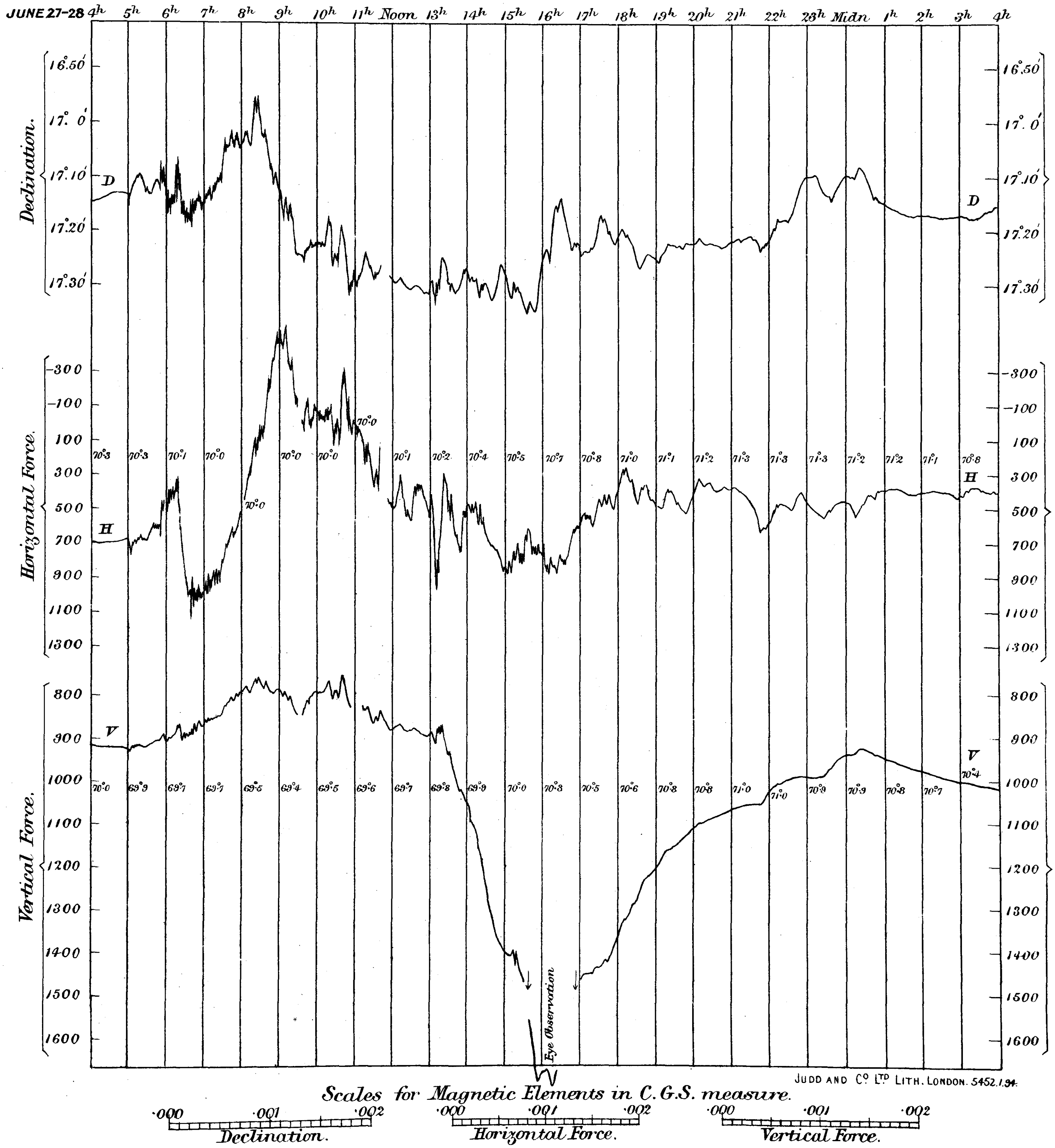


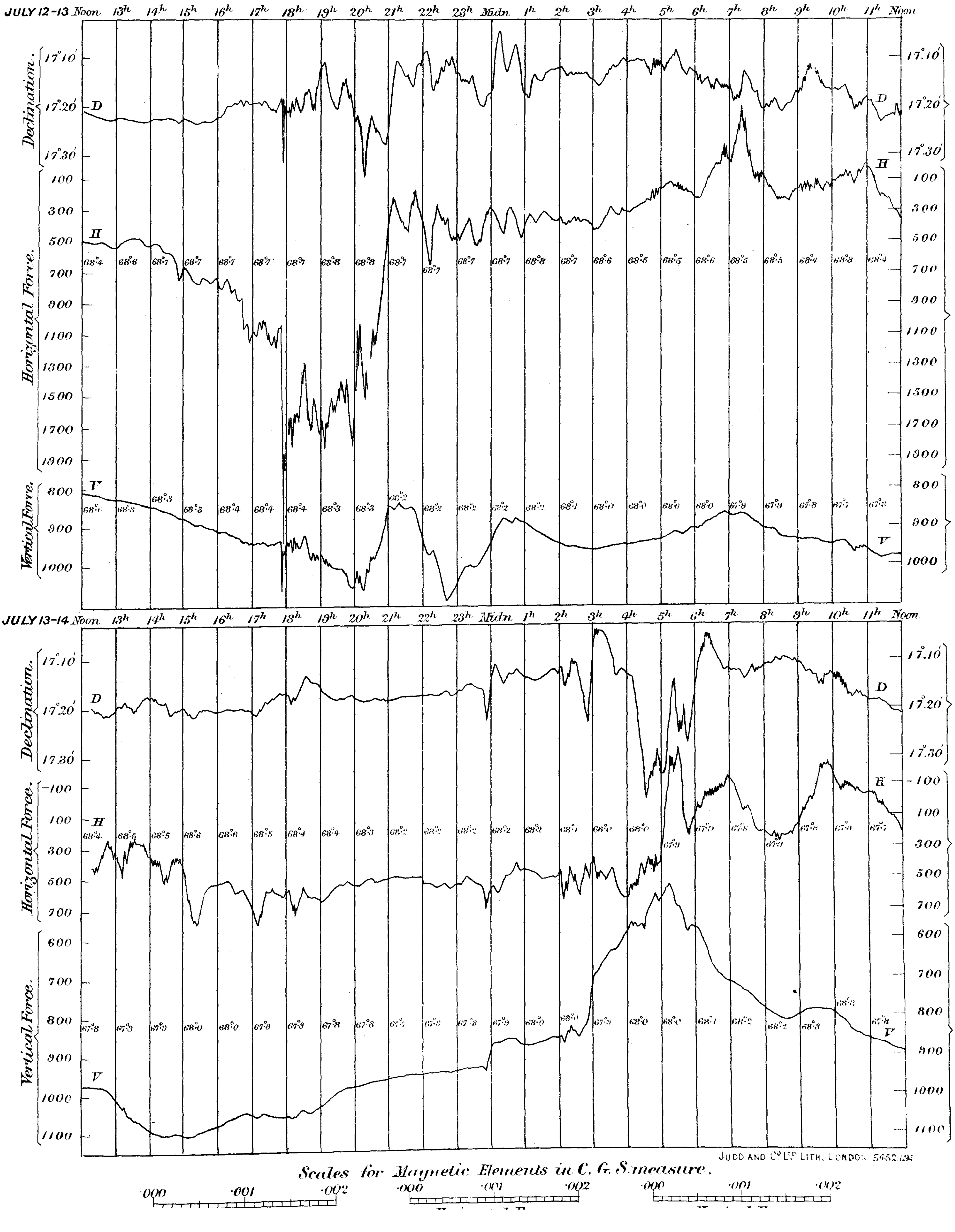
Plate XV.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.

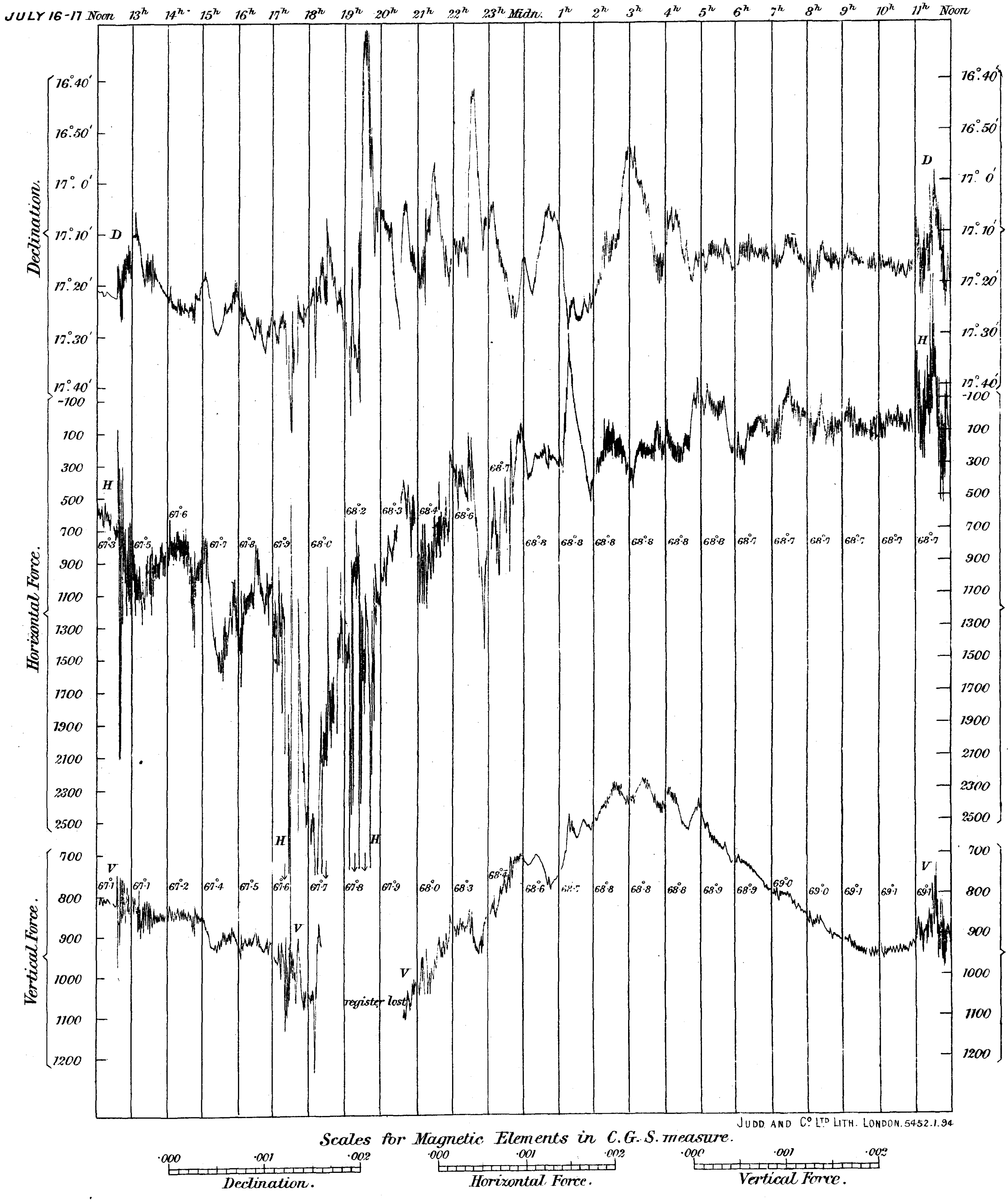


JUDD AND C° LTD LITH. LONDON. 5452.1.94.

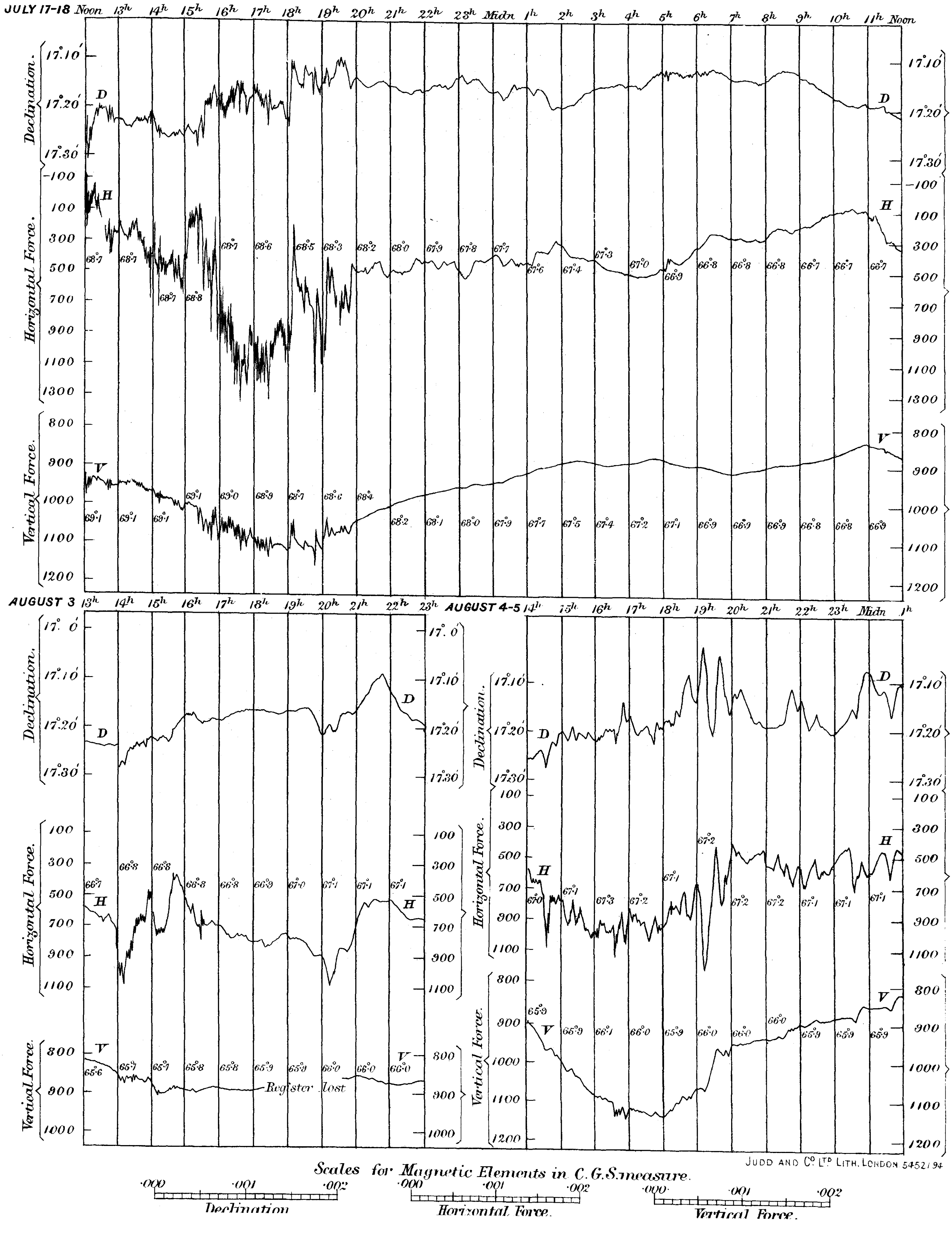
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



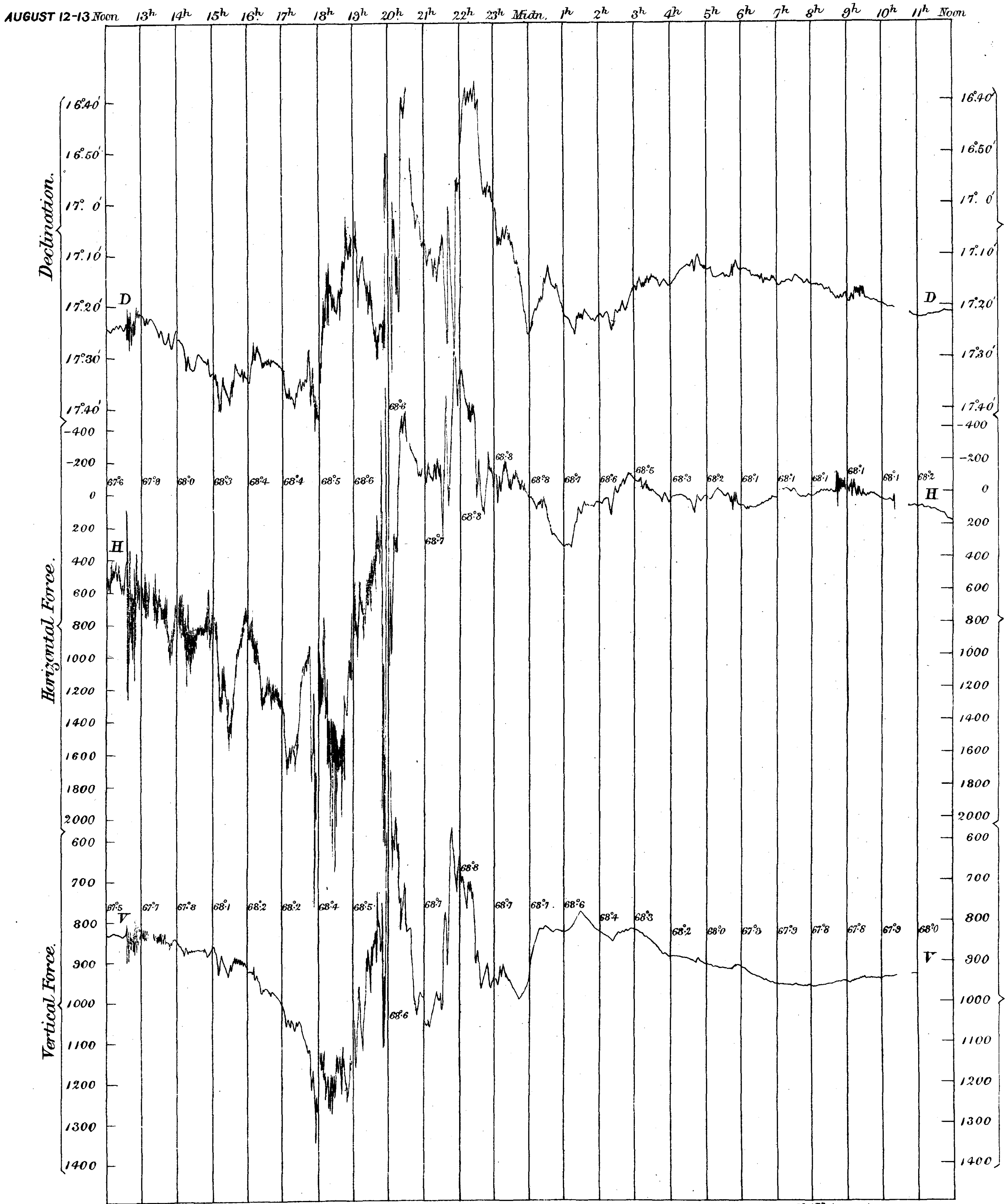
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



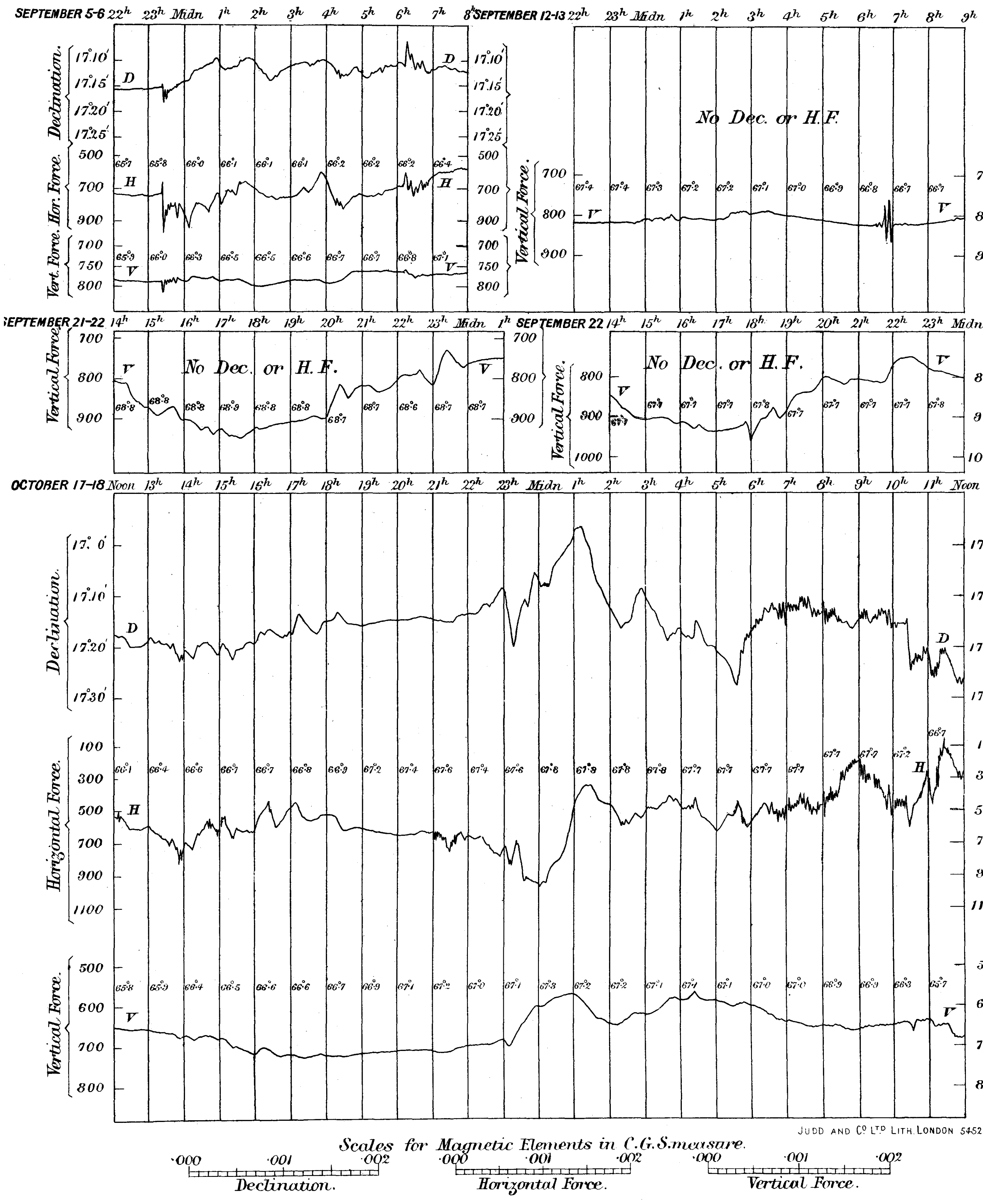
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Scales for Magnetic Elements in C. G. S. measure.

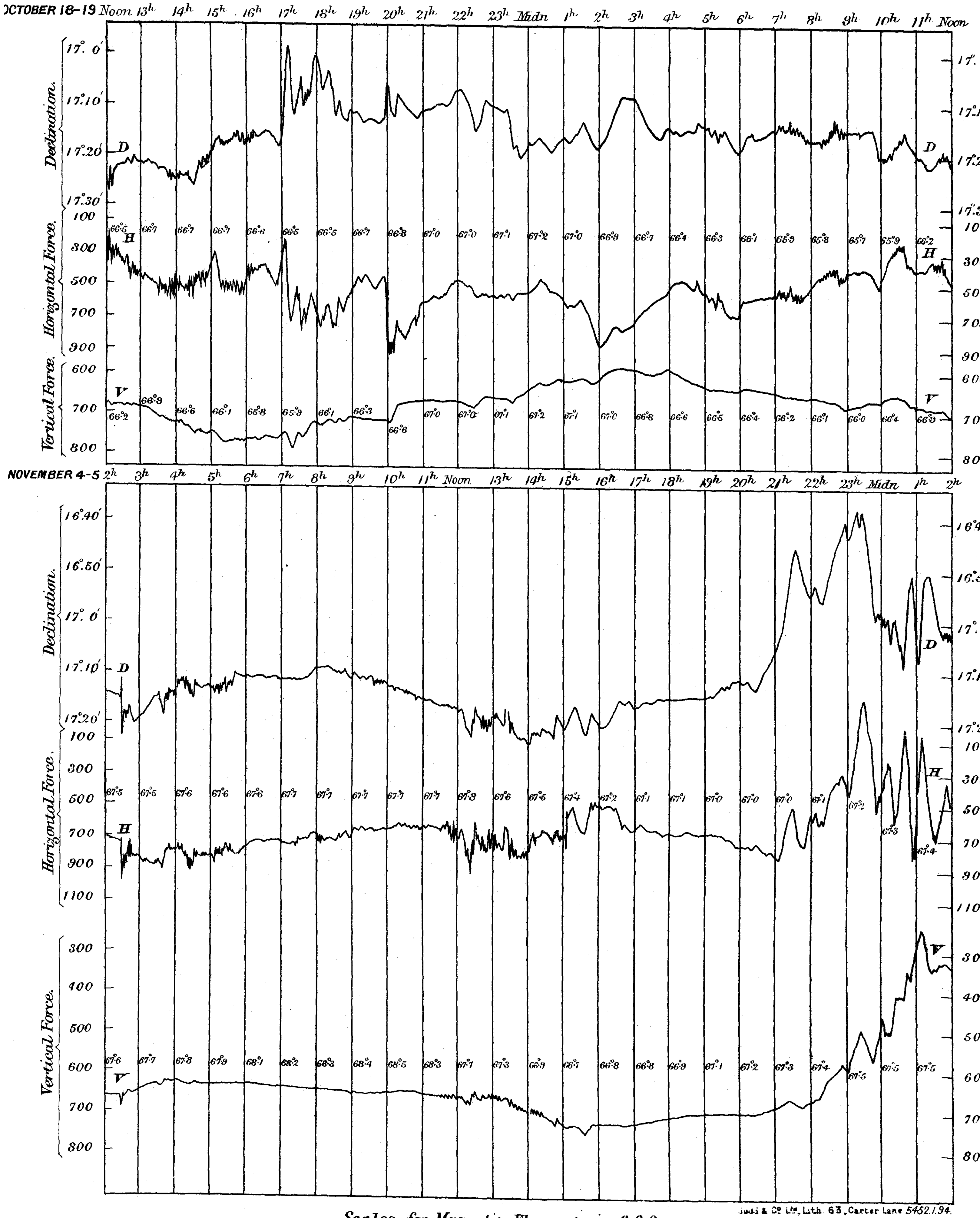
·000 ·001 ·002 Declination. ·000 ·001 ·002 Horizontal Force. ·000 ·001 ·002 Vertical Force.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



JUDD AND Co LTD LITH. LONDON 5452

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



Judd & Co Ltd, Lith. 63, Carter Lane 5452.1.94.

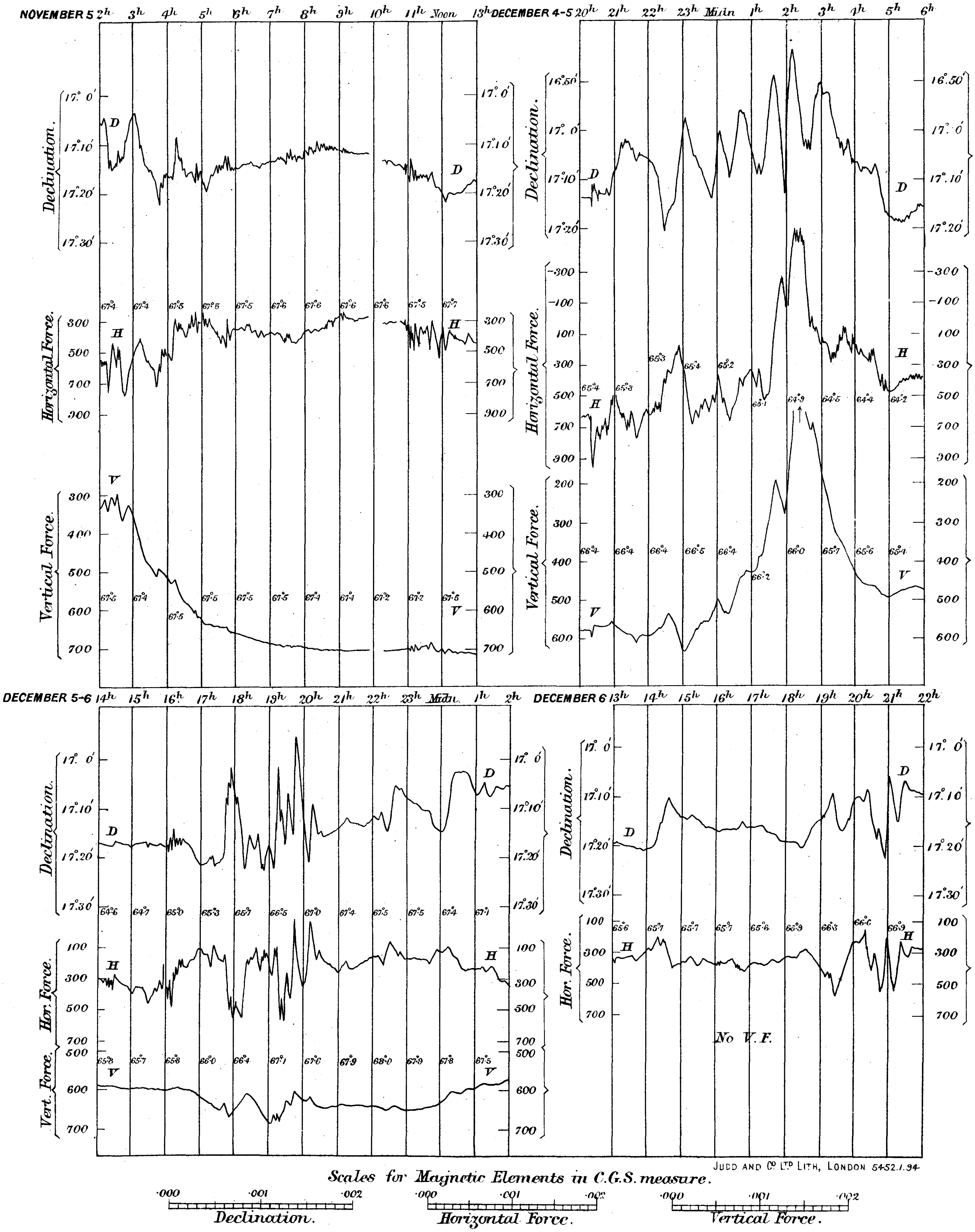
Scales for Magnetic Elements in C.G.S measure.

·000 ·001 ·002 Declination.

·000 ·001 ·002 Horizontal Force.

·000 ·001 ·002 Vertical Force.

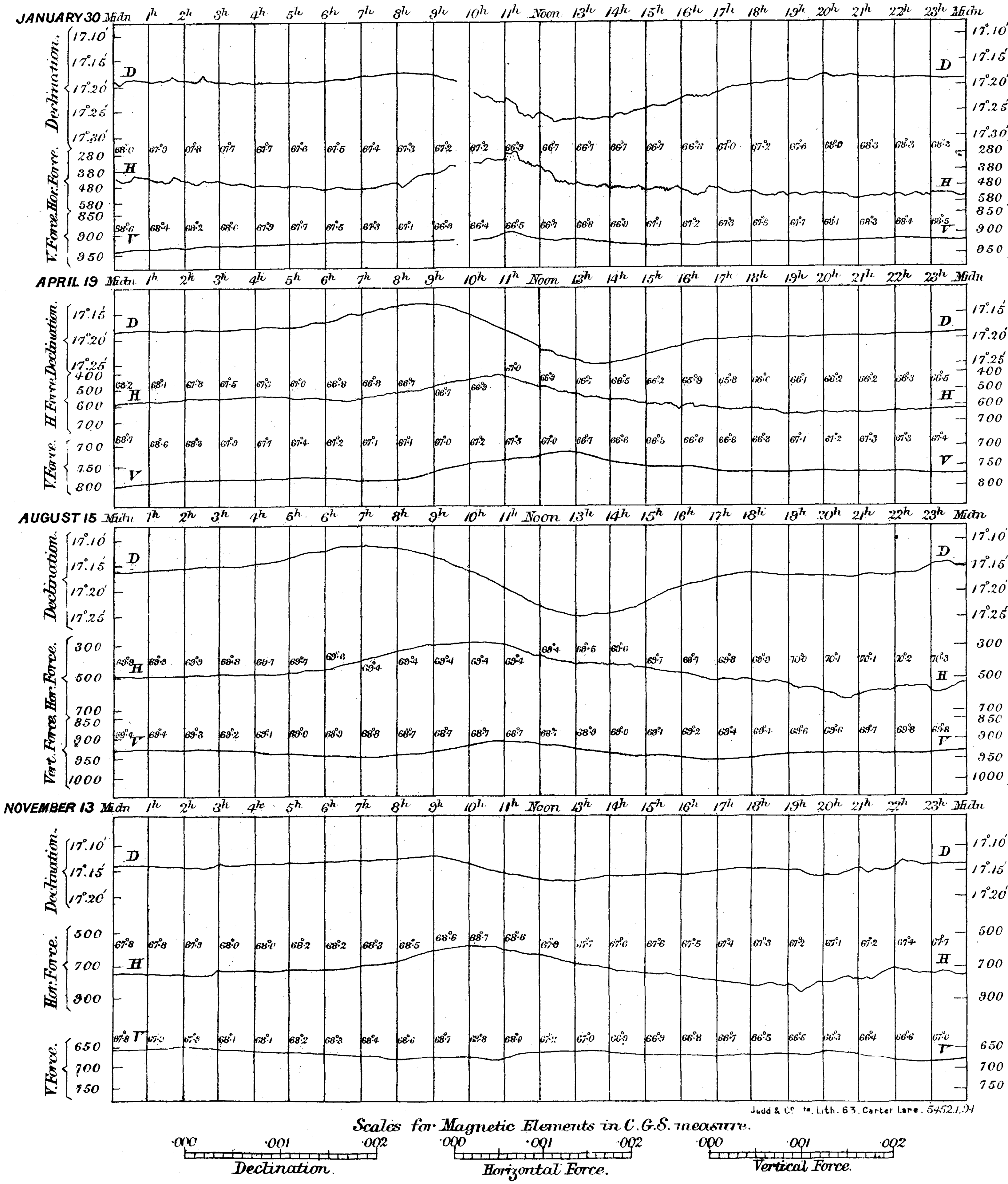
Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1892.



JUDD AND Co LTD LITH, LONDON 5452.1.94.

Scales for Magnetic Elements in C.G.S. measure.

Types of Magnetic Diurnal Variations at four seasons of the year. recorded at the Royal Observatory, Greenwich. 1892.



ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1892.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Jan. 1	...	29·714	42·9	35·9	7·0	39·6	+ 1·1	37·6	35·0	4·6	6·6	2·2	84	53·5	30·2	0·000	0·0	sP
2	...	30·019	41·5	30·1	11·4	36·9	− 1·6	35·1	32·6	4·3	8·5	0·4	85	54·3	22·7	0·000	1·0	sP : ssP
3	...	29·879	43·1	30·5	12·6	39·2	+ 0·7	36·5	33·0	6·2	9·6	3·9	79	48·1	24·0	0·006	0·0	mP : sP
4	...	29·886	34·1	26·5	7·6	31·0	− 7·4	29·2	24·3	6·7	8·4	3·1	74	45·6	20·9	0·000	0·0	vP : ssP
5	Perigee	29·689	41·7	24·1	17·6	33·5	− 4·8	32·1	29·5	4·0	8·3	1·3	86	46·2	19·6	0·003	2·0	sP : sP, sN
6	In Equator	29·274	43·5	31·2	12·3	37·2	− 1·0	35·1	32·2	5·0	8·2	1·8	82	45·6	25·9	0·075	0·0	mP : ssN, ssP : sP
7	First Quarter	29·216	37·2	29·4	7·8	32·1	− 6·0	30·4	26·5	5·6	10·2	0·0	78	52·8	22·8	0·000	0·5	mP : sP
8	...	29·225	35·1	26·3	8·8	30·6	− 7·4	29·0	24·5	6·1	9·0	1·9	76	50·6	21·0	0·003	1·5	vP, wN : ssP
9	...	29·254	31·8	26·3	5·5	28·9	− 9·0	28·2	25·8	3·1	10·3	0·0	89	35·8	22·8	0·002	0·0	vP
10	...	29·377	31·4	23·7	7·7	28·8	− 9·1	28·1	25·6	3·2	6·0	0·4	88	37·9	20·0	0·003	0·0	vP : ...
11	...	29·653	35·4	29·7	5·7	33·0	− 4·9	32·5	31·5	1·5	3·1	1·1	94	39·5	26·0	0·010	0·2	... : vP
12	Greatest Declination N.	29·708	34·1	22·3	11·8	29·1	− 8·8	28·7	27·4	1·7	2·9	0·0	93	31·1	18·1	0·003	0·8	sP : mP
13	...	29·546	35·6	31·2	4·4	33·5	− 4·5	31·9	28·9	4·6	9·6	0·0	83	41·0	25·5	0·004	0·0	wP : mP : sP
14	Full	29·314	35·0	27·6	7·4	31·5	− 6·7	29·6	24·9	6·6	8·7	3·8	75	43·9	23·0	0·000	0·0	ssP
15	...	29·317	32·2	25·1	7·1	29·4	− 8·9	28·4	25·0	4·4	6·6	1·6	83	34·2	19·5	0·000	0·8	vP, wN : vP
16	...	29·340	36·4	23·4	13·0	30·4	− 8·1	29·2	25·7	4·7	6·5	0·0	81	62·5	18·7	0·000	5·0	sP : mP
17	...	29·412	36·6	30·8	5·8	33·7	− 4·8	32·7	30·9	2·8	5·3	1·0	89	48·6	29·7	0·009	2·2	wP, vN : mP
18	...	29·583	44·4	33·8	10·6	38·9	+ 0·4	37·5	35·6	3·3	5·3	0·8	89	49·5	29·8	0·000	2·0	wP : mP
19	...	29·690	39·3	28·8	10·5	34·7	− 3·8	33·8	32·4	2·3	4·1	0·0	91	47·1	22·9	0·000	0·0	wP : mP : sP
20	In Equator: Apogee	29·712	39·3	31·9	7·4	33·8	− 4·6	32·7	30·7	3·1	5·5	0·7	88	71·2	27·9	0·005	0·0	mP : sP
21	...	29·759	35·4	29·3	6·1	32·2	− 6·1	31·4	29·6	2·6	5·7	0·0	90	49·8	23·3	0·000	0·8	mP : sP
22	Last Quarter	29·706	48·1	32·5	15·6	41·5	+ 3·2	40·6	39·5	2·0	4·9	0·0	93	62·3	28·9	0·090	2·2	wP : vP, wN
23	...	29·786	49·6	40·5	9·1	45·7	+ 7·3	44·7	43·6	2·1	6·7	0·0	93	54·2	34·7	0·016	0·2	wP : mP
24	...	29·943	48·5	34·0	14·5	44·8	+ 6·3	43·2	41·4	3·4	9·2	0·8	88	61·2	27·6	0·021	0·8	vP : mP
25	...	30·245	42·3	31·4	10·9	36·0	− 2·8	35·0	33·5	2·5	6·4	0·3	91	51·3	25·2	0·000	0·0	vP : vP, wN
26	...	30·258	43·0	29·1	13·9	36·5	− 2·5	35·8	34·8	1·7	3·9	0·0	94	95·9	22·8	0·011	0·2	mP
27	Greatest Declination S.	29·850	47·1	41·2	5·9	44·2	+ 4·9	43·2	42·0	2·2	5·7	0·9	92	47·2	37·0	0·075	0·8	wP : wP, vN
28	...	30·028	46·8	35·2	11·6	42·5	+ 3·0	39·7	36·3	6·2	8·4	4·0	79	53·6	29·1	0·000	2·0	wP : mP : wP
29	New	29·954	51·4	46·8	4·6	49·3	+ 9·6	47·4	45·3	4·0	5·2	2·3	87	54·8	41·2	0·000	0·2	wP
30	...	29·970	51·6	44·8	6·8	48·8	+ 9·0	46·3	43·6	5·2	8·0	2·3	82	63·0	38·7	0·000	0·8	wP
31	...	29·917	49·0	45·5	3·5	47·9	+ 8·1	46·7	45·4	2·5	4·8	0·6	92	55·1	40·9	0·048	1·5	wwP : mP : wP
Means	...	29·685	40·8	31·6	9·2	36·6	− 1·9	35·2	32·8	3·8	6·8	1·1	86·1	51·3	26·5	Sum 0·384	0·8	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·685, being 0in·093 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 51°·6 on January 30; the lowest in the month was 22°·3 on January 12; and the range was 29°·3.
The mean of all the highest daily readings in the month was 40°·8, being 2°·3 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 31°·6, being 2°·0 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 9°·2, being 0°·3 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 36°·6, being 1°·9 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Jan. 1	0·0	7·9	WSW	WNW : NW	3·0	0·0	0·54	357	0, ho.-fr : 0, ho.-fr : 4, ci.-cu	5, li.-cl : v, th.-cl : 0, d
2	2·5	7·9	NW : WSW	WSW : SW	2·2	0·0	0·24	269	0, ho.-fr : 0, ho.-fr	p.-cl : 10 : 10
3	0·0	7·9	WSW : NW	NW : WNW	2·3	0·0	0·36	338	10 : 10 : 9, oc.-slt.-r	p.-cl : v, th.-cl : 0, m
4	0·1	7·9	W : NNW	NNW : WSW	1·2	0·0	0·09	208	0, ho.-fr : 0, ho.-fr, m : 1, th.-cl, h	1, li.-cl : 0 : 0, ho.-fr
5	0·0	7·9	SW	SW : WSW	4·0	0·0	0·98	456	0, ho.-fr : 0, ho.-fr : 7, th.-cl, so.-ha, w	10, w : 10, w
6	0·0	8·0	WSW : W : NW	WNW : WSW	6·8	0·0	0·98	498	10 : 10, sc, gt.-glm, r, sn, st.-w	10, w : 1, li.-cl, w : 0, fr
7	3·3	8·0	WSW : SW	WSW : SSW	4·2	0·0	0·75	452	0, ho.-fr : 0, ho.-fr : 2, li.-cl	p.-cl, sn : v
8	1·3	8·0	SW : WSW : NNW	WSW : SW : SSW	3·0	0·0	0·42	335	10, sn : 8, ci.-cu, cu.-s, li.-cl, h	1, li.-cl, h : 0 : p.-cl
9	0·0	8·1	SSW : N	NNW	0·7	0·0	0·03	151	10, sn : 10	10 : 10, slt.-f
10	0·0	8·1	Calm : NNE	N : NNW	0·5	0·0	0·01	119	10 : 10, sn	10 : 10
11	0·0	8·1	N : NNW	N : NNE	1·0	0·0	0·10	216	10, sn : 10, sn, oc.-th.-r	10, oc.-slt.-r, sl : p.-cl : 0
12	0·0	8·2	N : SW	SW : N : NNE	0·3	0·0	0·00	125	0, ho.-fr : 0, ho.-fr, h, f : p.-cl, h, f, glm	10, f, glm : 10, slt.-f, slt.-r
13	0·0	8·2	NE	NE	1·7	0·0	0·05	210	10 : 3, li.-cl, ho.-fr : 10, sn	10, sn : 10
14	0·0	8·2	NNE : N	N : NNW	0·2	0·0	0·00	169	10 : 6, th.-cl, slt.-f, so.-ha	8, ci.-cu, th.-cl : 10, th.-cl, lu.-co, f
15	0·0	8·3	NNW : NW : W	NW : SW : S	0·8	0·0	0·02	181	v, ho.-fr : p.-cl, h, slt.-f	4, li.-cl, h : 7, th.-cl, h : 0, ho.-fr, slt.-f
16	1·3	8·3	SE	SE : ESE	2·6	0·0	0·45	293	0, ho.-fr : 3, li.-cl	p.-cl : v : 10
17	0·3	8·3	ESE : E	E	1·6	0·0	0·23	265	10, sn : 10	10 : 10
18	0·0	8·4	E : ESE	ESE : SE	1·0	0·0	0·01	148	10 : p.-cl : 10	10 : 10, m
19	0·0	8·4	E : ENE	E : ESE	0·4	0·0	0·00	137	10 : 10	10 : 10, th.-cl : v, ho.-fr
20	1·5	8·5	ESE : E	E : NE	0·2	0·0	0·00	137	10 : 10, sn, glm	p.-cl : 0, h
21	0·0	8·5	ENE : Calm	Calm : SSW	0·3	0·0	0·01	115	ho.-fr : 10, fr, f	10, glm, slt.-f : 10
22	0·0	8·6	SSW	SSW : SW	2·5	0·0	0·40	318	10 : 10, oc.-slt.-r	10, th.-r, gt.-glm, f : 10, th.-r : v, th.-r, f
23	0·0	8·6	SSW : SW	SW : WSW	0·9	0·0	0·05	240	10, oc.-r : 10, oc.-th.-r	10 : 10
24	0·2	8·7	SW : W : NW	NNW : WSW	1·5	0·0	0·13	243	10, r : p.-cl	2, li.-cl : 0, slt.-f
25	0·7	8·7	WSW : NNW	NW : SW	0·7	0·0	0·02	173	0, slt.-f, ho.-fr : 0, h, slt.-f, ho.-fr : 1, th.-cl, h, slt.-f	1, li.-cl, h : 0, ho.-fr, f
26	0·5	8·8	SW	SW : WSW	1·1	0·0	0·18	272	0, ho.-fr : 0, ho.-fr, m : 4, ci.-cu, li.-cl, h	10, oc.-slt.-r : 10, oc.-slt.-r
27	0·0	8·8	WSW	SW : WNW	4·5	0·0	1·07	502	10 : 10, glm	10, sc, slt.-r, w : v, r, w
28	0·0	8·9	WNW : WSW	SW : WSW	4·5	0·0	1·07	520	0, w : 0 : 5, th.-cl	10, w : 10, w
29	0·0	8·9	WSW : W	WSW	8·3	0·0	1·92	687	10, w : 10, st.-w : 10, sc, w	10, w : v, li.-cl : v
30	0·1	9·0	WSW : W	WSW	7·0	0·0	1·93	669	p.-cl, w : 10, st.-w	10, sc, st.-w : 10, w
31	0·0	9·0	WSW : NW	SW : SSW	1·6	0·0	0·18	271	10 : 10, shs.-r	v, glm, f : 10, oc.-th.-r
Means	0·4	8·4	...	...	...	...	0·39	293		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 35°·2, being 2°·0 *lower* than
The mean *Temperature of the Dew Point* for the month was 32°·8, being 2°·6 *lower* than
The mean *Degree of Humidity* for the month was 86·1, being 2·7 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·186, being 0in·021 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·2, being 0gr·2 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 554 grains, being *the same as*
} the average for the 50 years, 1841–1890.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7·1.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·046. The maximum daily amount of *Sunshine* was 3·3 hours on January 7.

The highest reading of the *Solar Radiation Thermometer* was 95°·9 on January 26; and the lowest reading of the *Terrestrial Radiation Thermometer* was 18°·1 on January 12.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 0·5; for the 6 hours ending 15h. was 0·1; and for the 6 hours ending 21h. was 0·2.

The *Proportions of Wind* referred to the cardinal points were N. 6, E. 5, S. 7, and W. 12. One day was calm.

The *Greatest Pressure of the Wind* in the month was 8·3 lbs. on the square foot on January 29. The mean daily *Horizontal Movement of the Air* for the month was 293 miles; the greatest daily value was 687 miles on January 29; and the least daily value was 115 miles on January 21.

Rain fell on 11 days in the month, amounting to 0in·384, as measured by gauge No. 6 partly sunk below the ground; being 1in·605 *less* than the average fall for the 50 years, 1841-1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Feb. 1	Perigee	29·419	47·9	36·8	11·1	43·8	+ 4·1	41·6	39·0	4·8	8·0	2·1	83	59·0	31·3	0·105	4·5	wP : vP, ssN
2	In Equator	29·102	43·9	34·4	9·5	37·6	− 2·1	35·1	31·7	5·9	11·7	1·6	80	77·0	30·7	0·102	6·0	mP : ssP, ssN : mP
3	...	29·164	43·6	34·8	8·8	38·7	− 1·0	35·9	32·2	6·5	11·7	3·3	78	63·0	27·5	0·000	0·0	wP : vP
4	...	29·496	45·1	30·3	14·8	38·1	− 1·7	36·0	33·2	4·9	12·9	1·8	82	72·8	24·1	0·006	1·0	sP : ssP : vP, mN
5	First Quarter	29·495	48·7	38·4	10·3	43·1	+ 3·3	39·8	35·8	7·3	14·5	2·8	76	79·0	32·0	0·000	0·0	wP : mP : sP
6	...	29·687	47·0	38·4	8·6	42·6	+ 2·9	40·5	38·0	4·6	8·1	1·3	84	59·9	32·7	0·018	3·0	mP
7	...	29·715	52·6	45·0	7·6	48·6	+ 9·2	47·0	45·2	3·4	8·6	0·4	89	59·0	40·0	0·020	0·8	wwP : wP
8	...	29·655	50·1	43·4	6·7	45·7	+ 6·6	43·6	41·2	4·5	9·4	1·3	85	74·4	35·6	0·122	2·2	wP, wN : vN, vP
9	Greatest Declination N.	30·113	47·1	39·6	7·5	43·1	+ 4·4	41·4	39·4	3·7	5·7	0·4	86	60·9	36·7	0·032	2·0	wP : vP : wwP
10	...	30·167	48·1	42·1	6·0	46·4	+ 8·0	44·6	42·6	3·8	6·9	0·6	87	50·4	41·5	0·012	0·0	wP
11	...	30·276	49·4	39·0	10·4	44·5	+ 6·2	42·4	39·9	4·6	6·7	1·6	84	58·6	32·2	0·000	2·0	wP, wN : wP
12	Full	30·290	43·2	31·9	11·3	38·7	+ 0·2	37·6	36·1	2·6	5·9	0·0	91	52·2	25·0	0·004	0·0	wP
13	...	30·314	42·9	33·7	9·2	39·4	+ 0·6	36·5	32·7	6·7	11·7	1·4	78	73·3	27·0	0·006	2·0	wN, wP : sP : mP
14	...	29·945	40·1	31·0	9·1	36·2	− 3·0	34·7	32·5	3·7	7·3	0·9	87	48·3	24·3	0·030	2·0	mP : wP, ssN
15	...	29·341	40·6	27·9	12·7	36·3	− 3·3	35·7	34·9	1·4	4·8	0·5	95	46·0	27·9	0·284	0·7	wP, wN : ssN, ssP
16	In Equator	29·451	32·2	23·2	9·0	28·2	−11·6	26·0	17·2	11·0	14·4	1·0	62	81·0	20·5	0·022	2·3	mP : vP
17	Apogee	29·246	32·9	18·8	14·1	26·9	−12·9	24·7	14·5	12·4	18·0	0·4	58	63·1	16·2	0·085	0·5	... : sP, ssN
18	...	29·050	36·1	21·5	14·6	28·4	−11·3	26·4	18·9	9·5	14·8	4·0	67	73·8	15·9	0·000	1·8	mP : ssP
19	...	29·138	34·1	21·1	13·0	28·5	−11·1	26·4	18·3	10·2	16·3	2·3	64	41·7	18·4	0·071	2·7	ssP : sP : mP, wN
20	...	29·193	38·1	29·3	8·8	33·0	− 6·5	32·1	30·3	2·7	5·1	0·5	90	65·8	29·3	0·070	1·7	wP : mP
21	Last Quarter	29·281	48·0	35·1	12·9	41·7	+ [illegible]·2	40·6	39·2	2·5	5·2	0·0	92	68·9	32·8	0·372	2·3	vN, vP : wP
22	...	29·400	52·3	37·5	14·8	42·8	+ 3·2	41·0	38·8	4·0	10·9	0·0	86	91·4	33·5	0·035	0·0	wN, wP : mP
23	Greatest Declination S.	29·528	50·3	33·5	16·8	41·8	+ 2·0	40·1	38·0	3·8	8·2	1·2	87	93·0	28·6	0·002	3·0	wP
24	...	29·639	50·8	38·3	12·5	42·4	+ 2·5	41·4	40·2	2·2	6·9	0·5	92	75·2	31·3	0·272	2·5	wP, wwN : wP
25	...	29·745	53·5	36·4	17·1	42·1	+ 2·1	40·8	39·2	2·9	12·4	0·0	90	81·0	34·4	0·004	1·5	wP
26	...	29·892	43·1	33·9	9·2	38·4	− 1·7	37·8	37·0	1·4	3·4	0·0	95	63·3	30·3	0·002	0·0	wP
27	...	29·921	40·1	33·3	6·8	37·0	− 3·1	36·0	34·6	2·4	5·3	0·2	91	50·2	33·3	0·002	1·0	wP
28	New	29·733	42·8	33·1	9·7	38·0	− 2·2	35·9	33·1	4·9	7·0	2·9	82	75·2	29·5	0·000	0·0	wP
29	Perigee	29·673	42·0	35·0	7·0	37·8	− 2·4	36·0	33·6	4·2	7·5	1·9	85	82·0	29·5	0·010	0·2	wP : wN, vP
Means	...	29·623	44·4	33·7	10·7	39·0	− 0·6	37·2	34·0	4·9	9·3	1·2	83·0	66·9	29·4	Sum 1·688	1·6	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·623, being 0in·176 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 53°·5 on February 25; the lowest in the month was 18°·8 on February 17; and the range was 34°·7.
The mean of all the highest daily readings in the month was 44°·4, being 0°·9 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 33°·7, being 0°·6 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 10°·7, being 0°·3 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 39°·0, being 0°·6 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Feb. 1	0·0	9·1	SW	SW	6·5	0·0	1·70	610	v : 10, st.-w	10, hy.-sqs, glm : 2, li.-cl : 0
2	3·1	9·2	SW : WSW	SW : WSW	6·0	0·0	1·46	597	0 : 0, w	10, oc.-r, sn, st.-w : 3, li.-cl, w : 0, w
3	0·5	9·2	WSW : WNW	NW : NNW	3·0	0·0	0·86	462	10, w : 9, ci.-s, li.-cl, w	7, cu, cu.-s, slt.-r, sn, w : 0, w
4	1·9	9·3	NW : SW	SSW : WSW	2·2	0·0	0·32	315	0, ho.-fr : 2, li.-cl	10, oc.-th.-r : 10, oc.-r, lu.-ha
5	3·5	9·3	SW : WSW	WNW : WSW	2·7	0·0	0·57	414	p.-cl : 0 : 3, ci.-cu, cu.-s	p.-cl : 10
6	0·0	9·4	WSW	WSW : SW	1·5	0·0	0·27	288	10 : 10	10, fq.-th.-r : 10, th.-r
7	0·0	9·4	Calm : WSW	WSW : W	4·7	0·0	0·86	420	10, r : 10	10 : 10, sc : 0, w
8	0·6	9·5	W : WSW	NNW : N	7·3	0·0	1·33	510	p.-cl, w : 10, r : 10, c.-r	v, st.-w, shs.-r : 10, w
9	0·0	9·6	NE : SSW	SW : SSW	1·0	0·0	0·05	171	10 : 10	10, oc.-slt.-r : 10, fq.-r
10	0·0	9·6	WSW : NNW	NNW : NW	1·0	0·0	0·11	206	10, slt.-r : 10, slt.-r, gt.-glm	10 : 10
11	0·0	9·7	N : NNW : WSW	Variable	0·4	0·0	0·01	125	10 : 10, glm	10 : 10 : 2, th.-cl, h, f
12	0·0	9·8	WSW : NNW	NNW : NW	1·3	0·0	0·05	181	0, ho.-fr : 10, f, glm	10 : 0, h
13	2·7	9·8	N : NNE	N : NNW	2·7	0·0	0·53	319	v : 4, li.-cl	10 : 3, li.-cl
14	0·0	9·9	NNW : SW	SW	1·4	0·0	0·10	252	p.-cl, a : 10 : 10, sn	10, fq.-th.-r : 10
15	0·0	9·9	SW : WNW	ENE	4·1	0·0	0·66	356	10, hy.-r, sl : 10, gt.-glm	10, fq.-r, sl, sn, glm : 10, sn, w
16	2·3	10·0	ENE : NE	ENE : NE	4·7	0·0	1·10	518	10, sn : 10 : 6, li.-cl, w	7, ci.-cu, li.-cl, oc.-sn, w : 10, w : v, fr
17	2·5	10·1	NNE : N	WSW : SSW	2·0	0·0	0·39	334	0, fr : 0 : 2, th.-cl, h	5, th.-cl : 10, sn
18	4·3	10·1	WNW : NNW	NNE : NE	1·6	0·0	0·30	287	10 : 10 : p.-cl, slt.-sn	2, li.-cl : 0 : 0, ho.-fr
19	0·0	10·2	ENE : E	E : ENE	3·9	0·0	0·88	396	10 : 10, slt.-sn	10, oc.-sn, w : p.-cl, w : 10, sn
20	0·5	10·3	NNE : ESE	ENE : E	2·3	0·0	0·17	192	10, oc.-sn : 10, sn	10 : 10
21	0·0	10·3	SE : S	SE : SSE	1·5	0·0	0·16	203	10, hy.-r : 10, sc	10, slt.-r : 10, r
22	3·9	10·4	Calm : S	S : SE	1·5	0·0	0·06	171	10, r : p.-cl	4, cu.-s, li.-cl : 0 : 0
23	6·3	10·5	SE : ESE	SE : SSE	1·9	0·0	0·19	228	0, d : 0	5, li.-cl : 10, slt.-r : v
24	0·0	10·5	Calm : ESE	SW : SSE	0·2	0·0	0·00	94	0 : 10, m, glm, r : 10, c.-r	p.-cl, sh.-r : v
25	2·0	10·6	ESE : E	E : SE	0·5	0·0	0·02	132	10 : 10, slt.-f	4, ci.-cu, li.-cl : v : 0
26	0·0	10·7	ESE : ENE	ESE : NE	0·7	0·0	0·02	124	p.-cl : 10, tk.-f : 10, slt.-f, slt.-r	10 : 10, oc.-th.-r, slt.-f
27	0·0	10·7	NE : ENE	E : ENE	1·0	0·0	0·05	179	10 : 10	10 : 10
28	1·4	10·8	ENE : NE	NNE : N	1·2	0·0	0·10	237	10 : 10 : p.-cl	10 : 10
29	1·3	10·8	NNW : N	N : NNW	1·9	0·0	0·22	270	10 : 10	v, cu.-s, oc.-r : p.-cl, slt.-r
Means	1·3	10·0	...	...	...	...	0·43	296		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 37°·2, being 0°·6 *lower* than
The mean *Temperature of the Dew Point* for the month was 34°·0, being 1°·6 *lower* than
The mean *Degree of Humidity* for the month was 83·0, being 3·0 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·196, being 0in·012 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·3, being 0gr·1 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 551 grains, being 2 grains *less* than
} the average for the 50 years, 1841–1890.

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 0·127. The maximum daily amount of *Sunshine* was 6·3 hours on February 23.

The highest reading of the *Solar Radiation Thermometer* was 93°·0 on February 23; and the lowest reading of the *Terrestrial Radiation Thermometer* was 15°·9 on February 18.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 0·7; for the 6 hours ending 15h. was 0·3; and for the 6 hours ending 21h. was 0·6.

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

The *Greatest Pressure of the Wind* in the month was 7·3 lbs. on the square foot on February 8. The mean daily *Horizontal Movement of the Air* for the month was 296 miles; the greatest daily value was 610 miles on February 1; and the least daily value was 94 miles on February 24.

Rain fell on 19 days in the month amounting to 1in·688, as measured by gauge No. 6 partly sunk below the ground; being 0in·204 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Mar. 1	In Equator	29·714	40·9	32·6	8·3	36·3	− 3·9	35·0	33·1	3·2	5·5	1·3	89	60·9	30·0	0·139	1·2	wP, wN : vP, vN
2	...	29·888	32·6	27·7	4·9	30·2	−10·2	28·4	23·0	7·2	12·8	2·2	73	39·2	27·0	0·010	2·7	wP, wwN : mP, ssN
3	...	30·056	32·1	27·1	5·0	29·3	−11·2	26·7	17·7	11·6	15·5	10·3	60	66·2	26·5	0·006	4·3	wP : sP
4	...	30·120	35·3	28·8	6·5	30·8	− 9·9	27·7	19·1	11·7	13·9	7·8	60	76·2	28·8	0·000	1·5	mP : sP
5	First Quarter	30·123	41·4	26·3	15·1	33·8	− 7·1	31·5	27·4	6·4	8·5	4·0	77	82·0	21·0	0·000	1·5	ssP : sP
6	...	29·997	38·6	28·8	9·8	32·9	− 8·2	30·1	24·5	8·4	12·5	2·4	70	88·0	24·8	0·000	4·5	mP : sP
7	Greatest Declination N.	29·793	37·1	27·7	9·4	31·3	− 9·7	28·3	20·6	10·7	15·8	4·6	63	87·0	23·4	0·000	0·5	mP : ...
8	...	29·732	37·4	24·6	12·8	30·2	−10·7	27·6	19·7	10·5	13·0	6·7	63	77·0	20·3	0·000	1·5	... : sP
9	...	29·438	39·1	22·3	16·8	29·8	−11·0	27·9	21·8	8·0	12·2	0·3	71	72·3	16·5	0·134	0·0	vP : vP, ssN
10	...	29·203	40·1	23·1	17·0	30·7	−10·0	28·7	23·1	7·6	9·1	5·0	71	86·1	19·6	0·035	0·2	mP, wN : vP, ssN
11	...	29·394	38·9	26·9	12·0	32·5	− 8·1	30·4	26·0	6·5	10·6	5·2	75	60·0	23·1	0·003	0·8	mP : vP
12	...	29·345	38·5	27·8	10·7	33·0	− 7·7	30·7	26·1	6·9	11·5	3·3	75	64·9	22·1	0·000	0·0	mP : vP, vN
13	Full	29·194	41·9	23·9	18·0	32·0	− 8·9	30·1	25·7	6·3	13·8	0·0	76	67·1	21·8	0·000	0·0	mP : vP
14	In Equator	29·336	41·1	24·3	16·8	32·1	− 9·1	30·4	26·5	5·6	9·7	2·9	78	63·8	18·6	0·000	0·0	vP, wN : vP
15	Apogee	29·350	43·4	30·0	13·4	38·2	− 3·2	36·5	34·2	4·0	6·4	2·1	86	64·7	24·5	0·274	11·0	mP : ssN, wP
16	...	29·680	54·0	36·2	17·8	44·4	+ 2·9	41·5	38·1	6·3	12·8	1·4	78	94·1	33·8	0·046	1·2	vN, wP : mP
17	...	30·009	59·9	45·5	14·4	50·2	+ 8·6	46·9	43·4	6·8	14·1	1·7	78	110·8	40·0	0·000	4·5	wP : mP
18	...	30·138	60·0	38·2	21·8	48·1	+ 6·5	44·3	40·1	8·0	16·1	2·2	74	110·8	33·0	0·000	2·3	wP : mP
19	...	30·047	53·1	35·5	17·6	43·0	+ 1·5	39·9	36·2	6·8	13·4	2·2	77	107·0	30·1	0·000	1·0	mP : sP
20	...	30·005	48·8	31·3	17·5	39·7	− 1·7	36·9	33·2	6·5	14·9	1·8	78	105·8	26·0	0·000	3·0	mP : sP
21	Last Quarter	30·155	54·8	27·4	27·4	40·7	− 0·7	38·2	35·0	5·7	13·0	0·8	81	103·3	22·5	0·171	0·0	mP : ...
22	Greatest Declination S.	30·230	41·1	36·8	4·3	39·3	− 2·2	37·7	35·6	3·7	6·0	2·3	87	51·4	34·0	0·088	1·0	... : vP, vN
23	...	30·280	49·0	33·4	15·6	41·0	− 0·8	39·3	37·3	3·7	7·6	1·7	86	79·2	29·0	0·000	1·0	mP : vP
24	...	30·113	45·5	36·7	8·8	41·0	− 1·1	39·2	36·9	4·1	7·5	1·9	86	62·1	30·2	0·000	1·8	mP : sP
25	...	29·831	51·8	35·1	16·7	40·3	− 2·1	38·8	36·9	3·4	8·8	0·7	88	96·8	31·1	0·000	5·2	wP : mP
26	...	29·518	60·5	36·2	24·3	47·2	+ 4·3	45·0	42·6	4·6	12·0	0·7	85	91·8	36·2	0·019	2·0	mP : vP, vN
27	...	29·553	48·1	40·0	8·1	45·0	+ 1·7	43·3	41·3	3·7	5·2	1·5	87	60·0	40·0	0·059	1·2	wP, mN : wP, wwN
28	New: Perigee: In Equator	29·771	40·5	31·9	8·6	35·9	− 7·8	33·1	28·9	7·0	12·2	1·4	75	79·0	26·5	0·105	3·8	vP, vN : sP
29	...	30·234	42·6	30·4	12·2	36·0	− 8·1	32·0	26·0	10·0	13·8	4·9	66	104·0	23·0	0·000	1·0	sP
30	...	30·372	51·0	30·7	20·3	40·1	− 4·5	35·7	30·0	10·1	16·4	5·1	67	108·0	26·7	0·000	3·0	mP : sP
31	...	30·368	57·6	28·3	29·3	42·6	− 2·4	35·8	27·6	15·0	24·2	9·2	56	109·7	20·3	0·000	0·0	sP
Means	...	29·838	45·1	30·8	14·2	37·3	− 4·3	34·8	30·2	7·1	11·9	3·1	75·4	81·6	26·8	Sum 1·089	2·0	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·838, being 0in·085 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 60°·5 on March 26 ; the lowest in the month was 22°·3 on March 9 ; and the range was 38°·2.
The mean of all the highest daily readings in the month was 45°·1, being 4°·6 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 30°·8, being 4°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 14°·2, being 0°·5 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 37°·3, being 4°·3 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Mar. 1	0·0	10·8	NNW : NNE	NNE : N	3·0	0·0	0·65	438	10, oc.-slt.-r : 10, sh.-r	10, fq.-shs : 10, sn
2	0·0	10·9	NNE : NE	NE	5·2	0·3	1·49	606	10, sn, w : 10, oc.-sn, w	10, sn, w : 10, sn, w
3	0·2	11·0	NE : ENE	ENE : NE	4·2	0·0	1·14	504	10, sn, w : 10, oc.-sn, w	10, sn, w : 10, sn, w
4	0·4	11·1	NE : ENE	ENE : NNE	2·8	0·0	0·50	369	10 : 10, slt.-sn	10, slt.-sn : 10
5	1·2	11·1	NNE : NNW	N : NNE	1·2	0·0	0·08	188	10 : 10 : v	10 : 10, slt.-sn
6	1·8	11·2	NE : E : SE	ENE : NE	2·2	0·0	0·12	227	10 : 10	10 : p.-cl
7	7·1	11·2	ENE : ESE	E : ENE	2·3	0·0	0·31	324	10 : 4, cu, cu.-s, li.-cl	4, cu, ci.-cu, cu.-s : v, li.-cl, lu.-ha
8	0·5	11·3	E : NE	NE : NNE	1·1	0·0	0·03	217	2, li.-cl : 7, cu.-s	9, th.-cl, cu.-s : v, ho.-fr
9	2·4	11·4	SW : SSW	NW : WSW	4·5	0·0	0·09	271	0, ho.-fr : 0 : p.-cl, sn	10, sn, sq, glm : v, th.-cl, fr
10	1·0	11·4	WSW : SW	SW : NNW	2·0	0·0	0·08	303	0 : 10 : 10, slt.-sn	9, so.-ha : 10
11	0·8	11·5	NNW : NW	NNW	1·7	0·0	0·09	262	10 : 10, sn	8, ci.-cu, li.-cl : 6, li.-cl
12	0·6	11·6	NNW	NNW : NW : W	0·2	0·0	0·00	149	10 : 7, li.-cl, cu.-s, slt.-sn	10 : p.-cl, h, slt.-f, ho.-fr
13	1·0	11·6	SW : W	Variable	0·0	0·0	0·00	128	0, ho.-fr : 0, ho.-fr : 0, h, m	p.-cl, h : 3, li.-cl, h, slt.-f, lu.-ha, ho.-fr
14	0·4	11·7	Calm	NW : SW	0·1	0·0	0·00	134	0, h, slt.-f, ho.-fr : 0, h, slt.-f, ho.-fr : p.-cl, f, h, glm	6, cu, cu.-s, h : 0, h
15	0·5	11·8	SW : SSW	S : SSE	6·2	0·0	0·70	454	1, li.-cl, ho.-fr : 2, li.-cl : p.-cl, sc, r, w	10, c.-r, st.-w : v, slt.-r
16	4·1	11·8	WNW : NW	SW : SSW	3·5	0·0	0·13	354	10, oc.-r : 10 : 3, th.-cl, h	4, th.-cl, slt.-r : 10, th.-r
17	2·8	11·9	SSW : S	SSW : S	1·6	0·0	0·05	292	10 : 10 : v	8, cu.-s, li.-cl : v, li.-cl
18	9·2	12·0	SSE	SE : E	2·2	0·0	0·07	267	v, li.-cl : 2, cu.-s, li.-cl	1, li.-cl : 0
19	9·9	12·0	E	E : ENE	3·3	0·0	0·15	299	0 : 0	0 : 0
20	10·4	12·1	ENE : E	ESE	1·3	0·0	0·02	246	0, ho.-fr : 0	0 : 0
21	3·8	12·2	ESE : ENE	E : NE : N	1·0	0·0	0·00	124	0, ho.-fr : 0, tk.-f : 0, slt.-f	6, th.-cl, so.-ha : 10, r
22	0·0	12·2	NNE : N : NNW	NNE	2·7	0·0	0·48	425	10, slt.-r : 10, sc, glm, fq.-th.-r	10, r : 10
23	0·2	12·3	NNE : NE	NE	1·8	0·0	0·04	348	p.-cl : 10	10 : 10
24	0·4	12·4	NE : ENE	ENE : ESE	0·1	0·0	0·00	179	10 : 10	10 : 5, li.-cl : 10
25	4·0	12·4	ESE	ESE : E	0·0	0·0	0·00	113	10 : 10	0 : 10, tk.-f
26	1·8	12·5	Calm : WSW	WSW : SSW	0·0	0·0	0·00	118	10, f : 4, th.-cl, f	p.-cl : 10, fq.-r
27	0·0	12·6	WSW : N : NNE	NNE : N	0·5	0·0	0·00	123	10, oc.-r : 10 : 10, glm	10, gt.-glm : 10
28	2·3	12·6	NNE : NE	N : NNW	3·2	0·0	0·43	444	10, r : 10, sn : 10, w	p.-cl, oc.-sn, w : 1, li.-cl
29	2·6	12·7	N : NE	NNE	2·7	0·0	0·41	486	v, li.-cl, fr : 8, cu.-s, li.-cl	9, cu.-s, ci.-cu : 10
30	11·0	12·8	NNE : NE	NE : ENE	2·7	0·0	0·32	433	v : 1, li.-cl	1, li.-cl : 0
31	11·0	12·8	NE : ENE	ENE : ESE	0·9	0·0	0·01	178	0 : 1, th.-cl	0 : 0
Means	2·9	11·8	...	...	...	...	0·24	290		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 34°·8, being 4°·5 *lower* than
The mean *Temperature of the Dew Point* for the month was 30°·2, being 6°·1 *lower* than
The mean *Degree of Humidity* for the month was 75·4, being 5·7 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·168, being 0in·046 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·0, being 0gr·5 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 557 grains, being 7 grains *greater* than
} the average for the 50 years, 1841–1890.

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 0·249. The maximum daily amount of *Sunshine* was 11·0 hours on Mar. 30 and 31.

The highest reading of the *Solar Radiation Thermometer* was 110°·8 on Mar. 17 and 18; and the lowest reading of the *Terrestrial Radiation Thermometer* was 16°·5 on Mar. 9.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·5; for the 6 hours ending 15h. was 0·3; and for the 6 hours ending 21h. was 0·2.

The *Proportions of Wind* referred to the cardinal points were N. 11, E. 11, S. 4, and W. 3. Two days were calm.

The *Greatest Pressure of the Wind* in the month was 6·2 lbs. on the square foot on March 15. The mean daily *Horizontal Movement of the Air* for the month was 290 miles; the greatest daily value was 606 miles on March 2; and the least daily value was 113 miles on March 25.

Rain fell on 12 days in the month, amounting to 1in·089, as measured by gauge No. 6 partly sunk below the ground; being 0in·372 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
April 1	...	30·280	68·7	29·1	39·6	47·6	+ 2·2	39·6	30·8	16·8	29·7	8·7	52	111·4	24·9	0·000	0·0	vP, vN : sP
2	...	30·209	65·4	36·8	28·6	49·7	+ 4·0	41·9	33·6	16·1	25·0	7·4	54	118·8	30·5	0·000	0·0	sP : mP : sP
3	Greatest Declination N.	30·044	64·1	34·9	29·2	48·6	+ 2·6	41·7	34·2	14·4	29·2	5·9	58	122·1	25·0	0·000	0·0	sP
4	First Quarter	29·830	75·3	36·1	39·2	55·1	+ 8·9	48·5	42·2	12·9	22·3	2·6	62	118·0	29·5	0·000	0·0	vP : vP, wN
5	...	29·805	73·3	41·5	31·8	57·9	+11·7	50·8	44·4	13·5	24·3	4·6	61	119·0	35·8	0·000	0·0	vP : wP, wwN
6	...	29·770	67·5	42·4	25·1	54·2	+ 8·0	48·6	43·1	11·1	21·4	2·9	66	116·3	35·1	0·000	0·0	wP, wwN : mP
7	...	29·756	66·3	39·5	26·8	53·0	+ 6·9	46·7	40·4	12·6	22·7	3·7	63	116·0	29·0	0·000	0·0	vP : mP
8	...	29·778	65·8	38·8	27·0	49·6	+ 3·7	45·8	41·8	7·8	16·7	1·4	74	116·5	33·0	0·000	0·0	mP : vP, wwN
9	...	29·784	60·1	39·2	20·9	49·8	+ 4·2	45·6	41·2	8·6	16·2	2·3	72	113·2	32·7	0·000	0·0	wP : mP
10	In Equator	29·784	65·2	37·4	27·8	50·6	+ 5·1	44·2	37·5	13·1	27·4	2·5	61	120·3	31·8	0·000	0·0	mP : sP
11	...	29·752	66·8	33·0	33·8	48·7	+ 3·2	42·8	36·4	12·3	22·3	3·9	62	116·8	22·3	0·000	0·0	sP : mP
12	Apogee : Full	29·706	52·1	33·3	18·8	40·9	− 4·8	37·8	33·9	7·0	11·5	4·1	75	111·2	26·1	0·000	0·0	vP
13	...	29·495	41·2	33·0	8·2	37·4	− 8·6	36·0	34·1	3·3	5·3	1·2	88	64·3	29·0	0·105	0·0	vP, wN : ssN, vP
14	...	29·521	49·7	29·0	20·7	36·7	− 9·7	33·9	29·8	6·9	15·1	0·9	76	116·0	23·2	0·000	0·0	sP : vP, ssN
15	...	29·543	50·2	27·8	22·4	37·5	− 9·4	34·3	29·9	7·6	18·5	0·0	74	103·3	22·7	0·010	0·0	mP : vP, wN
16	...	29·366	42·1	32·1	10·0	36·1	−11·2	34·4	31·9	4·2	12·0	0·0	85	58·0	30·8	0·547	0·0	ssN, ssP : wN, vP
17	...	29·560	48·3	26·7	21·6	37·5	−10·2	34·3	29·8	7·7	14·5	0·0	74	93·0	23·5	0·063	0·0	mP : vP, vN
18	Greatest Declination S.	29·870	51·3	32·0	19·3	39·7	− 8·4	36·2	31·6	8·1	17·6	2·9	73	104·0	27·1	0·000	0·0	mP : wP, wN : vN, vP
19	...	30·184	51·0	30·1	20·9	40·6	− 7·7	37·1	32·7	7·9	17·0	0·7	73	101·1	25·0	0·000	0·0	mP : vP, vN : wP, wwN
20	Last Quarter	30·150	51·7	35·7	16·0	44·2	− 4·3	41·5	38·3	5·9	13·6	0·8	79	83·0	29·0	0·132	1·0	mP : vP, vN
21	...	29·973	63·1	47·8	15·3	54·1	+ 5·6	50·1	46·2	7·9	18·1	1·3	74	116·2	44·0	0·012	0·0	wP, wwN : vP
22	...	30·105	70·0	48·2	21·8	57·4	+ 8·9	52·8	48·6	8·8	14·6	2·5	72	118·8	41·7	0·000	0·0	mP : wwP
23	...	30·215	67·6	42·2	25·4	54·7	+ 6·3	48·6	42·7	12·0	23·9	0·9	64	117·4	36·5	0·000	0·0	mP : vP
24	In Equator	30·105	63·5	47·2	16·3	54·1	+ 5·7	46·7	39·4	14·7	23·2	7·4	58	109·8	42·3	0·000	0·0	mP : wP : wP, vN
25	...	29·733	57·1	39·8	17·3	47·7	− 0·7	43·5	38·9	8·8	20·6	2·6	72	100·2	32·5	0·120	0·0	wP, ssN : vP
26	Perigee : New	29·700	55·9	35·9	20·0	45·1	− 3·3	41·1	36·5	8·6	19·0	0·7	72	105·7	31·4	0·061	0·0	mP : vP, vN
27	...	29·577	59·1	30·4	28·7	43·3	− 5·2	40·4	37·0	6·3	18·2	0·0	78	108·6	26·2	0·308	0·0	vP : wP, wN : ssP, ssN
28	...	29·522	46·1	36·4	9·7	40·3	− 8·3	38·2	35·5	4·8	7·0	2·2	84	64·2	30·5	0·059	0·0	mP, wN : vP, ssN : mP, ssN
29	...	29·795	51·7	34·0	17·7	41·4	− 7·4	37·4	32·4	9·0	15·5	3·1	71	115·9	28·3	0·004	0·0	sP : vP
30	...	30·003	59·9	29·6	30·3	45·1	− 3·9	40·2	34·5	10·6	20·1	0·0	67	112·3	23·1	0·000	0·0	sP : mP : vP, wN
Means	...	29·830	59·0	36·0	23·0	46·6	− 0·5	42·0	37·0	9·6	18·8	2·6	69·8	106·4	30·1	Sum 1·421	0·0	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·830, being 0in·089 *higher* than the average for the 50 years, 1841-1890.

TEMPERATURE OF THE AIR.

The highest in the month was 75°·3 on April 4; the lowest in the month was 26°·7 on April 17; and the range was 48°·6.
The mean of all the highest daily readings in the month was 59°·0, being 1°·8 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 36°·0, being 2°·9 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 23°·0, being 4°·7 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 46°·6, being 0°·5 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
April 1	6·9	12·9	Calm	ENE : ESE	0·2	0·0	0·00	103	o : o, f	o : o, m
2	9·6	13·0	ENE : NE	E	1·4	0·0	0·03	187	o : 2, th.-cl	1, th.-cl : 1, li.-cl
3	11·1	13·0	ENE : E	E	2·4	0·0	0·04	243	o : 1, th.-cl	1, th.-cl : o
4	9·6	13·1	E : SW	W : WSW	0·5	0·0	0·01	174	o : o, slt.-f	2, th.-cl : o, lu-ha
5	11·0	13·2	SW : Calm	S : Calm	0·0	0·0	0·00	113	o, d : o, m	1, li.-cl : o, h, lu.-ha
6	11·0	13·2	NE : ENE	E : ENE	1·1	0·0	0·01	190	o, d : o, m	o : o
7	11·3	13·3	NE : ENE	NE : ENE	2·8	0·0	0·18	321	o, d : o	o : o
8	7·8	13·4	ENE : NE	ENE	3·0	0·0	0·32	378	p.-cl : p.-cl	1, th.-cl, w : 6, th.-cl, lu-ha
9	11·5	13·4	NE : ENE	ENE : NE	1·7	0·0	0·12	308	o, d : o	1, li.-cl : o
10	11·7	13·5	NE : ENE	E : ESE	1·3	0·0	0·01	195	o, d : o	o : o
11	10·7	13·6	NNE : NNW	NE : ESE	0·5	0·0	0·00	140	o, ho.-fr : 3, th.-cl, so.-ha	1, li.-cl : o
12	5·0	13·6	NNE : NE	NE : E	1·2	0·0	0·05	273	o, ho.-fr : o : 8, ci.-cu, cu.-s	10 : v, li.-cl
13	0·0	13·7	ENE : NE	ENE : NE	1·0	0·0	0·02	230	10 : 10, th.-r, sl	10, fq.-r, sn : 8, li.-cl
14	7·7	13·7	NNE : N	N : SE : SSW	1·3	0·0	0·03	215	p.-cl, ho.-fr : 7, cu, cu.-s	5, cu.-s : 1, th.-cl, h, m, ho.-fr
15	2·4	13·8	SW : S	SW : NE	1·2	0·0	0·01	123	o, ho.-fr : 10, slt.-f : 5, th.-cl, cu.-s	p.-cl : 10 : 10, slt.-r, sn
16	0·0	13·9	NNE : N : NNW	NNW	3·6	0·0	0·65	384	10, sn, w : 10, sn, th.-r	10 : v
17	3·5	13·9	NNW : N	NNE : NNW	2·0	0·0	0·04	176	10 : o, ho.-fr : 8, cu, cu.-s	p.-cl : p.-cl, sn
18	6·1	14·0	NW : NNW	NNW : ESE : NNE	0·6	0·0	0·01	171	v, ho.-fr : 6, cu.-s, li.-cl	10 : 10, slt.-r
19	5·3	14·1	NE : NNE	N : SSW	0·0	0·0	0·00	125	o, ho.-fr : 1, li.-cl : 7,cu,cu.-s,f,gt.-glm	6, ci.-cu, cu.-s : o, h
20	0·0	14·1	SSW : SW	SW	1·6	0·0	0·11	332	10 : 10, oc.-slt.-r	10, oc.-slt.-r : 10, c.-r
21	2·0	14·2	WSW : NW	WNW : WSW	1·4	0·0	0·05	319	10, oc.-r : 10	p.-cl : v, th.-cl
22	4·8	14·2	SW : WSW	WSW : NW	1·5	0·0	0·08	351	v, li.-cl : 10	10 : o
23	11·3	14·3	SW : WSW	W : WNW	1·2	0·0	0·03	237	o, d : 2, li.-cl, m	1, li.-cl : p.-cl
24	9·9	14·4	WSW : WNW : NNW	WNW : SW	1·4	0·0	0·01	237	10 : 2, li.-cl, h	p.-cl, so.-ha, h : 10
25	4·8	14·4	SW : WSW : NNW	NW : NNW	2·9	0·0	0·12	314	10 : 10, shs.-r: 10, r	3, cu.-s : o
26	4·3	14·5	SW : NW	Variable	1·4	0·0	0·02	208	o : v, shs.-r	7, cu.-s : 10, hy.-r : o, m
27	4·1	14·5	Calm : SW	SSW : WSW	3·5	0·0	0·20	282	o, ho.-fr : 4, cu.-s, li.-cl	7,ci.-cu,cu.-s: 10, hy.-r,hl: o
28	0·7	14·6	WSW : NNW	NNW	7·6	0·0	0·92	484	p.-cl : 10, slt.-r, w, glm	v, sh.-r, st.-w : o
29	3·7	14·7	NNW : NNE	NNE	1·2	0·0	0·04	145	o, ho.-fr : 8, th.-cl	9, cu.-s, ci.-cu, slt.-r : 10, fr.-r : o
30	8·5	14·7	Calm : NNW	N: NNW	0·6	0·0	0·01	55	o, ho.-fr : 1, li.-cl, h, m	2, cu : o, h, f
Means	6·5	13·8	...	...	...	...	0·10	234		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 42°·0, being 1°·9 *lower* than
The mean *Temperature of the Dew Point* for the month was 37°·0, being 3°·2 *lower* than
The mean *Degree of Humidity* for the month was 69·8, being 6·8 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·220, being 0in·029 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·5, being 0gr·4 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 546 grains, being 3 grains *greater* than
} the average for the 50 years, 1841–1890.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 4·3.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·473. The maximum daily amount of *Sunshine* was 11·7 hours on April 10.

The highest reading of the *Solar Radiation Thermometer* was 122°·1 on April 3; and the lowest reading of the *Terrestrial Radiation Thermometer* was 22°·3 on April 11.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 0·0; for the 6 hours ending 15h. was 0·0; and for the 6 hours ending 21h. was 0·0.

The *Proportions of Wind* referred to the cardinal points were N. 9, E. 8, S. 3, and W. 7. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 7·6 lbs. on the square foot on April 28. The mean daily *Horizontal Movement of the Air* for the month was 234 miles; the greatest daily value was 484 miles on April 28; and the least daily value was 55 miles on April 30.

Rain fell on 10 days in the month, amounting to 1in·421, as measured by gauge No. 6 partly sunk below the ground; being 0in·240 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
May 1	Greatest Declination N.	29·856	57·8	33·1	24·7	47·2	− 2·0	41·3	34·7	12·5	20·7	4·0	62	102·6	27·5	0·000	0·0	wP : wP, wwN
2	...	29·644	48·5	37·4	11·1	43·2	− 6·2	41·4	39·3	3·9	8·6	1·6	86	67·5	32·8	0·074	0·0	mP : vP, ssN
3	First Quarter	29·515	47·9	41·5	6·4	43·8	− 5·9	42·3	40·5	3·3	6·5	1·3	88	69·7	40·3	0·023	0·0	wP : ssN, vP : vP
4	...	29·604	49·5	40·6	8·9	45·3	− 4·7	43·8	42·1	3·2	5·2	0·9	89	66·9	37·5	0·056	0·0	wP, wN : wP, wwN
5	...	29·788	48·2	36·3	11·9	43·0	− 7·3	39·9	36·2	6·8	10·1	2·4	77	83·2	30·0	0·000	0·0	mP : vP
6	...	29·970	54·3	34·0	20·3	43·4	− 7·2	38·2	32·0	11·4	20·4	4·4	64	111·3	27·2	0·000	0·0	sP : mP : sP
7	...	30·027	64·0	28·7	35·3	47·0	− 3·8	41·3	34·9	12·1	21·7	3·7	63	115·9	21·3	0·000	0·0	sP: wwP, vN : wP
8	In Equator	29·989	64·4	39·9	24·5	52·3	+ 1·3	46·7	41·0	11·3	18·8	1·8	66	113·4	31·7	0·000	0·0	mP : vP, wN
9	Apogee	30·004	69·8	38·5	31·3	53·5	+ 2·3	46·8	40·2	13·3	22·5	4·4	61	126·7	30·0	0·000	0·0	mP : wP, wN : mP
10	...	30·013	64·5	38·3	26·2	53·1	+ 1·6	47·5	41·9	11·2	20·3	2·8	66	121·5	28·0	0·000	0·0	wP : wP, mN : mP
11	Full	30·082	70·9	41·1	29·8	55·7	+ 4·0	49·3	43·2	12·5	23·4	3·3	64	127·3	36·0	0·000	0·0	mP : wP, wN : mP
12	...	30·180	70·8	41·6	29·2	55·9	+ 3·9	49·4	43·3	12·6	24·3	2·2	63	127·7	34·7	0·000	0·0	mP
13	...	30·052	71·1	41·4	29·7	57·4	+ 5·1	50·5	44·2	13·2	24·7	3·3	61	114·2	30·6	0·000	0·0	mP : vP, vN
14	...	29·879	68·5	47·2	21·3	57·4	+ 4·8	53·0	49·0	8·4	16·0	2·4	73	108·3	39·0	0·052	0·2	mP : wP, wN : vP
15	Greatest Declination S.	29·792	61·6	41·7	19·9	52·0	− 0·8	48·6	45·1	6·9	13·9	2·0	78	103·4	35·5	0·002	1·5	mP : wP : mP
16	...	29·594	61·2	43·3	17·9	52·4	− 0·7	46·7	40·9	11·5	20·1	2·4	65	127·0	34·8	0·000	2·8	mP, wN : vN, wP
17	...	29·738	66·3	47·0	19·3	53·3	0·0	47·9	42·5	10·8	19·4	4·6	66	116·6	41·1	0·008	1·5	mP : wP, vN
18	...	29·908	68·0	44·4	23·6	55·1	+ 1·5	50·5	46·1	9·0	18·4	2·1	72	129·9	39·1	0·019	1·0	mP : wP, wN
19	Last Quarter	29·878	62·7	46·0	16·7	54·3	+ 0·4	50·4	46·6	7·7	15·0	2·7	75	100·6	39·5	0·145	3·0	mP : vP, vN : mP, vN
20	...	29·750	65·3	47·4	17·9	56·4	+ 2·2	50·2	44·5	11·9	18·2	6·0	64	126·0	40·0	0·000	2·0	wP : vN : vP
21	...	29·860	68·4	42·8	25·6	53·6	− 1·0	46·7	39·9	13·7	23·2	6·6	60	123·0	34·9	0·000	0·0	mP : wP, wN : vP, vN
22	In Equator	29·814	68·1	43·1	25·0	54·9	− 0·1	50·5	46·3	8·6	15·5	1·3	73	118·1	34·9	0·000	0·5	mP : wP : mP
23	...	29·763	75·5	43·8	31·7	59·0	+ 3·7	53·4	48·4	10·6	20·4	1·7	68	134·3	34·2	0·000	2·5	mP : wP : mP
24	Perigee	29·755	76·2	49·5	26·7	61·9	+ 6·3	55·6	50·2	11·7	19·0	3·8	66	133·6	41·1	0·000	3·0	mP
25	...	29·621	84·0	52·8	31·2	66·2	+10·5	59·3	53·7	12·5	24·5	4·0	64	138·3	44·1	0·050	1·5	vP, sN : vP, vN
26	New	29·653	77·2	54·8	22·4	63·7	+ 7·8	60·5	57·8	5·9	13·4	1·5	81	133·8	49·1	0·974	8·5	ssP, ssN : wP : mP
27	...	29·678	76·3	57·4	18·9	65·4	+ 9·4	62·1	59·4	6·0	14·4	0·8	82	119·1	51·3	0·207	1·0	ssP, ssN : mP
28	Greatest Declination N.	29·622	81·8	51·0	30·8	66·6	+10·6	59·0	52·9	13·7	29·2	2·7	62	136·3	46·5	0·000	2·0	mP : wP, wN : mP
29	...	29·844	71·8	49·2	22·6	58·9	+ 2·7	54·5	50·5	8·4	16·7	1·9	74	144·7	43·8	0·000	1·2	wP
30	...	29·944	76·9	52·5	24·4	63·7	+ 7·2	57·9	53·1	10·6	18·0	1·6	69	137·6	46·9	0·000	5·8	wP : mP
31	...	29·703	85·1	53·7	31·4	66·9	+10·1	58·6	52·0	14·9	30·1	3·2	59	139·9	46·0	0·046	3·5	mP : wP : ssP, ssN
Means	...	29·823	67·0	43·9	23·1	54·9	+ 1·8	49·8	44·9	10·0	18·5	2·8	69·7	116·7	37·1	Sum 1·656	1·3	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·823, being 0in·037 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 85°·1 on May 31; the lowest in the month was 28°·7 on May 7; and the range was 56°·4.
The mean of all the highest daily readings in the month was 67°·0, being 2°·9 *higher* than the average for the 50 years, 1841-1890.
The mean of all the lowest daily readings in the month was 43°·9, being 0°·2 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 23°·1, being 2°·7 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 54°·9, being 1°·8 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
May 1	7·6	14·8	Calm	Calm : E	0·3	0·0	0·00	61	0, ho.-fr : 0, h	p.-cl, h : v, th.-cl
2	0·0	14·8	E : NE	ENE : NE	1·6	0·0	0·10	237	p.-cl : 10, sc, r, f	10, sc, oc.-r : 10
3	0·0	14·9	NE : NNE	NNW : N : NNE	1·0	0·0	0·03	185	10, shs.-r : 10, slt.-r	10 : 10 : th.-cl, lu.-ha
4	0·0	14·9	NNE	NNE	1·5	0·0	0·10	299	10 : 10, oc.-r	10, oc.-slt.-r : 10, oc.-slt.-r
5	2·4	15·0	N	N	2·3	0·0	0·13	333	0 : v, li.-cl : 10	10 : 10 : v, li.-cl
6	11·3	15·1	NNW : N	N : NNE	2·8	0·0	0·48	386	v, li.-cl : 0 : v, li.-shs	5, cu, cu.-s : 0
7	12·9	15·1	SSW : SW	SW : SSW	1·6	0·0	0·06	248	0, ho.-fr : 0, so.-ha	4, li.-cl : 10
8	1·8	15·2	SW	SW : WNW	0·0	0·0	0·00	154	p.-cl : p.-cl	p.-cl : 0, h
9	9·4	15·2	Calm	E : ESE	1·5	0·0	0·03	128	0, d : 0, f	1, li.-cl : 0
10	12·8	15·3	ENE : NE	E : NNE	2·0	0·0	0·13	252	0 : 0	0 : 1, li.-cl
11	13·2	15·3	NNE	ENE : NE	2·8	0·0	0·40	385	0 : 2, li.-cl	1, li.-cl : 0
12	13·5	15·4	NNE : NE	ESE : ENE	1·3	0·0	0·08	273	0 : 0	0 ; v, th.-cl
13	2·0	15·4	NE : E	Variable	0·0	0·0	0·00	76	1, th.-cl, h : 1 th.-cl, h, m, so.-ha	h, th.-cl, so.-ha : 10, m
14	2·2	15·5	SW : WSW	Variable	1·5	0·0	0·04	230	10, li.-shs : 10, oc.-slt.-r	p.-cl, oc.-slt.-r : 0
15	0·6	15·5	SW	SW	3·3	0·0	0·33	376	0, d, lu.-ha, prs : p.-cl : 10	10 : 10 : 0
16	5·3	15·6	WSW	W : WSW	4·6	0·0	0·86	525	p.-cl : v : 10, w	10, sh.-r : v, slt.-r, w
17	4·5	15·6	WNW : NW	NW : NE : SE	2·6	0·0	0·44	365	v : 8, cu.-s	4, cu.-s, li.-cl : p.-cl, shs.-r
18	1·5	15·7	S : SW	SW	2·5	0·0	0·24	311	v, shs.-r : p.-cl, so.-ha	p.-cl, so.-ha : v
19	3·8	15·7	SW : WSW	W : WSW	2·9	0·0	0·48	414	v : 9, cu.-s, oc.-slt.-r	v, shs.-r : v, cu.-s, oc.-slt.-r : v
20	3·4	15·8	SW : WSW	W : WNW	5·7	0·0	1·12	572	v : 9, cu.-s, w	9, cu.-s, w : 10
21	8·2	15·8	NW : W	WSW : SW	2·3	0·0	0·18	287	0 : 6, cu.-s, li.-cl, h	v : 0
22	2·8	15·9	SW : WSW : NE	SE : S	0·5	0·0	0·02	170	0, d : 0 : 10, m	10 : p.-cl
23	8·9	15·9	SSW : SW	SW	1·3	0·0	0·07	233	0, d : 6, li.-cl	v, cu.-s : v, th.-cl
24	6·6	16·0	SSW : SSE	SSW : SE	1·9	0·0	0·11	255	0, d : 6, cu.-s, th.-cl	5, ci.-cu, li.-cl, so.-ha : 3, cu.-s, th.-cl
25	5·6	16·0	ENE : SSW	SSW : SW	2·5	0·0	0·21	249	v : 5, ci.-cu	3, th.-cl, so.-ha : v, t.-sm, hy.-r
26	2·9	16·0	Variable	ESE : E	3·4	0·0	0·02	125	v, t.-sm, hy.-r : v, shs.-r	5, li.-cl, t, hy.-sh : vv
27	0·1	16·1	Variable	SW : Calm	1·2	0·0	0·03	150	10, hy.-r, l, t : 10, li.-shs : 10, oc.-slt.-r, t	p.-cl, ci.-cu : p.-cl
28	10·8	16·1	ENE : E : S	S : SSW	5·7	0·0	0·71	375	p.-cl : 3, li.-cl, w	2, li.-cl, w : p.-cl
29	7·7	16·1	SSW	SSW	2·8	0·0	0·62	390	0 : 4, cu, cu.-s	p.-cl : 0, lu.-co
30	10·6	16·2	SSW	SSW : SE	1·4	0·0	0·08	220	0, d : 6, ci.-cu	1, li.-cl : 1, li.-cl, l
31	6·9	16·2	SE : S	S : SW	2·6	0·0	0·12	234	v : 4, ci.-s, th.-cl	6, ci.-cu, oc.-r, so.-ha : v, hy.-shs : 2, li.-cl, lu.-co
Means	5·8	15·6	...	...	...	...	0·23	274		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 49°·8, being 0°·6 *higher* than
The mean *Temperature of the Dew Point* for the month was 44°·9, being 0°·4 *lower* than
The mean *Degree of Humidity* for the month was 69·7, being 5·3 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·298, being 0in·005 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·4, being *the same as*
The mean *Weight of a Cubic Foot of Air* for the month was 536 grains, being 2 grains *less* than
} the average for the 50 years, 1841-1890.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5·8.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·372. The maximum daily amount of *Sunshine* was 13·5 hours on May 12.

The highest reading of the *Solar Radiation Thermometer* was 144°·7 on May 29; and the lowest reading of the *Terrestrial Radiation Thermometer* was 21°·3 on May 7.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 0·9; for the 6 hours ending 15h. was 0·2; and for the 6 hours ending 21h. was 0·2.

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

The *Greatest Pressure of the Wind* in the month was 5·7 lbs. on the square foot on May 20 and 28. The mean daily *Horizontal Movement of the Air* for the month was 274 miles; the greatest daily value was 572 miles on May 20; and the least daily value was 61 miles on May 1.

Rain fell on 11 days in the month, amounting to 1in·656, as measured by gauge No. 6 partly sunk below the ground; being 0in·347 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
June 1	...	29·692	71·7	50·6	21·1	59·8	+ 2·6	54·7	50·2	9·6	19·3	2·4	71	135·3	46·2	0·000	6·0	wP : vP
2	First Quarter	29·595	68·3	52·8	15·5	58·2	+ 0·5	54·3	50·8	7·4	14·9	3·4	76	122·9	46·5	0·132	6·2	vP, vN : mP
3	...	29·766	71·1	48·0	23·1	58·0	0·0	52·2	47·0	11·0	20·7	2·8	67	137·2	42·0	0·000	3·2	mP : wP, wwN
4	In Equator	29·872	70·6	42·7	27·9	55·9	− 2·3	49·8	44·1	11·8	23·9	2·6	65	137·1	37·0	0·046	0·5	mP : wP, vN
5	Apogee	29·643	68·6	50·0	18·6	58·3	0·0	54·2	50·5	7·8	15·1	1·8	75	126·9	49·0	0·211	4·5	wP, ssN : ssP, ssN
6	...	30·008	76·2	48·1	28·1	61·0	+ 2·7	55·8	51·3	9·7	19·6	1·0	71	136·9	41·9	0·000	1·5	mP : wN, wP
7	...	30·194	70·9	48·6	22·3	58·2	0·0	54·4	51·0	7·2	16·2	0·8	77	129·1	43·0	0·000	6·0	wP : mP
8	...	30·211	72·1	47·9	24·2	59·0	+ 0·8	54·3	50·1	8·9	18·7	1·7	72	132·6	42·5	0·000	4·5	mP : sP
9	...	30·068	77·1	53·5	23·6	64·7	+ 6·5	59·7	55·6	9·1	17·3	1·6	72	133·9	48·2	0·000	0·0	mP
10	Full	29·776	85·9	51·9	34·0	67·4	+ 9·2	60·8	55·6	11·8	25·2	0·8	66	139·8	45·5	0·000	0·7	mP : wP : mP
11	Greatest Declination S.	29·631	72·5	54·4	18·1	61·9	+ 3·5	56·4	51·7	10·2	16·7	1·7	69	131·8	51·2	0·000	2·7	wP, wN
12	...	29·727	55·0	44·8	10·2	51·2	− 7·4	49·8	48·4	2·8	4·8	0·2	90	60·0	40·5	0·187	1·5	wP, wwN
13	...	29·894	61·7	41·0	20·7	50·3	− 8·5	45·3	40·1	10·2	17·7	4·0	68	127·3	36·5	0·000	0·5	mP : vP
14	...	29·939	56·8	40·8	16·0	49·2	− 9·7	44·6	39·7	9·5	14·6	3·1	70	96·1	33·1	0·000	1·8	mP : vP
15	...	29·855	65·4	37·2	28·2	52·3	− 6·7	46·6	40·8	11·5	19·8	2·3	66	128·2	29·5	0·000	0·7	sP : vP
16	...	29·761	62·8	45·2	17·6	54·3	− 4·7	51·4	48·6	5·7	9·9	0·8	81	100·0	37·0	0·095	0·0	mP : wP, ssN
17	Last Quarter	29·791	64·1	45·5	18·6	52·6	− 6·5	47·1	41·6	11·0	20·5	1·5	67	122·1	40·0	0·019	0·0	vP : vP, wN
18	In Equator	29·791	65·5	42·0	23·5	51·6	− 7·6	47·1	42·5	9·1	18·8	3·4	72	119·3	34·2	0·035	0·0	mP : vP, vN
19	...	29·694	70·0	45·7	24·3	52·8	− 6·7	49·0	45·2	7·6	18·4	1·9	76	126·9	40·4	0·142	1·7	mP : ssP, ssN
20	...	29·664	67·1	43·9	23·2	54·6	− 5·3	50·6	46·8	7·8	17·1	0·8	74	132·3	36·9	0·076	5·5	mP : vP, vN : mP
21	Perigee	29·741	72·4	44·7	27·7	57·7	− 2·6	53·1	48·9	8·8	16·9	2·3	72	126·2	39·5	0·008	2·0	mP
22	...	29·706	76·1	54·6	21·5	62·1	+ 1·4	57·2	53·0	9·1	21·1	1·3	72	132·5	54·0	0·061	5·8	vP
23	...	29·476	60·4	50·7	9·7	54·5	− 6·5	52·2	49·9	4·6	11·0	1·8	84	73·3	48·9	0·666	0·0	vN, vP : ssP, ssN : vP, vN
24	New: Greatest Declination N.	29·796	75·8	46·1	29·7	60·0	− 1·2	54·4	49·5	10·5	20·0	1·9	68	134·1	39·9	0·000	0·0	mP
25	...	29·795	72·0	50·3	21·7	59·5	− 1·8	55·5	52·0	7·5	17·6	1·5	76	122·3	44·8	0·016	1·0	mP : vP
26	...	29·873	81·4	53·9	27·5	65·8	+ 4·4	60·5	56·2	9·6	18·5	2·4	72	136·3	47·6	0·000	1·0	mP : wP
27	...	29·956	82·3	58·2	24·1	68·2	+ 6·8	63·0	58·9	9·3	18·0	2·5	72	141·0	51·3	0·000	2·0	wP : mP
28	...	29·924	82·1	54·6	27·5	67·1	+ 5·8	62·7	59·2	7·9	15·5	0·8	76	144·1	48·0	0·570	0·5	mP : wP : ssP, ssN
29	...	29·833	62·6	47·8	14·8	58·3	− 2·9	55·6	53·2	5·1	9·9	0·6	83	93·1	42·0	0·004	1·5	wP, wN : vP, wN
30	...	30·133	75·4	42·3	33·1	57·8	− 3·4	52·5	47·7	10·1	20·3	0·8	69	137·8	34·1	0·000	3·0	sP : wP, wwN
Means	...	29·827	70·5	47·9	22·5	58·1	− 1·3	53·5	49·3	8·7	17·3	1·8	73·0	123·9	42·4	Sum 2·268	2·1	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·827, being 0in·016 *higher* than the average for the 50 years, 1841-1890.

TEMPERATURE OF THE AIR.

The highest in the month was 85°·9 on June 10; the lowest in the month was 37°·2 on June 15; and the range was 48°·7.
The mean of all the highest daily readings in the month was 70°·5, being 0°·4 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 47°·9, being 2°·0 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 22°·5, being 1°·5 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 58°·1, being 1°·3 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	Clouds and Weather. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
June 1	12·5	16·2	SW	SW : S	2·6	0·0	0·38	367	v : 5, ci.-cu, li.-cl	3, cu.-s, li.-cl : v, li.-cl :v,th.-cl,lu.-ha
2	5·1	16·3	S : SSW	SW : SSW	3·5	0·0	0·67	392	10 : 10, shs.-r : 10, r	7, cu.-s, ci.-cu, li.-cl : 3, li.-cl
3	13·3	16·3	SW : WSW	WSW : SW	2·2	0·0	0·23	317	0 : 4, cu, cu.-s, li.-cl	4, cu, cu.-s : 2, li.-cl
4	10·2	16·3	WSW	SW : S	2·0	0·0	0·18	277	0 : 0 : 3, cu.-s, li.-cl	5, cu.-s : p.-cl : 10, r
5	6·1	16·4	SSW : SW	W : NW	3·0	0·0	0·42	367	10, slt.-r : p.-cl : v, shs.-r, t	v,shs.-r,t.-sm : v, hy.-sh : 2, li.-cl
6	9·6	16·4	WSW : NNW	N : E	0·5	0·0	0·00	176	0 : 5, ci.-cu, cu.-s	p.-cl : p.-cl
7	9·4	16·4	E : ENE	ENE	0·6	0·0	0·02	163	10 : 10 : p.-cl, t	0 : 0 : p.-cl
8	11·6	16·4	ENE	ENE : E	0·6	0·0	0·03	190	10 : 10 : 0	0 : 0 : v
9	13·4	16·4	ENE : NE	ENE : ESE	1·5	0·0	0·09	242	10 : p.-cl : 0	0 : 0
10	12·7	16·5	E : ESE	SSW	1·2	0·0	0·02	173	0, d : 0, m : 4, cu, cu.-s	5, cu, cu.-s : 0 : 0
11	3·9	16·5	SW : WSW	WSW : NNE	1·5	0·0	0·10	331	0 : 10 : 7, cu, cu.-s, li.-cl	8, cu.-s : 10
12	0·0	16·5	NNE : NE	NNE : NNW	1·1	0·0	0·00	176	10 : 10, m.-r	10, r : p.-cl
13	7·9	16·5	NNW : N	N : NNE	1·5	0·0	0·16	323	0, d : 8, cu.-s, li.-cl	9, cu.-s, ci.-cu : 9, cu.-s : 0
14	0·7	16·5	N : NNE	NE : NNE	2·4	0·0	0·33	366	10 : 10	10 : 10
15	7·9	16·5	NNE : N	NNE : SE : S	1·0	0·0	0·03	189	0, ho.-fr : 0 : 7, cu.-s, li.-cl	8, cu.-s : 10 : v, th.-cl
16	0·0	16·5	SW	WSW : NE	0·7	0·0	0·03	202	v : 10, oc.-th.-r	10, fq.-r : 10, r
17	4·7	16·6	SW : W : WNW	NW : WSW	1·6	0·0	0·17	289	10, oc.-shs : 8, cu.-s, li.-cl	v, cu.-s, li.-cl : p.-cl
18	6·6	16·6	WSW : NW	SW : WSW	1·2	0·0	0·06	224	0 : 4, cu, cu.-s	10, sh.-r : v, oc.-shs
19	6·2	16·6	SW : WSW	SW	1·6	0·0	0·06	223	p.-cl : 7, cu, cu.-s	v, shs.-r, l, t : 10, r, t : 10
20	8·8	16·6	SW	SW	3·1	0·0	0·33	339	p.-cl : v, li.-cl : 7, ci.-cu	v, shs.-r, hl : 10, shs.-r : p.-cl
21	6·9	16·6	SW	SW : SSW	0·9	0·0	0·00	205	0, d : 4, ci.-cu, li.-cl	10 : 10, slt.-r
22	5·0	16·6	SSW : SW	SW	1·4	0·0	0·03	223	10 : 10, r : 8, cu.-s, li.-cl	4, ci.-cu, li.-cl, so.-ha : p.-cl, so.-ha : 10
23	1·1	16·6	Calm : NNW	NW : W : WSW	2·6	0·0	0·23	262	10, r : 10, glm, c.-r	10, c.-r : v : 3, li.-cl
24	12·4	16·6	WSW : SW	SW : SSW	1·1	0·0	0·03	222	0, d : 1, cu, li.-cl	4, cu, cu.-s : 5, th.-cl, so.-ha, prh : 3, s, li.-cl
25	0·8	16·6	SSW : SW	SW : SSW	1·4	0·0	0·04	246	3, li.-cl, d : 6, ci.-cu, li.-cl, m, so.-ha	10, oc.-r : 10, oc.-r : v, slt.-r
26	10·5	16·5	WSW	WSW : SW	2·1	0·0	0·17	343	v, li.-cl : 2, li.-cl	v, li.-cl : 2, li.-cl
27	11·2	16·5	SW	SW : SSW	2·1	0·0	0·23	356	0 : 10 : 5, cu.-s, li.-cl	1, li.-cl : 1, li.-cl, a
28	4·2	16·5	SW : NE	E : SE	1·7	0·0	0·05	158	0 : 10, m : 9, th.-cl	8, cu.-s, li.-cl : p.-cl : 10, t.-sm
29	0·5	16·5	W	NNW	2·6	0·0	0·42	358	10, li.-shs, l, t : 10	10 : 10 : v
30	8·8	16·5	SW	SW : SSW	1·0	0·0	0·01	198	0, d : 2, ci.-cu, li.-cl	8, cu.-s : 2, li.-cl
Means	7·1	16·5	...	...	...	...	0·15	263		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 53°·5, being 1°·5 *lower* than
The mean *Temperature of the Dew Point* for the month was 49°·3, being 1°·8 *lower* than
The mean *Degree of Humidity* for the month was 73·0, being 1·0 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·352, being 0in·023 *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 50 years, 1841–1890.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5·9.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·429. The maximum daily amount of *Sunshine* was 13·4 hours on June 9.

The highest reading of the *Solar Radiation Thermometer* was 144°·1 on June 28; and the lowest reading of the *Terrestrial Radiation Thermometer* was 29°·5 on June 15.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·7; for the 6 hours ending 15h. was 0·2; and for the 6 hours ending 21h. was 0·2.

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

The *Greatest Pressure of the Wind* in the month was 3·5 lbs. on the square foot on June 2. The mean daily *Horizontal Movement of the Air* for the month was 263 miles; the greatest daily value was 392 miles on June 2; and the least daily value was 158 miles on June 28.

Rain fell on 14 days in the month, amounting to 2in·268, as measured by gauge No. 6 partly sunk below the ground; being 0in·246 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
July 1	In Equator	30·069	75·5	47·6	27·9	60·8	− 0·5	54·9	49·8	11·0	19·3	2·9	67	133·0	40·0	0·000	4·0	mP : wP, vN
2	First Quarter	29·941	80·8	50·9	29·9	64·8	+ 3·4	56·7	50·0	14·8	24·8	3·4	59	137·4	45·7	0·000	0·0	mP
3	Apogee	29·632	82·4	55·2	27·2	67·3	+ 5·6	60·3	54·7	12·6	24·3	3·8	64	136·7	49·8	0·000	1·2	mP : wP, wN
4	...	29·743	80·5	57·8	22·7	66·4	+ 4·5	59·8	54·5	11·9	24·5	3·4	66	142·1	51·8	0·000	4·5	wP : wP, wN
5	...	29·800	70·7	51·9	18·8	58·9	− 3·2	55·7	52·8	6·1	13·3	0·6	80	121·2	45·3	0·431	5·3	mP, wwN : vP, vN
6	...	29·716	71·7	52·3	19·4	60·3	− 1·9	55·8	51·9	8·4	18·0	0·8	73	134·0	48·5	0·006	3·0	mP : wP, wN
7	...	29·532	72·3	54·5	17·8	63·4	+ 1·3	57·4	52·4	11·0	19·4	2·1	67	131·5	49·0	0·010	1·0	wP, wN : wP, wwN
8	...	29·811	73·5	50·4	23·1	60·3	− 1·7	53·1	46·8	13·5	25·9	4·6	61	134·8	43·6	0·000	4·5	mP : wP, vN
9	Greatest Declination S.	29·909	75·5	50·4	25·1	60·4	− 1·6	55·2	50·7	9·7	19·1	2·6	70	141·8	42·0	0·013	1·5	mP : wP, wN
10	Full	29·849	70·0	50·7	19·3	59·0	− 3·1	54·7	50·8	8·2	14·2	2·7	75	107·0	44·4	0·000	0·2	mP : wP, wwN
11	...	29·786	71·4	52·0	19·4	59·4	− 2·9	55·4	51·8	7·6	15·5	1·4	76	130·4	44·1	0·000	2·0	wP
12	...	29·483	68·1	51·9	16·2	58·8	− 3·8	55·9	53·3	5·5	12·8	0·6	82	126·8	44·2	0·055	6·8	wP : vP, vN
13	...	29·442	64·1	52·1	12·0	57·0	− 5·9	55·3	53·8	3·2	7·8	0·6	89	97·5	49·4	0·044	0·0	vP, vN
14	...	29·673	58·1	52·3	5·8	54·9	− 8·2	53·0	51·1	3·8	6·3	1·0	87	71·0	50·5	0·010	1·0	vP, wN : mP
15	In Equator	29·851	66·1	50·2	15·9	57·3	− 5·9	53·5	50·0	7·3	13·5	3·2	76	112·5	45·3	0·000	3·0	wP : wP, wN
16	...	29·660	73·1	48·6	24·5	61·1	− 2·1	56·9	53·2	7·9	15·7	1·5	76	121·6	42·0	0·000	3·0	mP : wP
17	Last Quarter	29·621	58·7	50·4	8·3	54·4	− 8·7	53·0	51·6	2·8	5·8	1·4	90	64·7	47·0	0·236	0·0	vP, wN : vP, vN
18	Perigee	29·806	65·8	49·2	16·6	54·0	− 9·0	50·0	46·1	7·9	17·3	0·6	74	127·6	44·8	0·098	0·0	mP : wP, ssN
19	...	29·650	62·5	47·0	15·5	53·6	− 9·4	51·5	49·5	4·1	13·3	1·0	86	114·0	40·0	0·486	0·8	mP : ssP, ssN
20	...	29·713	64·4	51·0	13·4	55·9	− 7·1	52·2	48·7	7·2	13·9	1·4	78	113·2	44·7	0·106	2·5	wP, vN : mP
21	...	30·044	69·0	48·3	20·7	57·4	− 5·6	51·6	46·3	11·1	18·9	4·8	66	129·9	41·9	0·000	0·8	mP : vP
22	Greatest Declination N.	30·056	71·1	47·2	23·9	59·3	− 3·6	55·6	52·3	7·0	14·8	1·3	78	102·2	39·5	0·000	0·0	mP : vN : wP
23	New	30·084	74·3	49·2	25·1	61·3	− 1·5	57·4	54·0	7·3	14·4	2·4	77	117·0	42·3	0·000	2·0	wP, wN
24	...	30·145	66·9	51·7	15·2	58·2	− 4·4	55·1	52·3	5·9	10·8	1·6	81	108·4	45·6	0·000	0·2	vP : mP
25	...	30·084	65·0	51·9	13·1	56·2	− 6·2	51·8	47·7	8·5	14·4	5·0	73	125·2	48·4	0·000	0·8	mP
26	...	30·006	72·5	53·1	19·4	60·9	− 1·4	56·3	52·4	8·5	16·9	3·0	73	139·8	47·1	0·000	0·2	mP : vP
27	...	30·044	71·0	53·5	17·5	60·3	− 2·0	56·5	53·2	7·1	13·7	3·2	77	124·0	51·0	0·000	0·8	wP : mP
28	...	30·053	74·2	50·4	23·8	59·6	− 2·7	55·5	51·9	7·7	15·6	2·5	76	135·1	45·0	0·000	2·0	mP
29	In Equator	30·022	77·1	48·0	29·1	61·2	− 1·1	56·3	52·1	9·1	18·0	2·3	72	132·4	42·0	0·000	0·2	vP
30	...	29·978	74·1	52·1	22·0	60·2	− 2·1	56·7	53·7	6·5	14·6	3·2	79	135·8	48·7	0·004	0·8	vP : vP, wN : mP
31	Apogee: First Quarter	29·879	76·3	54·0	22·3	63·0	+ 0·7	59·1	55·8	7·2	17·0	1·7	77	110·0	50·1	0·037	0·0	vP
Means	...	29·841	70·9	51·2	19·7	59·5	− 2·9	55·2	51·5	8·1	15·9	2·3	75·0	121·2	45·6	Sum 1·536	1·7	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·841, being 0in·048 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 82°·4 on July 3; the lowest in the month was 47°·0 on July 19; and the range was 35°·4.
The mean of all the highest daily readings in the month was 70°·9, being 3°·1 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 51°·2, being 1°·9 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 19°·7, being 1°·2 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 59°·5, being 2°·9 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	ROBINSON'S. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
July 1	7·8	16·5	SW : WSW	WSW : SSW	0·4	0·0	0·01	203	0, d : 0	8, ci.-cu, cu.-s : 1, th.-cl
2	10·7	16·5	SW : SSW	S : SE	0·6	0·0	0·02	160	2, li.-cl : v : 2, li.-cl	5, ci.-cu, li.-cl, so.-ha : 6, ci.-cu, th.-cl
3	11·3	16·4	Calm : SE	SSW	3·0	0·0	0·37	302	v : 3, ci.-s, ci.-cu, th.-cl	1, li.-cl : 1, li.-cl
4	10·1	16·4	SSW : SW	SW : SSW	1·8	0·0	0·18	336	10 : 2, cu : 7, cu.-s, ci.-cu, t	5, ci.-cu, cu.-s : 2, li.-cl
5	1·0	16·4	SW	SW : SSW	3·0	0·0	0·43	385	0 : v : 10	10, r : 10, c.-r
6	6·0	16·4	WSW : SW	SW	5·6	0·0	0·71	463	10, slt.-r : 7, li.-cl	8, ci.-cu, cu.-s, w : 10, w
7	8·3	16·3	SW	SW : WSW	7·5	0·0	1·49	643	10, w : v, w : 10, slt.-r, w	v, w : 5, cu.-s, li.-cl, w : v
8	12·9	16·3	SW : WSW	WSW : SW	4·0	0·0	0·92	489	0 : 3, cu, li.-cl, w	3, ci.-cu, li.-cl : 3, li.-cl
9	7·8	16·3	SW : SSW	SW : SSW	1·6	0·0	0·22	285	1, li.-cl, d : 4, cu, cu.-s	10, oc.-r : 10
10	1·0	16·3	WSW : WNW	NW : NNW	1·5	0·0	0·12	228	p.-cl : 10	10 : v, h, m
11	5·2	16·2	NE : E	ENE : E	2·0	0·0	0·18	258	v, m : 10, m	8, cu.-s, li.-cl : 0
12	2·3	16·2	ENE : E	ENE : Calm	3·2	0·0	0·43	314	10 : v, ci.-cu, cu.-s	10, r : 10, slt.-r : 10
13	0·0	16·2	Calm : NNE	N : NNW	0·8	0·0	0·05	172	10, hy.-sh : 10, oc.-slt.-r, t	10 : 10, r
14	0·0	16·1	NNW : N	N : NNE	1·5	0·0	0·15	264	10, oc.-slt.-r : 10, oc.-th.-r	10 : 10
15	1·3	16·1	Calm : SE	S : SSE	0·5	0·0	0·00	73	10 : 10	10, slt.-r : 6, th.-cl : 5, th.-cl
16	0·7	16·1	Calm : SE	SSE : ENE	0·9	0·0	0·03	115	10 : 10	10 : 10
17	0·0	16·0	NE : NNE	NNE	1·1	0·0	0·11	270	10, r : 10, c.-r	10, c.-r : 10
18	5·7	16·0	N : NNW	NNW : WSW	0·6	0·0	0·03	132	10 : 8, cu.-s, li.-cl	10 : 10, r
19	1·2	16·0	WSW	SW : WSW	3·3	0·0	0·50	336	10 : 8, ci.-cu, cu.-s, so.-ha	10, hy.-r, sc, w : v, sqs, shs.-r : 10, li.-shs
20	3·9	15·9	NNW : N	N	5·1	0·0	1·19	534	10, shs.-r, w : 10, st.-w	v, ci.-cu, cu.-s : p.-cl, slt.-r
21	9·7	15·9	NNW : N	N : SW	1·5	0·0	0·10	250	10 : v, li.-cl	1, li.-cl : 10 : v
22	1·3	15·8	SW : Calm	SE : SW	0·2	0·0	0·00	98	0, d : 0, h, m : 0, h, f	10 : 5, cu.-s, li.-cl : 2, th.-cl
23	0·8	15·8	SW : Calm	NNE : NE	0·1	0·0	0·00	132	0, d : 2, cu.-s, li.-cl, m, h	9, ci.-cu, cu.-s, m : 9, ci.-cu
24	2·1	15·7	NE : NNE	NE : ENE : E	0·9	0·0	0·02	222	10 : 10	10 : v : 10
25	0·4	15·7	NNE : NE	NE : ENE	1·1	0·0	0·03	281	10 : 10	p.-cl : 10
26	6·2	15·7	NNE : NE	NE : ENE	1·8	0·0	0·12	331	10 : 10	8, ci.-cu, cu.-s : 10
27	7·0	15·6	NNE : NE	ENE : NE	2·4	0·0	0·30	362	10 : 10	7, ci.-cu, li.-cl : 6, ci.-cu, li.-cl
28	7·6	15·6	NE	NE : ESE	1·2	0·0	0·08	272	10 : 10	3, li.-cl : 0 : 0
29	12·9	15·5	NNE : N	NE : NNE	1·0	0·0	0·05	254	0, d : 0	0 : 0, l
30	3·6	15·5	NNE	NE	1·0	0·0	0·03	207	10 : 10, oc.-r	2, ci.-cu, li.-cl : 0, m
31	0·3	15·4	N : NW : WSW	WSW : NW : NNW	1·0	0·0	0·01	184	10, m : 10, oc.-slt.-r	p.-cl : 10, fq.-m.-r
Means	4·8	16·0	...	...	...	...	0·25	276		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 55°·2, being 2°·6 *lower* than
The mean *Temperature of the Dew Point* for the month was 51°·5, being 2°·4 *lower* than
The mean *Degree of Humidity* for the month was 75·0, being 1·2 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·381, being 0in·035 *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 4 grains *greater* than
} the average for the 50 years, 1841–1890.

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

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·300. The maximum daily amount of *Sunshine* was 12·9 hours on July 8 and 29.

The highest reading of the *Solar Radiation Thermometer* was 142°·1 on July 4; and the lowest reading of the *Terrestrial Radiation Thermometer* was 39°·5 on July 22.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·1; for the 6 hours ending 15h. was 0·3; and for the 6 hours ending 21h. was 0·3.

The *Proportions of Wind* referred to the cardinal points were N. 10, E. 6, S. 7, and W. 7. One day was calm.

The *Greatest Pressure of the Wind* in the month was 7·5 lbs. on the square foot on July 7. The mean daily *Horizontal Movement of the Air* for the month was 276 miles; the greatest daily value was 643 miles on July 7; and the least daily value was 73 miles on July 15.

Rain fell on 12 days in the month, amounting to 1in·536, as measured by gauge No. 6 partly sunk below the ground; being 0in·934 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Aug. 1	...	29·789	70·1	55·1	15·0	61·5	− 0·7	58·2	55·4	6·1	12·1	2·5	81	109·9	53·0	0·012	0·0	mP : vP, wN
2	...	29·963	65·2	51·1	14·1	57·5	− 4·6	53·2	49·3	8·2	15·4	3·4	74	115·8	48·3	0·001	0·2	mP : vP, vN
3	...	29·920	73·9	52·3	21·6	61·1	− 1·0	56·5	52·5	8·6	17·5	2·4	74	125·4	47·3	0·000	0·8	vP, wN : vP, vN
4	...	29·895	69·3	50·0	19·3	60·1	− 2·1	54·3	49·2	10·9	19·1	1·0	67	118·0	42·5	0·000	0·0	mP : vP, vN
5	Greatest Declination S.	29·919	77·1	45·4	31·7	59·9	− 2·4	54·1	49·0	10·9	23·1	0·2	67	137·1	37·1	0·000	1·2	mP : wP, wwN
6	...	29·812	77·1	51·0	26·1	62·0	− 0·4	56·0	50·8	11·2	21·2	3·8	67	141·0	43·1	0·006	5·8	mP : vP, vN
7	...	29·837	73·3	56·2	17·1	62·2	− 0·3	59·1	56·4	5·8	15·7	0·6	82	129·6	47·0	0·125	0·0	vP, sN : mP
8	Full	29·702	81·2	55·8	25·4	65·4	+ 2·9	60·2	55·9	9·5	24·8	1·0	72	136·5	50·9	0·007	2·0	wP : vP, vN
9	...	29·781	63·1	51·8	11·3	57·7	− 4·8	54·9	52·4	5·3	9·1	1·7	82	107·3	50·5	0·369	0·5	vP, vN : vP
10	...	30·053	65·2	47·8	17·4	55·8	− 6·7	50·4	45·4	10·4	16·3	3·4	68	122·8	41·0	0·000	1·5	sP : mP
11	...	30·034	74·6	43·8	30·8	57·9	− 4·6	52·5	47·6	10·3	21·1	2·1	69	127·2	35·0	0·000	4·0	wP : wP, wN
12	In Equator : Perigee	29·921	77·8	48·3	29·5	61·4	− 1·1	55·6	50·6	10·8	24·0	1·7	68	135·0	39·2	0·000	1·2	mP
13	...	29·641	78·4	51·3	27·1	62·7	+ 0·3	58·2	54·4	8·3	20·1	2·5	75	142·8	41·2	0·024	5·3	mP : vP, vN : wP
14	...	29·649	77·9	56·2	21·7	64·8	+ 2·5	59·6	55·3	9·5	20·9	2·3	71	139·6	47·8	0·000	7·5	mP
15	Last Quarter	29·752	78·4	56·1	22·3	65·3	+ 3·2	59·1	54·0	11·3	21·9	1·9	67	145·0	47·7	0·000	6·0	mP
16	...	29·880	70·2	51·0	19·2	60·9	− 1·1	57·8	55·1	5·8	13·1	0·6	81	119·2	40·9	0·024	0·0	sP
17	...	29·753	84·3	56·3	28·0	68·6	+ 6·8	63·4	59·3	9·3	19·9	1·1	72	144·8	43·5	0·000	0·7	vP
18	Greatest Declination N.	29·645	74·1	58·9	15·2	63·9	+ 2·3	62·1	60·7	3·2	8·5	0·2	89	103·4	55·1	0·479	2·3	ssP, ssN
19	...	29·574	65·5	58·0	7·5	61·2	− 0·2	60·5	59·9	1·3	3·8	0·0	96	85·0	51·4	0·264	0·0	vP, wN : wP, wN
20	...	29·861	73·6	52·3	21·3	61·6	+ 0·3	56·4	51·9	9·7	19·3	3·4	71	119·3	44·5	0·000	0·5	wP : vP, wN
21	...	30·026	77·4	48·9	28·5	62·8	+ 1·7	57·8	53·6	9·2	17·3	2·2	72	134·0	40·0	0·000	4·5	mP
22	New	29·848	79·7	48·3	31·4	62·9	+ 1·9	58·5	54·8	8·1	18·0	0·4	75	130·7	37·1	0·000	0·0	vP : mP
23	...	29·657	82·0	53·1	28·9	65·6	+ 4·7	61·3	57·8	7·8	19·4	0·9	77	131·8	45·3	0·094	2·0	mP, wwN : ssP, ssN
24	...	29·593	77·8	58·8	19·0	66·2	+ 5·4	62·5	59·5	6·7	16·0	0·8	80	116·1	52·2	0·000	0·0	wP : mP
25	In Equator	29·597	72·3	54·1	18·2	61·7	+ 0·9	58·3	55·4	6·3	13·9	1·3	80	115·7	44·2	0·056	0·0	wP, wwN : vP, wN
26	...	29·831	73·1	52·7	20·4	60·5	− 0·3	54·9	50·0	10·5	21·2	2·5	68	130·1	44·2	0·000	0·0	mP : vP, wwN
27	...	29·638	67·5	52·0	15·5	58·7	− 2·0	55·8	53·2	5·5	12·2	0·6	82	115·6	44·5	0·352	3·0	mP : mP, vN
28	Apogee	29·466	69·6	51·0	18·6	58·7	− 1·9	56·0	53·6	5·1	15·1	1·2	83	103·3	42·5	0·911	3·5	wP, wN : mP
29	...	29·546	73·2	50·1	23·1	61·9	+ 1·6	59·3	57·1	4·8	10·4	1·0	84	111·1	41·2	0·095	7·2	wP : mP
30	First Quarter	29·437	72·1	57·5	14·6	63·9	+ 3·8	59·3	55·5	8·4	18·0	2·8	75	128·2	50·5	0·046	15·0	wP : mP
31	...	29·502	67·1	54·0	13·1	58·5	− 1·4	54·9	51·7	6·8	16·0	1·9	78	123·2	46·4	0·161	6·8	wP : mP : ssP, ssN
Means	...	29·759	73·6	52·6	21·1	61·7	+ 0·1	57·4	53·8	7·9	16·9	1·7	75·7	124·0	45·0	Sum 3·026	2·6	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·759, being 0in·023 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 84°·3 on August 17; the lowest in the month was 43°·8 on August 11; and the range was 40°·5.
The mean of all the highest daily readings in the month was 73°·6, being 0°·8 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 52°·6, being 0°·4 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 21°·1, being 1°·3 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 61°·7, being 0°·1 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	ROBINSON'S. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Aug. 1	0·3	15·3	WNW : NW	NNW : NNE	2·7	0·0	0·18	341	10 : 10, fq.-th.-r	10, oc.-slt.-r : 10, shs.-r
2	2·7	15·3	N	N : NNE	1·3	0·0	0·05	213	10 : 2, li.-cl, ci.-cu	10, r : 10
3	1·2	15·2	NNE : WSW	WSW : WNW	1·0	0·0	0·02	167	10 : 10, slt.-f	8, ci.-cu, cu.-s : 10, slt.-r : 10
4	5·0	15·2	NW : NNW	NNW : NE	1·0	0·0	0·03	211	p.-cl : 3, li.-cl : 9, ci.-cu, cu.-s	8, cu, cu.-s, li.-cl : 2, li.-cl : 0, slt.-m
5	12·1	15·1	SW : WSW	SW	1·6	0·0	0·08	190	0 : 0, f : 2, ci.-cu, li.-cl	3, ci.-cu, li.-cl : 1, ci.-cu, cu.-s
6	8·3	15·1	SW	W : SW	5·3	0·0	0·51	396	p.-cl : 6, ci.-cu, cu.-s	p.-cl, w : p.-cl
7	1·1	15·0	SW : WSW	WSW : SSW	1·5	0·0	0·08	245	10, shs.-r : 10, slt.-r	10, slt.-r : 10, r
8	5·9	15·0	SSW : SW	SW : WSW	1·4	0·0	0·07	232	10 : 7, li.-cl, so.-ha	4, ci.-cu, li.-cl : 10, oc.-r
9	1·0	14·9	SW : NNW	NNE	2·5	0·0	0·17	290	10, slt.-r : 10, hy.-r : 10	9 : 10 : 10
10	2·6	14·9	NNE	NE : SE	0·6	0·0	0·03	195	10 : 10	9, cu.-s, li.-cl : 10
11	10·3	14·8	SSE : SW	SW : SSW	0·6	0·0	0·01	165	1, th.-cl : 2, li.-cl	2, li.-cl : 0, h
12	12·0	14·7	SSW : SW	SSW : SSE	0·5	0·0	0·02	204	0 : 0 : 1, li.-cl	0 : 0, a
13	4·1	14·7	SSE : SSW	SSW	3·1	0·0	0·22	346	0 : v, li.-cl : 6, li.-cl	10, oc.-m.-r : 10
14	8·9	14·6	SSW : SW	SSW : S	4·0	0·0	0·27	402	p.-cl : 5, cu.-s, li.-cl	5, cu.-s : v, oc.-li.-shs
15	10·8	14·6	SW	SW	3·5	0·0	0·38	396	p.-cl : 4, cu, ci.-cu, li.-cl	3, li.-cl : 0
16	4·8	14·5	SW : SSW: S	E	0·0	0·0	0·00	141	0 : 10, r	p.-cl : 1, li.-cl
17	11·0	14·4	SW	SW : ENE	1·2	0·0	0·03	197	0 : 1, li.-cl	3, ci.-cu, li.-cl : 0 : p.-cl, h
18	0·1	14·4	ENE : SE	Variable	1·9	0·0	0·03	185	10 : 10, oc.-r, t	10, fq.-r, l, t : 10, hy.-r, t.-sm
19	0·0	14·3	SSE : SW	N : Calm	0·5	0·0	0·00	110	p.-cl : 10 : 10, r	10, r, glm : 10, m.-r, f
20	10·6	14·3	NNW : NW	SW	0·9	0·0	0·03	180	0 : 0	3, cu.-s, li.-cl : 0
21	12·4	14·2	SSW : SW	SW	0·2	0·0	0·00	154	0 : 1, th.-cl : 3, ci.-cu, li.-cl	2, ci.-cu : 0
22	5·8	14·1	Calm : SE	ESE	0·2	0·0	0·00	91	0 : 0, f : 2, cu.-s, li.-cl	4, cu.-s, th.-cl : p.-cl : 0
23	6·6	14·1	Calm : ENE	E : ESE	1·3	0·0	0·03	135	0 : 0, f : 2, ci.-cu, li.-cl	6, ci.-cu, li.-cl, so.-ha : 10, l
24	3·5	14·0	Calm : WSW	WSW : SW	0·6	0·0	0·01	147	10 : 10	4, li.-cl, so.-ha : 6, li.-cl : 10
25	1·2	13·9	WSW : SW	WSW : WNW	1·3	0·0	0·04	226	10, r : 10, r	9, cu.-s, li.-shs : 2, li.-cl
26	6·0	13·9	WSW : W	WSW : SW	2·1	0·0	0·12	271	10 : 10 : p.-cl	5, cu.-s, ci.-cu : 0
27	1·3	13·8	SW : SSW	SW : SSW	3·4	0·0	0·68	392	p.-cl : 0 : 9, ci.-cu, li.-cl, so.-ha	10, r : 10, oc.-th.-r
28	4·3	13·8	SW : NNW	NNW : SW	3·6	0·0	0·05	210	10, r : 10, c.-hy.-r, sq	8, cu, cu.-s : 6, ci.-cu : 0
29	0·6	13·7	SSE : SSW	SSW : SSE	1·9	0·0	0·09	267	10, slt.-r : 10, li.-shs : 10, slt.-r	10, oc.-slt.-r : 10, slt.-r : v, l
30	7·0	13·7	SSW	SW	5·5	0·0	1·17	555	v : 7, cu, cu.-s, li.-shs, w	4, li.-cl, st.-w : 4, th.-cl, w
31	6·4	13·6	SW : SSW	SW	5·3	0·0	0·92	492	0 : 1, li.-cl : v, shs.-r, w	p.-cl, hy.-r, w : v
Means	5·4	14·5	...	...	...	...	0·17	250		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 57°·4, being 0°·2 *lower* than
The mean *Temperature of the Dew Point* for the month was 53°·8, being 0°·4 *lower* than
The mean *Degree of Humidity* for the month was 75·7, being 1·1 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·415, being 0in·006 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·6, being 0gr·1 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 527 grains, being 1 grain *less* than
} the average for the 50 years, 1841–1890.

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 0·374. The maximum daily amount of *Sunshine* was 12·4 hours on August 21.

The highest reading of the *Solar Radiation Thermometer* was 145°·0 on August 15; and the lowest reading of the *Terrestrial Radiation Thermometer* was 35°·0 on August 11.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·3; for the 6 hours ending 15h. was 0·8; and for the 6 hours ending 21h. was 0·5.

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 3, S. 12, and W. 10. One day was calm.

The *Greatest Pressure of the Wind* in the month was 5·5 lbs. on the square foot on August 30. The mean daily *Horizontal Movement of the Air* for the month was 250 miles; the greatest daily value was 555 miles on August 30; and the least daily value was 91 miles on August 22.

Rain fell on 16 days in the month, amounting to 3in·026, as measured by gauge No. 6 partly sunk below the ground; being 0in·676 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Sept. 1	Greatest Declination S.	29·759	67·1	49·9	17·2	57·9	− 1·8	54·9	52·2	5·7	14·8	1·8	81	122·0	42·0	0·007	8·2	mP
2	...	29·549	63·2	51·6	11·6	58·9	− 0·8	56·6	54·5	4·4	7·4	2·1	85	83·9	44·5	0·290	8·5	wP, wwN : vP, sN
3	...	29·549	65·1	47·1	18·0	53·9	− 5·7	49·8	45·8	8·1	15·2	1·5	73	119·1	38·8	0·017	3·8	mP : vP, sN
4	...	29·914	63·1	45·3	17·8	53·2	− 6·2	48·8	44·4	8·8	14·6	3·1	72	117·0	38·0	0·000	3·0	mP
5	...	30·171	65·0	38·4	26·6	50·8	− 8·5	47·0	43·0	7·8	15·8	0·9	75	102·4	28·2	0·000	2·0	v P, wN
6	Full	30·119	65·6	43·0	22·6	54·3	− 4·8	50·6	47·0	7·3	13·3	1·1	76	112·0	33·5	0·000	0·0	mP
7	...	29·934	62·4	44·8	17·6	53·4	− 5·5	50·7	48·0	5·4	11·6	1·8	82	98·6	37·0	0·045	0·0	wP : vN, vP
8	In Equator: Perigee	29·877	63·1	43·0	20·1	51·9	− 6·8	47·6	43·2	8·7	17·3	2·6	72	108·1	33·9	0·000	4·0	mP : vP, wN
9	...	29·816	63·7	41·6	22·1	53·5	− 5·0	50·6	47·7	5·8	12·7	0·9	81	87·5	33·7	0·000	0·0	mP, wwN : vP, vN
10	...	29·872	68·1	55·4	12·7	60·0	+ 1·7	58·6	57·3	2·7	7·2	0·4	92	97·0	53·0	0·022	0·0	wP : vP, wN
11	...	29·922	70·9	52·9	18·0	60·1	+ 2·0	57·8	55·8	4·3	8·8	0·6	86	110·0	46·0	0·000	0·2	mP
12	...	29·886	71·6	57·1	14·5	62·8	+ 4·8	59·7	57·1	5·7	12·1	1·5	81	123·7	52·2	0·003	2·3	wP : mP
13	Last Quarter	29·664	71·1	53·0	18·1	62·7	+ 4·8	58·5	54·9	7·8	12·4	3·0	76	103·7	45·0	0·000	4·5	wP : wP, wwN
14	Greatest Declination N.	29·959	70·3	43·4	26·9	55·9	− 1·9	51·6	47·5	8·4	19·1	1·3	74	125·2	32·5	0·000	0·0	mP : wP, wwN
15	...	29·867	69·6	45·7	23·9	57·0	− 0·7	52·8	48·9	8·1	18·5	0·4	74	123·5	37·1	0·000	2·2	mP
16	...	29·660	72·6	50·3	22·3	59·0	+ 1·5	54·5	50·4	8·6	16·9	4·4	74	120·3	44·8	0·020	3·8	wP : mP
17	...	30·020	61·8	42·7	19·1	52·3	− 5·0	47·1	41·8	10·5	16·5	2·9	68	115·9	32·5	0·000	0·0	mP : vP, vN
18	...	30·024	67·1	37·2	29·9	52·0	− 4·9	48·1	44·1	7·9	18·4	1·3	75	111·2	28·5	0·000	2·0	mP : wP
19	...	29·851	74·6	48·0	26·6	60·1	+ 3·6	55·0	50·5	9·6	20·9	0·0	70	116·6	38·4	0·000	0·0	wP : mP, wN
20	...	29·776	71·1	53·2	17·9	60·9	+ 4·8	58·0	55·5	5·4	12·2	2·1	83	110·8	47·4	0·031	1·2	vP, wN : wP
21	New: In Equator	29·810	69·5	54·4	15·1	59·9	+ 4·2	58·6	57·5	2·4	7·7	0·8	92	114·7	47·0	0·419	0·8	... : vP, vN : ssP, ssN
22	...	29·994	62·1	55·0	7·1	57·6	+ 2·2	56·3	55·1	2·5	6·1	0·6	92	80·1	52·9	0·020	0·0	wP : mP
23	...	29·931	67·4	53·1	14·3	58·0	+ 2·8	56·2	54·6	3·4	9·4	0·8	88	104·7	49·0	0·000	0·0	wP, WN : mP
24	Apogee	29·771	67·4	48·0	19·4	58·0	+ 2·9	54·9	52·1	5·9	15·3	1·3	81	116·3	41·0	0·029	0·0	wP : vP
25	...	29·797	66·4	45·3	21·1	55·7	+ 0·7	53·2	50·9	4·8	9·1	0·8	85	112·7	38·1	0·000	0·0	mP
26	...	29·810	68·6	51·1	17·5	57·9	+ 3·0	56·1	54·5	3·4	10·3	0·0	88	104·7	40·3	0·000	0·0	mP : vP
27	...	29·553	69·8	51·7	18·1	60·4	+ 5·5	57·6	55·2	5·2	9·4	0·9	83	117·0	43·2	0·024	3·0	wP : wP
28	...	29·585	62·1	45·1	17·0	51·8	− 3·0	48·6	45·4	6·4	14·6	1·5	79	111·0	37·0	0·187	0·0	vP, vN : mP : sP
29	Greatest Dec. S. First Quarter	29·583	60·3	42·2	18·1	51·2	− 3·4	48·5	45·7	5·5	12·9	0·8	82	104·8	33·9	0·420	2·0	mP : wP : wP, vN
30	...	29·355	60·2	47·0	13·2	51·3	− 3·1	48·9	46·4	4·9	12·9	1·1	84	112·6	44·0	0·476	6·0	wP, wN : vN, vP
Means	...	29·813	66·7	47·9	18·8	56·4	− 0·8	53·2	50·2	6·2	13·1	1·4	80·1	109·6	40·4	Sum 2·010	1·9	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 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·813, being 0in·007 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 74°·6 on September 19; the lowest in the month was 37°·2 on September 18; and the range was 37°·4.
The mean of all the highest daily readings in the month was 66°·7, being 0°·6 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 47°·9, being 1°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 18°·8, being 0°·6 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 56°·4, being 0°·8 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	Daily Duration of Sunshine.[1]	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS. Osler's. General Direction. A.M.	P.M.	Pressure on the Square Foot. Greatest.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Sept. 1	4·2	13·5	SW	SW	3·4	0·0	0·60	426	v : v, li.-cl : 2, li.-cl	10, fq.-th.-r : 10 : v, th. cl
2	0·0	13·4	SSW : SW	SW : WSW	4·7	0·0	0·88	494	10 : 10,shs.-r,w : 10, sc, r, w	10, fq.-r : p.-cl : v, sh.-r
3	8·3	13·4	SW : WSW	WSW : NW	2·2	0·0	0·25	321	1, li.-cl : 2, li.-cl	v, oc.-r : 3, li.-cl
4	6·7	13·3	WNW : NNW	NNW : N	2·3	0·0	0·34	336	p.-cl : 10 : 6, ci.-cu, li.-cl	p.-cl : p.-cl
5	7·0	13·2	NNW : Calm	SW : SSW	0·6	0·0	0·00	127	0 : 0, ho.-fr : 9, th.-cl, glm	2, li.-cl : 1, li.-cl, d
6	2·0	13·2	SW : SSW	SSW	0·0	0·0	0·00	80	0, d : 10 : 6, ci.-cu, li.-cl, m	9 : 9, li.-cl
7	1·7	13·1	SSW : SW	SSW : NW	1·5	0·0	0·06	230	1, li.-cl, d : p.-cl : v	10, r : 10, shs.-r : p.-cl
8	8·6	13·0	W : NNW	N : Calm	1·6	0·0	0·15	233	0, d : 0 : 5, cu, cu.-s	6, cu.-s : 0, h, m
9	0·3	13·0	SW : WSW	NW : WSW	0·4	0·0	0·02	163	0, d : 8, li.-cl	8, ci.-cu, cu, cu.-s : 10 : 10, m
10	0·1	12·9	SW : WSW	WSW : SW	0·7	0·0	0·01	146	10 : 10, slt.-r	10, li.-shs : 10, shs-r
11	1·4	12·9	Calm : SW	SW	2·3	0·0	0·20	263	v : p.-cl : 10, oc.-th.-r	p.-cl, ci.-cu, cu.-s : 10 : v
12	2·0	12·8	SSW	SSW : S : SSE	1·2	0·0	0·08	261	10 : 9, th.-cl, so.-ha	8, cu.-s, th.-cl, so.-ha : 3, li.-cl
13	3·6	12·7	SW	SW : NW	3·0	0·0	0·43	358	v : 10	p.-cl : v
14	7·5	12·7	NW : SW	SW : SSW	1·0	0·0	0·04	192	0, d : 0	5, ci.-cu, cu.-s : 0, d
15	9·4	12·6	S : SSW	S : SSE	1·0	0·0	0·03	186	0, d : 10 : 5, cu.-s, li.-cl	3, li.-cl : p.-cl : 0
16	5·1	12·6	SSE : SSW	WSW	3·0	0·0	0·30	316	v : 6,ci.-cu,li.-cl,so.-ha	v, shs.-r : 2, li.-cl : 1, th.-cl
17	8·6	12·5	W : NNW	NNW : SW : SSW	0·7	0·0	0·02	184	2, li.-cl, d : v, li.-cl : 2, li.-cl	0 : 0, d
18	10·0	12·4	SSW : Calm	SW : SSW	1·1	0·0	0·06	221	0, ho.-fr : 0, ho.-fr : 2, ci.-cu, li.-cl	0 : 0
19	8·3	12·3	SW : WSW	SW : SSW	1·0	0·0	0·30	328	0, d : 4, ci.-cu, li.-cl	4, ci.-cu, li.-cl, so.-ha : 0 : v
20	4·5	12·3	NE : E	ESE : SSE : SSW	1·2	0·0	0·05	194	10, slt.-r : 10, glm, sh.-r, t : 5, ci.-cu, cu.-s, li.-cl	v : v, l
21	1·5	12·2	SSW : SE	SE : NE	1·0	0·0	0·02	145	10 : 10, hy.-sh : 10, fq.-r	v, cu.-s, r, t : 10, fq.-r : 10
22	0·0	12·2	NNE : NE	NNE : N	1·1	0·0	0·10	230	10 : 10, oc.-th.-r	10 : 10, th.-r
23	2·2	12·1	N : NW : W	WSW : S	0·1	0·0	0·00	116	10 : 10, slt.-f : 10, slt.-f	v, th.-cl : v : 10
24	3·0	12·0	SW : W	W : SW	2·1	0·0	0·19	278	10 : 10, oc.-slt.-r : 10, oc.-slt.-r	5, cu.-s, li.-cl : 0
25	3·5	11·9	SW	SSW	2·4	0·0	0·30	312	0 : 10, t : v	10 : v : 3, th.-cl
26	2·2	11·9	SW	SW : SSW	1·1	0·0	0·02	118	p.-cl : 10, f : 7, cu.-s	10 : p.-cl
27	1·2	11·8	SW : SSW	SSW	3·0	0·0	0·70	404	10 : 7, ci.-cu, cu.-s	p.-cl : v, oc.-slt.-r
28	6·8	11·7	NW : SW	WSW : SW	1·3	0·0	0·08	245	10, fq.-r : 10 : 7, ci.-cu, cu.-s	3, cu.-s, li.-cl : v, li.-cl
29	5·5	11·7	SW : SSW	SSW	10·1	0·0	0·97	441	0, d : 0 : 3, li.-cl, w	v, sc, oc.-r, w : 10, oc.-r, w : 10, hy.-r
30	4·7	11·6	SSW : SW	WSW : SSW	4·3	0·0	0·33	284	10, c.-hy.-r : v, so.-ha	5, cu, cu.-s, sh.-r, w : 10, hy.-sh
Means	4·3	12·6	...	...	...	...	0·22	254		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 53°·2, being 1°·0 *lower* than
The mean *Temperature of the Dew Point* for the month was 50°·2, being 1°·2 *lower* than
The mean *Degree of Humidity* for the month was 80·1, being 0·7 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·364, being 0in·015 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·1, being 0gr·1 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 534 grains, being 1 grain *greater* than
} the average for the 50 years, 1841–1890.

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 0·345. The maximum daily amount of *Sunshine* was 10·0 hours on September 18.

The highest reading of the *Solar Radiation Thermometer* was 125°·2 on September 14; and the lowest reading of the *Terrestrial Radiation Thermometer* was 28°·2 on September 5.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·2; for the 6 hours ending 15h. was 0·3; and for the 6 hours ending 21h. was 0·4.

The *Proportions of Wind* referred to the cardinal points were N. 4, E. 1, S. 13, and W. 11. One day was calm.

The *Greatest Pressure of the Wind* in the month was 10·1 lbs. on the square foot on September 29. The mean daily *Horizontal Movement of the Air* for the month was 254 miles; the greatest daily value was 494 miles on September 2; and the least daily value was 80 miles on September 6.

Rain fell on 14 days in the month, amounting to 2in·010, as measured by gauge No. 6 partly sunk below the ground; being 0in·241 *less* than the average fall for the 50 years, 1841-1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Oct. 1	...	29·256	55·4	43·1	12·3	48·2	− 5·9	46·8	45·3	2·9	8·2	0·0	90	98·0	36·8	0·403	0·0	... : sN, sP : vP, vN
2	...	29·342	53·6	40·2	13·4	45·6	− 8·2	44·7	43·7	1·9	3·8	0·4	93	93·1	33·0	0·250	0·0	wP, wwN : vP, vN
3	...	29·537	58·6	40·9	17·7	48·2	− 5·3	45·8	43·2	5·0	11·2	1·1	83	110·4	36·5	0·018	0·0	wP : wP, vN : mP
4	...	29·491	61·4	41·2	20·2	49·4	− 3·8	47·0	44·4	5·0	13·9	0·8	84	112·2	32·2	0·402	0·0	wP : vP, vN
5	In Equator	29·274	55·2	40·6	14·6	47·9	− 5·1	46·7	45·4	2·5	8·6	0·4	92	71·7	34·5	0·114	0·0	wP, wN : mP
6	Full	29·186	51·6	40·1	11·5	46·9	− 5·8	46·3	45·6	1·3	2·3	0·0	96	57·2	34·0	0·114	0·0	vP, wN : wP, wN
7	Perigee	29·197	58·5	41·9	16·6	48·2	− 4·3	46·7	45·1	3·1	9·3	0·2	90	96·2	32·5	0·006	0·0	wP : vP, sN
8	...	29·377	53·7	40·0	13·7	45·4	− 6·7	43·4	41·1	4·3	9·7	0·7	85	75·0	32·5	0·008	0·7	mP : vP, sN
9	...	29·304	54·1	41·5	12·6	47·3	− 4·4	44·8	42·0	5·3	12·8	1·0	83	81·3	35·0	0·320	2·3	wP, sN : mP, ssN
10	...	29·603	54·6	39·0	15·6	46·8	− 4·5	43·8	40·4	6·4	11·2	0·9	79	84·0	30·0	0·016	0·0	wP : vP, sN
11	Greatest Declination N.	29·864	53·1	35·3	17·8	42·5	− 8·5	40·6	38·4	4·1	11·6	0·3	85	78·0	26·8	0·000	0·0	mP : vP, vN
12	Last Quarter	29·872	53·8	36·7	17·1	45·4	− 5·2	43·7	41·7	3·7	8·6	0·7	87	94·4	28·0	0·000	0·0	mP : vP
13	...	29·708	55·1	44·1	11·0	48·8	− 1·5	46·7	44·4	4·4	8·2	1·5	85	73·9	37·8	0·012	0·5	wP : mP
14	...	29·526	52·8	45·2	7·6	48·8	− 1·3	47·0	45·0	3·8	10·0	0·4	87	73·0	37·5	0·220	3·5	wP, wN : mP
15	...	29·635	59·3	39·8	19·5	48·8	− 1·1	46·9	44·8	4·0	12·0	0·0	87	107·7	32·5	0·000	0·0	mP
16	...	29·554	52·1	40·0	12·1	45·4	− 4·4	44·0	42·4	3·0	7·8	0·2	89	66·0	33·5	0·014	0·0	wP : wP, wN
17	...	29·800	50·7	36·2	14·5	41·5	− 8·1	39·7	37·4	4·1	10·1	1·2	86	94·9	29·5	0·016	1·0	wP : ssN, ssP : mP
18	In Equator	30·053	49·1	34·6	14·5	40·0	− 9·5	38·3	36·1	3·9	10·3	1·0	86	81·7	28·5	0·000	0·0	mP : sP, sN
19	...	30·098	47·6	33·0	14·6	40·2	− 9·1	38·3	35·9	4·3	10·9	0·2	85	65·5	27·1	0·000	0·0	mP : vP, wN
20	New	29·906	50·0	34·1	15·9	41·8	− 7·2	40·2	38·2	3·6	7·4	1·4	88	77·7	24·2	0·008	0·2	vP, vN : mP
21	...	29·511	51·6	37·5	14·1	44·3	− 4·5	42·1	39·5	4·8	10·9	1·3	83	89·7	32·3	0·013	0·8	mP : vP, sN
22	Apogee	29·415	46·4	33·5	12·9	39·9	− 8·7	36·8	32·8	7·1	15·6	2·2	75	72·7	25·4	0·000	0·0	mP, wN : vP
23	...	29·462	47·1	32·6	14·5	38·6	− 9·6	35·9	32·3	6·3	13·7	2·0	79	80·0	23·0	0·000	0·2	sP
24	...	29·620	48·2	30·2	18·0	37·9	−10·0	35·7	32·7	5·2	11·1	1·8	83	74·7	21·0	0·000	0·8	sP : vP
25	...	29·596	43·3	34·4	8·9	39·0	− 8·6	38·0	36·7	2·3	5·3	0·2	92	51·2	26·0	0·034	0·0	mP : mP, vN : sP
26	Greatest Declination S.	29·859	48·8	27·4	21·4	37·6	− 9·8	35·9	33·6	4·0	10·9	0·0	85	91·7	17·4	0·000	2·2	sP, wN : sP
27	...	29·450	57·0	41·0	16·0	48·6	+ 1·3	47·4	46·1	2·5	5·0	0·9	92	60·7	36·0	0·237	10·3	wP
28	First Quarter	29·175	59·6	53·5	6·1	56·9	+ 9·7	55·3	53·9	3·0	6·3	1·1	90	64·3	50·0	0·241	7·5	wwP : wwP, wwN
29	...	29·273	61·9	47·9	14·0	55·7	+ 8·7	53·4	51·2	4·5	8·4	1·7	86	94·2	42·0	0·008	6·0	wwP : sN, wP
30	...	29·495	55·3	43·1	12·2	49·6	+ 2·6	47·5	45·2	4·4	11·0	0·4	86	88·7	36·0	0·647	0·0	wP : mP, sN
31	...	29·478	47·6	43·9	3·7	45·7	− 1·1	45·1	44·5	1·2	2·2	0·6	96	49·0	43·8	0·778	0·0	sN, vP : mP
Means	...	29·546	53·1	39·1	14·0	45·5	− 4·5	43·7	41·6	3·9	9·3	0·8	86·7	80·9	32·1	Sum 3·879	1·2	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 results on October 15 and 16 for Air and Evaporation Temperatures are derived from eye-observations on account of failure of the photographic registers.

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}·546, being 0^{in}·170 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 61°·9 on October 29; the lowest in the month was 27°·4 on October 26; and the range was 34°·5.
The mean of all the highest daily readings in the month was 53°·1, being 4°·6 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 39°·1, being 4°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 14°·0, being 0°·4 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 45°·5, being 4°·5 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Oct. 1	2·8	11·6	S : WSW	SSW	1·6	0·0	0·09	220	p.-cl : 10, hy.-r	v, shs.-r : 2, th.-cl
2	0·2	11·5	SSW : SSE	WSW	1·0	0·0	0·04	194	0 : 10 : 10, oc.-r	10, glm, oc.-r : 10
3	4·1	11·4	SW : WSW	WSW : SW	3·7	0·0	0·75	387	10 : v, li.-cl	v, oc.-slt.-r, w : 3, li.-cl
4	4·8	11·4	SW : SSW	SSW : SSE : NNE	1·4	0·0	0·15	180	1, li.-cl, d : 2, cu, cu.-s, th.-cl	10 : 10, hy.-r : 10, r
5	3·1	11·3	NNW : Calm : SW	SW : S	0·5	0·0	0·01	123	10, r : 10, oc.-slt.-r	5, ci.-cu, li.-cl : 0, d
6	0·0	11·2	SE : Calm	Calm : SSW	0·2	0·0	0·01	108	1, li.-cl, d : p.-cl, f : 10, r	10, r : 10, r : v, li.-cl
7	3·0	11·2	SW	SW	1·1	0·0	0·13	241	v, d : 10	7, ci.-cu, cu.-s, slt.-r : 0
8	0·4	11·1	WSW : W	WSW : SW	2·2	0·0	0·23	318	0 : 10 : v, so.-ha	10, oc.-r : 1, li.-cl
9	2·4	11·0	SSW : SW	WSW	11·8	0·1	1·79	584	10 : 10, r : 10, r, sqs	v, r, st.-w : 0, w : 0, w
10	1·0	11·0	WSW	WNW : WSW	4·7	0·0	0·79	373	0, w : 10 : 10	9, slt.-r : p.-cl : 0
11	3·2	10·9	SW : WSW : NW	NNW	0·5	0·0	0·03	157	0, ho.-fr : 0, slt.-f	4, ci.-cu, cu.-s : f : 0, slt.-f
12	3·2	10·9	N	N	1·3	0·0	0·14	214	0, ho.-fr : 10 : 7, cu.-s, li.-cl	6, cu.-s, ci.-cu, li.-cl : 10
13	0·1	10·8	N : NNE	NNE : N	4·6	0·1	0·80	389	10 : 10, oc.-slt.-r	10, oc.-slt.-r, w : v, oc.-r
14	1·2	10·7	NNE : ESE	ESE	2·2	0·0	0·33	264	10, r : 10, c.-r	v, oc.-slt.-r : 10 : v, d
15	3·3	10·7	SE : Calm : NE	SE : NNE	0·2	0·0	0·00	116	0 : tk.-f : p.-cl, f	v, li.-cl : 0, h, m
16	0·0	10·6	NNE : N	N	3·9	0·0	0·54	311	v : 10, oc.-slt.-r	10, oc.-slt.-r, w : v
17	4·8	10·5	NNW : N	NNE : N	2·7	0·0	0·43	304	0, d : 0 : 2, li.-cl	8, li.-shs : 0
18	3·7	10·5	N	NNE : N	5·6	0·0	0·12	229	0 : 10 : 8, cu.-s	7, cu.-s : 0, d
19	0·7	10·4	N : NW : SW	NW : SW	1·1	0·0	0·08	185	0, ho.-fr : 5, li.-cl, slt.-f	8, cu.-s, li.-cl : 10, m
20	1·1	10·3	SW	W : SW	0·7	0·0	0·02	195	v, ho.-fr : 10, shs.-r : 8, ci.-cu, cu.-s	10 : 5, li.-cl : 10
21	0·8	10·3	WSW	W : WNW	2·1	0·0	0·27	337	10 : 10, slt.-r : p.-cl	10, oc.-r : 10, sh.-r
22	2·5	10·2	NW : NNW	NW : WSW	4·2	0·0	0·76	414	10, w : 10, w	4, li.-cl, w : 0, ho.-fr
23	7·6	10·2	WSW : W	WNW : W : WSW	3·8	0·0	0·67	417	p.-cl : 0, ho.-fr : 3, ci.-cu, li.-cl, w	4, li.-cl : 0, ho.-fr
24	5·1	10·1	SW : WSW	NW : Calm	1·3	0·0	0·06	234	0, ho.-fr : 2, li.-cl	7, li.-cl, cu.-s : v : 10, slt.-f
25	0·0	10·0	NE	NE : NNE	1·4	0·0	0·16	261	10 : 10, sc, oc.-slt.-r	10, sc, slt.-r : 0, ho.-fr
26	4·2	10·0	N : Calm	SE	1·3	0·0	0·02	137	0, ho.-fr : 0, slt.-f	2, cu, li.-cl : 1, s : 0
27	0·0	9·9	SSE	S	2·5	0·0	0·64	376	10, shs.-r : 10, sc, fq.-r	10, sc, fq.-r : 10, r
28	0·1	9·8	SSW	S : SSW	3·7	0·0	0·68	413	10, w, oc.-r : 10, oc.-slt.-r	10, c.-r : 10
29	2·3	9·8	SSW	SSW	6·2	0·0	1·13	467	10, slt.-r : 10, fq.-r, w	v : 10 : 2, li.-cl
30	3·2	9·7	Calm : N	ENE : NNE	1·2	0·0	0·04	172	v : 5, th.-cl, slt.-f	p.-cl, so.-ha : 10, hy.-r
31	0·0	9·7	N : NNE	NNE	2·1	0·0	0·34	314	10, c.-r : 10, slt.-r : 10, th.-r, glm	10, th.-r : 10, th.-r
Means	2·2	10·6	...	...	...	...	0·36	279		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 43°·7, being 4°·3 *lower* than
The mean *Temperature of the Dew Point* for the month was 41°·6, being 4°·3 *lower* than
The mean *Degree of Humidity* for the month was 86·7, being 1·1 *greater* than
The mean *Elastic Force of Vapour* for the month was 0in·263, being 0in·046 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·0, being 0gr·5 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 542 grains, being 3 grains *greater* than
} the average for the 50 years, 1841–1890.

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 0·210. The maximum daily amount of *Sunshine* was 7·6 hours on October 23.

The highest reading of the *Solar Radiation Thermometer* was 112°·2 on October 4; and the lowest reading of the *Terrestrial Radiation Thermometer* was 17°·4 on October 26.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·0; for the 6 hours ending 15h. was 0·2; and for the 6 hours ending 21h. was 0·0.

The *Proportions of Wind* referred to the cardinal points were N. 9, E. 3, S. 9, and W. 9. One day was calm.

The *Greatest Pressure of the Wind* in the month was 11·8 lbs. on the square foot on October 9. The mean daily *Horizontal Movement of the Air* for the month was 279 miles; the greatest daily value was 584 miles on October 9; and the least daily value was 108 miles on October 6.

Rain fell on 22 days in the month, amounting to 3in·879, as measured by gauge No. 6 partly sunk below the ground; being 1in·068 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Nov. 1	...	29·665	48·9	36·5	12·4	44·3	− 2·4	42·6	40·6	3·7	6·5	1·0	87	55·8	29·0	0·006	4·0	mP : sP
2	In Equator	29·625	51·0	31·6	19·4	41·3	− 5·2	40·4	39·3	2·0	7·1	0·0	93	66·1	28·0	0·142	1·5	ssP : mP, mN
3	...	29·582	55·9	43·7	12·2	49·8	+ 3·5	47·9	45·9	3·9	10·4	0·4	87	82·9	37·8	0·036	6·0	wP : mP
4	Full: Perigee	29·720	59·1	43·7	15·4	51·7	+ 5·6	50·3	48·9	2·8	7·2	0·7	90	75·9	39·6	0·118	16·0	wP : wP, wN
5	...	29·712	57·8	50·0	7·8	53·4	+ 7·5	52·3	51·2	2·2	5·2	0·8	92	63·3	46·0	0·077	5·5	wwP : wP, wwN
6	...	29·742	53·2	39·3	13·9	48·1	+ 2·6	46·9	45·6	2·5	6·6	0·0	92	66·3	33·0	0·010	3·0	wwP : mP
7	...	29·987	42·2	35·1	7·1	39·1	− 6·0	39·0	38·9	0·2	2·0	0·0	99	50·2	29·4	0·006*	0·0	wP : mP : ssP
8	Greatest Declination N.	30·147	48·3	31·2	17·1	39·6	− 5·0	39·0	38·2	1·4	4·4	0·0	95	76·0	30·0	0·008*	2·0	vP : mP
9	...	30·034	50·1	40·2	9·9	45·4	+ 1·4	44·5	43·5	1·9	4·2	0·2	93	59·4	35·9	0·000	0·0	wP : mP
10	...	29·995	53·0	39·9	13·1	45·1	+ 1·5	44·2	43·1	2·0	6·8	0·0	93	76·3	35·5	0·000	0·0	mP
11	Last Quarter	29·957	49·1	40·2	8·9	45·6	+ 2·4	45·3	45·0	0·6	1·7	0·2	98	51·0	38·5	0·008	0·0	wP, wwN : wP, wN
12	...	29·818	53·0	43·3	9·7	47·7	+ 4·8	47·2	46·6	1·1	4·2	0·0	96	73·5	39·4	0·091	0·7	wP, wN : wP
13	...	29·688	57·0	46·0	11·0	51·3	+ 8·5	50·0	48·7	2·6	6·6	0·0	91	90·0	40·0	0·021	2·5	wP, wN : wwP
14	...	29·628	60·9	48·9	12·0	53·7	+11·1	51·8	49·9	3·8	10·1	1·2	87	85·0	43·5	0·020	9·0	wwP, wN : wP
15	In Equator	29·584	57·1	50·1	7·0	53·5	+11·0	52·2	50·9	2·6	6·1	0·4	91	58·7	49·7	0·393	6·8	wwP : wP, vN
16	...	29·630	54·1	47·1	7·0	50·4	+ 8·0	49·8	49·2	1·2	1·6	0·2	96	54·1	46·5	0·732	0·0	wwP, vN : vN
17	...	29·818	47·3	41·5	5·8	45·3	+ 3·0	43·7	41·8	3·5	5·0	1·0	88	55·3	38·9	0·006	0·0	wP : mP
18	Apogee	29·749	43·7	32·8	10·9	39·6	− 2·6	38·8	37·8	1·8	3·7	0·0	94	51·0	30·0	0·000	1·0	mP : sP
19	New	29·574	49·1	31·7	17·4	41·3	− 0·9	40·8	40·2	1·1	4·4	0·0	96	68·8	29·8	0·017	0·0	sP : wP
20	...	29·846	46·7	35·0	11·7	42·3	+ 0·2	41·8	41·2	1·1	3·6	0·0	96	53·7	31·0	0·087	0·0	wwN, wP : mP
21	...	30·142	45·0	33·3	11·7	38·1	− 4·0	37·9	37·6	0·5	2·1	0·0	98	51·8	30·1	0·004	0·5	mP : wP
22	Greatest Declination S.	30·180	43·9	39·8	4·1	42·6	+ 0·4	41·7	40·6	2·0	4·0	0·2	93	45·9	39·0	0·000	1·5	wP
23	...	30·128	44·2	38·0	6·2	41·5	− 0·6	40·1	38·3	3·2	4·4	1·4	89	51·0	35·4	0·000	0·0	wP
24	...	30·032	44·1	36·7	7·4	40·3	− 1·8	39·8	39·2	1·1	2·9	0·0	96	44·7	36·2	0·087	0·0	wP, wwN : mP, wwN
25	...	30·034	44·9	33·9	11·0	41·1	− 0·9	39·5	37·5	3·6	5·5	1·3	87	53·0	30·3	0·000	0·0	mP
26	...	29·992	50·1	40·1	10·0	44·5	+ 2·6	43·3	41·9	2·6	5·5	0·6	91	52·0	36·2	0·272	0·0	wP : wP, wN
27	First Quarter	30·191	48·6	39·2	9·4	43·7	+ 2·1	42·4	40·8	2·9	5·7	1·1	90	60·4	33·7	0·000	0·2	wP, wwN : mP
28	...	30·232	48·0	42·0	6·0	46·6	+ 5·3	45·2	43·7	2·9	5·0	1·3	90	50·5	35·5	0·000	2·2	wP
29	In Equator	29·939	52·4	41·4	11·0	48·2	+ 7·2	45·7	43·0	5·2	7·7	0·4	82	55·7	35·3	0·071	4·5	wP : mP
30	...	29·983	42·4	33·0	9·4	38·9	− 1·8	36·3	32·8	6·1	10·3	5·2	80	52·6	28·9	0·000	0·0	mP
Means	...	29·878	50·0	39·5	10·5	45·1	+ 1·9	44·0	42·7	2·4	5·3	0·6	91·7	61·0	35·7	Sum 2·212	2·2	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 values given in Columns 3, 4, 5, 14, and 15 are derived from eye-readings of self-registering thermometers.

* Rainfall (Column 16). The amounts entered on November 7 and 8 were derived from moisture deposited during fogs.

The mean reading of the *Barometer* for the month was 29in·878, being 0in·134 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 60°·9 on November 14; the lowest in the month was 31°·2 on November 8; and the range was 29°·7.
The mean of all the highest daily readings in the month was 50°·0, being 1°·2 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 39°·5, being 1°·9 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 10°·5, being 0°·8 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 45°·1, being 1°·9 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Nov. 1	0·0	9·6	NNE : N	NNE	1·1	0·0	0·07	218	10, slt.-r : 10	10 : 0, f
2	1·1	9·5	S : Calm	SSE	1·7	0·0	0·08	161	0, tk.-f : tk.-f	p.-cl : 10, r
3	5·1	9·5	SSW : WSW	WSW : SSW	1·7	0·0	0·14	307	10 : 6, cu.-s, sh.-r	4,cu,cu.-s,li.-cl : 0 : 0
4	0·3	9·4	S : SSE	S : SSW	2·9	0·0	0·65	382	v : 10, m.-r : 10	9, so.-ha : 10, r : 10, sc, slt.-r
5	0·0	9·4	SW	SSW : WSW	0·9	0·0	0·01	151	10, oc.-r : 10, glm	10 : 10, fq.-r
6	1·2	9·3	SSW : WSW	WSW : SW	1·2	0·0	0·03	203	v : 10, slt.-r	5, li.-cl : 0, slt.-f
7	0·0	9·2	SW : WSW	NE : Calm	0·0	0·0	0·00	94	0, ho.-fr : 0, tk.-f	0, f : 0, tk.-f
8	3·3	9·2	Calm	SE : SSE	0·2	0·0	0·00	77	0, tk.-f : 0, tk.-f : 0, slt.-f	0 : 10 : 10
9	0·0	9·1	SE	SSE : Calm	0·4	0·0	0·01	104	10 : 10	10 : 10 : v, slt.-f
10	0·2	9·1	Calm	SE : Calm	0·0	0·0	0·00	50	0 : v, f : 8, ci.-cu, li.-cl	5,ci.-cu,li.-cl,so.-ha : 10, f
11	0·0	9·0	Calm	Calm : ENE	0·0	0·0	0·00	53	10, f, th.-r : 10, f	10, slt.-f : 10, th.-r : 10, slt.-f, oc.-slt.-r
12	0·3	9·0	NE : Calm	S : SE	0·0	0·0	0·00	77	10, f, oc.-r : 10,f,oc.-m.-r,gt.-glm	v, f : v
13	2·4	8·9	SE : S	S : SSE	1·7	0·0	0·12	231	v, sh.-r : 6,cu,cu.-s,li.-cl	p.-cl : 10, slt.-r : v, slt.-r
14	5·1	8·9	S : SSE	SSE : S	2·3	0·0	0·51	337	v, shs.-r : 4, cu.-s, li.-cl	3, li.-cl : v, th.-cl : v, th.-cl
15	0·0	8·8	SSW	Variable	3·9	0·0	0·50	292	v, w : 10, oc.-slt.-r, w	10, th.-r : 10, hy.-r
16	0·0	8·8	SSW : NNE	N	1·2	0·0	0·08	212	10, c.-r : 10, c.-r, f, glm	10, c.-r : 10, c.-r
17	0·0	8·7	NNW	NNW	1·3	0·0	0·12	229	10, slt.-r : 10	10 : p.-cl : v
18	0·0	8·7	NNW : SW	SE : Calm	0·1	0·0	0·00	86	v : 10	p.-cl : 0, f, ho.-fr
19	1·0	8·6	SE	SE : E	0·4	0·0	0·02	150	tk.-f, ho.-fr : v, li.-cl	v, ci.-cu, cu.-s : v, th.-cl : 10, oc.-th.-r
20	0·0	8·6	E : WSW	SW : E	0·6	0·0	0·02	127	10, r : 10	0 : 0, slt.-f : 0, tk.-f
21	0·0	8·5	E : ENE	E : SE	1·1	0·0	0·05	124	tk.-f : tk.-f	10, th.-cl : 0 : v
22	0·0	8·5	ESE	E : ENE	1·4	0·0	0·07	249	10 : 10, oc.-slt.-r	10 : 10
23	0·0	8·4	E	E : ESE	1·1	0·0	0·04	228	v : 1c	9, cu.-s, li.-cl : 10
24	0·0	8·4	SSE : SW	WSW : NNE	0·0	0·0	0·00	100	10, hy.-sh : 10,fq.-m.-r,slt.-f,glm	10, slt.-f, glm : 10, oc.-m.-r, slt.-f
25	0·0	8·3	NE : SE	ESE	0·4	0·0	0·00	144	10 : 3, li.-cl : 8, th.-cl	10 : 10
26	0·0	8·3	ESE	SW : NW	2·2	0·0	0·03	216	10 : 10, oc.-slt.-r	10, hy.-r : 0
27	1·4	8·2	W : N	SW	1·2	0·0	0·02	196	v : 2, li.-cl	f, glm : 2, th.-cl, lu.-ha, f
28	0·0	8·2	WSW	SW	3·1	0·0	0·43	388	10 : 10	10 : 10
29	0·0	8·2	SW	WSW	4·3	0·0	0·78	430	10, w : 10, li.-sc, w	10, th.-r : 0
30	1·5	8·1	WSW : W	WNW : SW	2·7	0·0	0·45	361	0, d : 0 : 1, li.-cl	2, li.-cl : 5, li.-cl, ho.-fr
Means	0·8	8·8	...	...	...	...	0·14	199		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 44°·0, being 2°·4 *higher* than the average for the 50 years, 1841–1890.
The mean *Temperature of the Dew Point* for the month was 42°·7, being 3°·0 *higher* than the average for the 50 years, 1841–1890.
The mean *Degree of Humidity* for the month was 91·7, being 4·2 *greater* than the average for the 50 years, 1841–1890.
The mean *Elastic Force of Vapour* for the month was 0in·274, being 0in·030 *greater* than the average for the 50 years, 1841–1890.
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3grs·1, being 0gr·3 *greater* than the average for the 50 years, 1841–1890.
The mean *Weight of a Cubic Foot of Air* for the month was 548 grains, being *the same as* the average for the 50 years, 1841–1890.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7·1.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·087. The maximum daily amount of *Sunshine* was 5·1 hours on November 3 and 14.

The highest reading of the *Solar Radiation Thermometer* was 90°·0 on November 13; and the lowest reading of the *Terrestrial Radiation Thermometer* was 28°·0 on November 2.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 1·5; for the 6 hours ending 15h. was 0·4; and for the 6 hours ending 21h. was 0·3.

The *Proportions of Wind* referred to the cardinal points were N. 4, E. 7, S. 11, and W. 5. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 4·3 lbs. on the square foot on November 29. The mean daily *Horizontal Movement of the Air* for the month was 199 miles; the greatest daily value was 430 miles on November 29; and the least daily value was 50 miles on November 10.

Rain fell on 18 days in the month, amounting to 2in·212, as measured by gauge No. 6 partly sunk below the ground; being 0in·054 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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 50 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.	Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Dec. 1	...	29·773	49·8	33·7	16·1	41·9	+ 1·3	40·2	38·1	3·8	5·9	1·3	87	50·6	28·9	0·355	0·2	mP : wP, wN
2	...	29·921	40·0	31·0	9·0	36·1	− 4·5	34·4	31·9	4·2	8·3	0·7	85	51·3	25·8	0·037	0·8	mP : mP, wN
3	Perigee	29·504	51·3	36·3	15·0	44·3	+ 3·5	43·2	41·9	2·4	6·2	0·0	92	56·0	33·0	0·152	0·0	wP, wN : wN, wP
4	Full	29·454	39·2	29·8	9·4	34·4	− 6·7	32·3	28·8	5·6	9·3	1·7	79	42·1	24·5	0·000	0·0	wP : mP
5	Greatest Declination N.	29·544	35·4	28·3	7·1	31·8	− 9·5	29·7	24·8	7·0	9·4	2·9	74	43·3	23·0	0·000	0·0	mP : vP
6	...	29·656	38·3	28·2	10·1	34·0	− 7·3	33·2	31·8	2·2	4·3	0·7	91	45·0	24·7	0·105	0·0	mP, ssN : mP, wN
7	...	29·874	39·2	32·9	6·3	35·5	− 5·5	34·5	32·9	2·6	4·6	0·8	90	46·7	29·2	0·013	0·0	mP
8	...	30·007	36·4	32·1	4·3	34·0	− 6·6	32·9	30·9	3·1	5·7	1·1	88	39·5	27·2	0·000	1·0	mP : mP, wN : mP
9	...	29·507	41·2	33·2	8·0	36·2	− 4·1	34·7	32·5	3·7	6·0	0·5	87	50·0	30·5	0·205	0·2	mP, wN : mP
10	...	29·792	40·0	31·3	8·7	33·7	− 6·2	32·5	30·4	3·3	7·8	0·9	87	40·0	28·2	0·024	0·8	mP : vP, wN
11	Last Quarter	29·318	44·8	39·3	5·5	42·5	+ 2·7	41·0	39·2	3·3	7·9	0·2	88	49·6	36·0	0·105	0·8	wN, wP : mP
12	In Equator	29·375	44·2	36·2	8·0	41·5	+ 1·6	39·9	37·9	3·6	4·6	2·2	88	52·1	30·0	0·015	2·2	wP
13	...	29·781	39·9	29·6	10·3	35·7	− 4·4	33·9	31·2	4·5	9·9	1·5	83	45·0	26·1	0·000	0·2	mP : sP
14	...	29·901	50·1	29·6	20·5	42·8	+ 2·6	41·8	40·6	2·2	5·7	0·8	92	50·1	26·1	0·128	0·8	mP : wP
15	Apogee	29·896	54·7	47·0	7·7	50·8	+10·5	49·0	47·1	3·7	8·6	0·8	87	66·0	43·0	0·005	0·2	wP
16	...	30·158	50·7	37·2	13·5	46·0	+ 5·8	44·4	42·6	3·4	6·7	1·1	89	55·3	32·9	0·000	1·7	mP : wP
17	...	30·152	49·2	47·0	2·2	48·0	+ 8·0	45·8	43·4	4·6	5·5	3·4	85	51·3	45·2	0·000	3·5	wP : mP
18	...	30·109	48·1	46·0	2·1	47·0	+ 7·3	44·5	41·7	5·3	6·1	4·2	82	52·2	44·6	0·000	1·8	wP : mP
19	New : Greatest Dec. S.	30·023	46·0	41·6	4·4	43·6	+ 4·3	41·4	38·8	4·8	5·7	3·7	83	46·6	40·6	0·000	1·2	wP : vP, wN
20	...	29·928	43·1	40·5	2·6	42·2	+ 3·2	40·9	39·3	2·9	4·8	1·8	90	43·1	39·2	0·000	0·0	wP, wN : vP, wN
21	...	29·935	43·9	35·8	8·1	40·5	+ 1·7	39·5	38·2	2·3	4·4	0·7	92	45·1	30·0	0·000	0·0	wN, mP : mP
22	...	29·900	40·1	29·8	10·3	34·8	− 3·8	34·3	33·5	1·3	6·5	0·0	95	41·4	27·3	0·000	0·2	mP
23	...	29·905	38·1	29·0	9·1	34·3	− 4·1	32·0	28·1	6·2	9·1	3·4	77	44·3	25·2	0·000	0·8	mP
24	...	29·839	32·8	25·5	7·3	28·8	− 9·5	27·7	23·7	5·1	10·2	1·2	81	42·1	24·0	0·000	0·0	mP : sP
25	...	29·782	32·8	23·7	9·1	27·1	−11·2	26·3	22·6	4·5	10·6	0·0	83	43·0	21·0	0·000	0·0	sP
26	First Quarter : In Equator	29·950	36·0	22·4	13·6	27·7	−10·7	27·0	24·1	3·6	7·5	0·0	86	40·0	19·0	0·000	0·0	sP
27	...	30·074	31·2	17·6	13·6	24·3	−14·1	24·1	23·1	1·2	4·5	0·0	95	32·0	15·0	0·000	0·0	...
28	...	30·120	28·8	24·9	3·9	27·6	−10·9	27·6	27·6	0·0	1·8	0·0	100	30·8	19·5	0·000	0·0	... : sP
29	...	29·865	34·9	24·2	10·7	29·2	− 9·4	28·7	27·0	2·2	5·9	0·0	91	39·9	21·1	0·000	0·0	vP : sP
30	...	29·690	32·4	20·9	11·5	28·0	−10·6	27·8	27·0	1·0	4·0	0·0	95	36·8	19·5	0·000	0·5	sP : ...
31	Perigee	29·669	33·4	26·0	7·4	30·6	− 8·0	29·3	25·7	4·9	13·0	0·0	81	34·4	21·8	0·000	1·5	... : sP
Means	...	29·819	40·8	32·0	8·9	36·6	− 3·1	35·3	33·1	3·5	6·8	1·1	87·2	45·3	28·5	Sum 1·144	0·6	...
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 that determined from the reduction of the observations from 1841 to 1890. 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 results for December 7 to 10 for Barometer are deduced from eye-observations, on account of temporary interruption of the photographic register.

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·819, being 0in·028 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 54°·7 on December 15; the lowest in the month was 17°·6 on December 27; and the range was 37°·1.
The mean of all the highest daily readings in the month was 40°·8, being 3°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 32°·0, being 2°·8 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 8°·9, being 0°·3 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 36°·6, being 3°·1 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1892.	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.	Least.	Mean of 24 Hourly Measures.	Robinson's. Horizontal Movement of the Air.	CLOUDS AND WEATHER. A.M.	P.M.
	hours	hours.			lbs.	lbs.	lbs.	miles.		
Dec. 1	0·0	8·1	SW	SSW : SW : NNW	5·4	0·0	0·62	385	v, ho.-fr : 8, th.-cl, th-r	10, sc, r, w : 10, slt.-r
2	2·9	8·1	N : NNE	E : ESE	1·2	0·0	0·08	187	10 : 2, li.-cl, ho.-fr	3, th.-cl : th.-cl, lu.-ha: 10, r
3	0·0	8·0	ESE : SSW	WSW	4·1	0·0	0·37	312	10, fq.-r : 10, oc.-r	10 : 10, sqs
4	0·0	8·0	WSW	WNW : WSW	5·8	0·0	0·89	465	v, hy.-sq, sn : 1, li.-cl, fr : 3, cu.-s, li.-cl, slt.-sn, w	0, w : 0
5	0·0	8·0	WSW : W	WNW : WSW	1·9	0·0	0·32	354	0, ho.-fr : 0, ho.-fr : 2, li.-cl	4, li.-cl : 10, slt.-sn : 2, li.-cl
6	0·0	8·0	WSW	WNW : WSW	1·6	0·0	0·14	289	10 : 10, slt.-f : 10, oc.-sn	p.-cl : 3, li.-cl : 10, r, sl
7	0·5	7·9	NW : N	N	2·2	0·0	0·27	286	10, slt.-r : 10	4, li.-cl : 8 : 10
8	0·0	7·9	N : NNW : SW	NW : SW	1·3	0·0	0·09	211	10 : p.-cl, ho.-fr : 10, th.-cl, f	10, th.-cl : 5, th.-cl : 10
9	0·7	7·9	SSW : NNW	NNW	6·9	0·0	1·62	514	10, r, w : 10, r, w	p.-cl, st.-w : 7, sc, w : 10, slt.-sn, w
10	0·0	7·9	NNW	SW : S	2·4	0·0	0·48	308	v, ho.-fr : 2, li.-cl, h	3, li.-cl, h, slt.-f : 10, sn : 10, r, sl
11	0·7	7·8	S : SW	WSW : SW	3·2	0·0	0·58	412	10, hy.-r : 10 : v, slt.-r	p.-cl : 10, slt.-r
12	0·0	7·8	WSW : SW	SW : NW	1·7	0·0	0·27	329	10 : 10, oc.-slt.-r	9 : 0 : 0
13	0·1	7·8	WSW : NW	NW : WSW	2·2	0·0	0·14	276	0, ho.-fr : 0, ho.-fr : 1, li.-cl	3 li.-cl : 4, li.-cl, slt.-f, ho.-fr
14	0·0	7·8	SW : SSW	SW : WSW	3·0	0·0	0·71	434	0 : v, r : 10, slt.-r	10, sc, r : 10
15	0·6	7·8	WSW	WSW : W	5·2	0·0	0·85	450	10, slt.-r : 10, sc	5, li.-cl : v
16	0·0	7·8	NW : SW : SSW	SW	2·6	0·0	0·27	311	p.-cl : 1, li.-cl : 10	10 : 10
17	0·0	7·7	SW	WSW	2·7	0·0	0·59	433	10 : 10	10 : 10
18	0·0	7·7	WSW	WSW	3·3	0·0	0·67	430	10 : 10	10 : 10
19	0·0	7·7	WSW	W : WSW	1·4	0·0	0·08	209	10 : 10	10 : 10
20	0·0	7·7	Calm : S : SW	SSW : Calm	0·0	0·0	0·00	67	10 : 10, slt.-f, glm	10, gt.-glm : 10, slt.-f
21	0·0	7·7	NNE : SSW : Calm	Calm : SE	0·0	0·0	0·00	56	10 : 10, f	10, slt.-f : 10, slt.-f
22	0·0	7·7	Calm : NE : E	E	1·5	0·0	0·03	118	tk.-f : 10, f	10, slt.-f : 0 : 10
23	0·0	7·7	ESE	E	1·5	0·0	0·27	293	p.-cl : 0 : 10	10 : 1 : 0, ho.-fr
24	3·0	7·7	E	E : ESE	1·3	0·0	0·18	247	0, ho.-fr : 2, li.-cl	0 : 0, ho.-fr
25	0·0	7·7	E	E : NE	1·7	0·0	0·06	213	0, ho.-fr : 0	0 : 0, ho.-fr
26	2·3	7·8	NNE	NNE : N	0·0	0·0	0·00	123	0, ho.-fr : 0	0 : 0, f
27	0·0	7·8	SW : Calm	NW	0·0	0·0	0·00	93	0, ho.-fr : f	7, f : v, f
28	0·0	7·8	Calm : SW	SSW : Calm	0·0	0·0	0·00	48	10, f, fr : 10, f, glm	10, f, glm : 10, tk.-f
29	0·0	7·8	Calm	Calm : E	0·0	0·0	0·00	50	f : v, f	p.-cl : v, li.-cl, lu.-co, slt.-f
30	0·0	7·8	E : Calm	ENE : E	0·0	0·0	0·00	91	tk.-f : 10, tk.-f	10 : 9, ho.-fr
31	0·0	7·8	E : ESE	E : ENE	3·6	0·0	0·28	277	v, ho.-fr : 10, oc.-sn	10, li.-sc, oc.-sn : 10, w
Means	0·3	7·8	...	...	...	...	0·32	267		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 35°·3, being 3°·0 *lower* than the average for the 50 years, 1841–1890.
The mean *Temperature of the Dew Point* for the month was 33°·1, being 3°·4 *lower* than the average for the 50 years, 1841–1890.
The mean *Degree of Humidity* for the month was 87·2, being 1·3 *less* than the average for the 50 years, 1841–1890.
The mean *Elastic Force of Vapour* for the month was 0in·188, being 0in·028 *less* than the average for the 50 years, 1841–1890.
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·2, being 0gr·3 *less* than the average for the 50 years, 1841–1890.
The mean *Weight of a Cubic Foot of Air* for the month was 557 grains, being 4 grains *greater* than the average for the 50 years, 1841–1890.

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 0·044. The maximum daily amount of *Sunshine* was 3·0 hours on December 24.

The highest reading of the *Solar Radiation Thermometer* was 66°·0 on December 15; and the lowest reading of the *Terrestrial Radiation Thermometer* was 15°·0 on December 27.

The mean daily distribution of *Ozone* for the 12 hours ending 9h. was 0·6; for the 6 hours ending 15h. was 0·0; and for the 6 hours ending 21h. was 0·0.

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 6, S. 7, and W. 10. Three days were calm.

The *Greatest Pressure of the Wind* in the month was 6·9 lbs. on the square foot on December 9. The mean daily *Horizontal Movement of the Air* for the month was 267 miles; the greatest daily value was 514 miles on December 9; and the least daily value was 48 miles on December 28.

Rain fell on 11 days in the month, amounting to 1in·144, as measured by gauge No. 6 partly sunk below the ground; being 0in·626 *less* than the average fall for the 50 years, 1841–1890.

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

MAXIMA.

	Greenwich Civil Time, 1892.	Reading.
	d h m	in.
January	2. 10. 0	30·079
	4. 22. 35	29·958
	6. 22. 45	29·310
	11. 22. 20	29·759
	21. 9. 35	29·805
	25. 22. 45	30·354
	28. 10. 58	30·158
	29. 22. 40	30·044
	31. 11. 0	29·990
February	2. 10. 20	29·176
	4. 7. 35	29·600
	7. 11. 20	29·791
	13. 10. 30	30·350
	16. 11. 30	29·494
	18. 23. 40	29·222
	20. 20. 30	29·327
	27. 0. 15	29·971
March	5. 1. 0	30·175
	11. 21. 5	29·460
	15. 1. 0	29·549
	18. 10. 0	30·188
	21. 8. 10	30·203
	23. 0. 20	30·335
	30. 11. 0	30·406
April	10. 23. 0	29·806
	15. 9. 20	29·592
	19. 23. 25	30·256
	23. 9. 0	30·277

MINIMA.

	Greenwich Civil Time, 1892.	Reading.
	d h m	in.
January	4. 5. 20	29·847
	6. 10. 15	29·189
	8. 1. 40	29·027
	14. 16. 45	29·281
	22. 14. 58	29·654
	27. 19. 15	29·610
	29. 6. 30	29·870
	31. 4. 20	29·890
February	2. 4. 45	29·060
	3. 0. 10	28·977
	4. 19. 40	29·355
	8. 11. 20	29·478
	15. 13. 10	29·270
	18. 2. 40	28·930
	20. 1. 50	29·037
	21. 4. 40	29·198
	29. 5. 0	29·645
March	10. 15. 30	29·116
	13. 14. 0	29·166
	15. 18. 0	29·090
	20. 5. 45	29·970
	21. 15. 20	30·134
	26. 16. 0	29·475
April	7. 15. 50	29·722
	13. 15. 40	29·454
	16. 5. 15	29·296
	21. 3. 40	29·904

MAXIMA.

	Greenwich Civil Time, 1892.	Reading.
	d h m	in.
April	25. 21. 10	29·733
	30. 10. 15	30·028
May	6. 23. 0	30·090
	12. 6. 0	30·215
	18. 6. 5	29·955
	19. 20. 15	29·928
	21. 10. 25	29·919
	26. 6. 20	29·724
	27. 21. 0	29·733
	30. 8. 25	29·981
June	1. 21. 0	29·742
	4. 7. 25	29·930
	8. 8. 0	30·250
	13. 23. 55	30·008
	18. 7. 20	29·827
	21. 22. 15	29·797
	25. 8. 0	29·840
	28. 6. 0	29·995
	30. 8. 15	30·174
July	5. 1. 45	29·865
	6. 12. 10	29·793
	9. 6. 50	29·957
	10. 23. 35	29·890
	15. 9. 25	29·884
	18. 21. 25	29·844
	24. 8. 30	30·175
	28. 0. 45	30·089

MINIMA.

	Greenwich Civil Time, 1892.	Reading.
	d h m	in.
April	25. 15. 15	29·650
	28. 3. 50	29·383
May	3. 17. 35	29·448
	8. 18. 0	29·969
	16. 22. 50	29·515
	18. 19. 25	29·840
	20. 12. 50	29·679
	25. 7. 0	29·575
	27. 2. 10	29·565
	28. 15. 0	29·556
	31. 16. 5	29·589
June	2. 10. 0	29·550
	5. 12. 55	29·568
	11. 16. 45	29·597
	16. 16. 10	29·730
	20. 17. 40	29·628
	23. 9. 35	29·330
	25. 20. 0	29·740
	29. 5. 55	29·638
July	3. 13. 45	29·546
	6. 1. 10	29·708
	7. 11. 45	29·485
	10. 1. 50	29·800
	13. 6. 0	29·404
	17. 3. 30	29·552
	20. 1. 5	29·360
	26. 16. 0	29·980
August	1. 8. 30	29·735

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

MAXIMA.		MINIMA.		MAXIMA.		MINIMA.	
Greenwich Civil Time, 1892.	Reading.	Greenwich Civil Time, 1892.	Reading.	Greenwich Civil Time, 1892.	Reading.	Greenwich Civil Time, 1892.	Reading.
d h m	in.	d h m	in.	d h m	in.	d h m	in.
August 2. 22. 0	29·990	August 3. 18. 0	29·862	October 8. 21. 15	29·467	October 6. 16. 15	29·111
5. 0. 0	29·970	6. 15. 0	29·771	12. 0. 45	29·920	9. 12. 45	29·209
7. 10. 25	29·862	9. 4. 20	29·618	15. 8. 25	29·688	14. 5. 35	29·430
11. 0. 25	30·095	13. 14. 30	29·558	19. 9. 30	30·142	16. 11. 50	29·519
14. 10. 15	29·696	14. 23. 30	29·568	22. 18. 0	29·478	22. 3. 20	29·334
16. 10. 0	29·955	17. 2. 25	29·720	24. 21. 30	29·700	23. 6. 40	29·402
18. 0. 15	29·798	18. 12. 35	29·568	26. 11. 0	29·937	25. 12. 0	29·526
18. 14. 40	29·655	18. 19. 20	29·552	30. 10. 55	29·550	28. 15. 10	29·139
18. 20. 55	29·636	19. 5. 10	29·520	November 2. 1. 30	29·715	31. 3. 35	29·328
21. 9. 25	30·067	25. 4. 0	29·510	4. 0. 5	29·773	November 3. 1. 15	29·454
26. 21. 0	29·872	28. 8. 55	29·319	8. 9. 15	30·190	4. 20. 50	29·654
29. 1. 25	29·625	30. 18. 40	29·396	17. 10. 20	29·856	15. 1. 55	29·533
September 1. 10. 10	29·803	September 2. 14. 55	29·463	21. 21. 50	30·222	19. 14. 35	29·545
5. 9. 25	30·205	9. 14. 20	29·794	27. 21. 50	30·309	26. 15. 5	29·909
12. 8. 35	29·978	13. 4. 40	29·624	30. 21. 0	30·078	30. 0. 15	29·855
14. 9. 0	29·994	16. 6. 15	29·576	December 2. 11. 15	30·025	December 1. 17. 30	29·497
17. 21. 20	30·130	20. 15. 40	29·710	8. 9. 0	30·079	3. 22. 0	29·353
22. 21. 0	30·036	24. 7. 0	29·721	10. 11. 35	29·853	9. 9. 0	29·413
24. 21. 45	29·840	25. 16. 5	29·760	13. 23. 20	30·023	11. 13. 40	29·250
26. 9. 45	29·886	27. 21. 55	29·437	16. 9. 25	30·205	14. 17. 50	29·798
29. 7. 40	29·674	October 1. 12. 20	29·222	28. 10. 0	30·170	25. 5. 45	29·744
October 3. 20. 40	29·563	5. 10. 15	29·236			31. 4. 15	29·644
5. 22. 30	29·313						

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. From December 8 to 10 eye-readings are employed, on account of temporary interruption of photographic registration.

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 1892.
[Extracted from the preceding Table.]

MONTH, 1892.	Readings of the Barometer.		Range.
	Highest.	Lowest.	
	in.	in.	in.
January	30·354	29·027	1·327
February	30·350	28·930	1·420
March	30·406	29·090	1·316
April	30·277	29·296	0·981
May	30·215	29·448	0·767
June	30·250	29·330	0·920
July	30·175	29·360	0·815
August	30·095	29·319	0·776
September	30·205	29·437	0·768
October	30·142	29·111	1·031
November	30·309	29·454	0·855
December	30·205	29·250	0·955

The highest reading in the year was 30in·406 on March 30. The lowest reading in the year was 28in·930 on February 18.
The range of reading in the year was 1in·476.

MONTHLY RESULTS of METEOROLOGICAL ELEMENTS for the YEAR 1892.

MONTH, 1892.	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 50 Years.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean Degree of Humidity. (Saturation = 100.)
	in.	°	°	°	°	°	°	°	°	°	°	
January ...	29·685	51·6	22·3	29·3	40·8	31·6	9·2	36·6	− 1·9	35·2	32·8	86·1
February...	29·623	53·5	18·8	34·7	44·4	33·7	10·7	39·0	− 0·6	37·2	34·0	83·0
March	29·838	60·5	22·3	38·2	45·1	30·8	14·2	37·3	− 4·3	34·8	30·2	75·4
April	29·830	75·3	26·7	48·6	59·0	36·0	23·0	46·6	− 0·5	42·0	37·0	69·8
May.........	29·823	85·1	28·7	56·4	67·0	43·9	23·1	54·9	+ 1·8	49·8	44·9	69·7
June	29·827	85·9	37·2	48·7	70·5	47·9	22·5	58·1	− 1·3	53·5	49·3	73·0
July.........	29·841	82·4	47·0	35·4	70·9	51·2	19·7	59·5	− 2·9	55·2	51·5	75·0
August	29·759	84·3	43·8	40·5	73·6	52·6	21·1	61·7	+ 0·1	57·4	53·8	75·7
September.	29·813	74·6	37·2	37·4	66·7	47·9	18·8	56·4	− 0·8	53·2	50·2	80·1
October ...	29·546	61·9	27·4	34·5	53·1	39·1	14·0	45·5	− 4·5	43·7	41·6	86·7
November.	29·878	60·9	31·2	29·7	50·0	39·5	10·5	45·1	+ 1·9	44·0	42·7	91·7
December..	29·819	54·7	17·6	37·1	40·8	32·0	8·9	36·6	− 3·1	35·3	33·1	87·2
Means	29·773	Highest. 85·9	Lowest. 17·6	Annual Range. 68·3	56·8	40·5	16·3	48·1	− 1·3	45·1	41·8	79·4

MONTH, 1892.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean Weight of a Cubic Foot of Air.	Mean Amount of Ozone.	Mean Amount of Cloud. (0–10.)	Rain. Number of Rainy Days.	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 ...	0·186	2·2	554	0·8	7·1	11	0·384	101	33	80	42	41	187	163	79	18	0·39	293
February...	0·196	2·3	551	1·6	7·8	19	1·688	107	76	94	47	48	139	87	59	39	0·43	296
March	0·168	2·0	557	2·0	6·4	12	1·089	150	168	156	28	44	74	32	47	45	0·24	290
April	0·220	2·5	546	0·0	4·3	10	1·421	122	140	128	10	25	94	70	64	67	0·10	234
May.........	0·298	3·4	536	1·3	5·8	11	1·656	100	90	82	29	96	204	78	28	37	0·23	274
June	0·352	3·9	533	2·1	5·9	14	2·268	76	70	74	12	65	303	86	31	3	0·15	263
July.........	0·381	4·3	531	1·7	7·0	12	1·536	140	167	60	32	49	188	53	28	27	0·25	276
August ...	0·415	4·6	527	2·6	6·2	16	3·026	81	30	43	43	104	314	74	38	17	0·17	250
September.	0·364	4·1	534	1·9	6·4	14	2·010	55	13	8	21	132	357	66	51	17	0·22	254
October ...	0·263	3·0	542	1·2	6·8	22	3·879	170	67	12	41	83	213	87	48	23	0·36	279
November.	0·274	3·1	548	2·2	7·1	18	2·212	69	41	90	119	122	155	43	12	69	0·14	199
December..	0·188	2·2	557	0·6	6·8	11	1·144	74	31	130	18	43	231	100	55	62	0·32	267
Sums	...	...	...	...	...	170	22·313	1245	926	957	442	852	2459	939	540	424	...	...
Means	0·275	3·1	543	1·5	6·5	...	...	...	...	...	...	...	...	...	...	...	0·25	265

The greatest recorded pressure of the wind on the square foot in the year was 11·8 lbs. on October 9.
The greatest recorded daily horizontal movement of the air in the year was 687 miles on January 29.
The least recorded daily horizontal movement of the air in the year was 48 miles on December 28.

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

Hour, Greenwich Civil Time.	1892. 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	29·677	29·637	29·832	29·851	29·845	29·827	29·850	29·771	29·822	29·553	29·875	29·840	29·782
1h.	29·672	29·633	29·832	29·841	29·840	29·822	29·846	29·767	29·819	29·549	29·869	29·833	29·777
2	29·676	29·627	29·832	29·834	29·833	29·818	29·842	29·763	29·816	29·541	29·868	29·831	29·773
3	29·679	29·622	29·829	29·830	29·829	29·816	29·838	29·758	29·812	29·536	29·866	29·829	29·770
4	29·678	29·617	29·829	29·826	29·824	29·817	29·838	29·755	29·808	29·533	29·866	29·825	29·768
5	29·676	29·614	29·833	29·827	29·827	29·820	29·843	29·755	29·809	29·533	29·868	29·821	29·769
6	29·675	29·616	29·838	29·833	29·833	29·824	29·846	29·761	29·816	29·532	29·870	29·822	29·772
7	29·682	29·621	29·847	29·838	29·835	29·828	29·851	29·764	29·820	29·539	29·876	29·825	29·777
8	29·691	29·627	29·852	29·840	29·837	29·831	29·853	29·767	29·824	29·546	29·886	29·830	29·782
9	29·700	29·631	29·857	29·842	29·835	29·830	29·852	29·765	29·826	29·548	29·890	29·834	29·784
10	29·706	29·634	29·858	29·841	29·831	29·831	29·852	29·768	29·826	29·549	29·895	29·837	29·786
11	29·706	29·634	29·857	29·838	29·826	29·831	29·851	29·766	29·822	29·546	29·894	29·832	29·784
Noon	29·694	29·629	29·852	29·833	29·821	29·830	29·848	29·763	29·818	29·540	29·884	29·823	29·778
13h.	29·681	29·619	29·842	29·827	29·815	29·826	29·846	29·760	29·812	29·537	29·876	29·815	29·771
14	29·679	29·612	29·834	29·820	29·809	29·826	29·842	29·758	29·806	29·536	29·871	29·807	29·767
15	29·679	29·609	29·824	29·811	29·804	29·823	29·836	29·750	29·800	29·539	29·871	29·804	29·763
16	29·679	29·610	29·820	29·808	29·801	29·821	29·831	29·745	29·797	29·539	29·873	29·804	29·761
17	29·681	29·612	29·819	29·808	29·800	29·819	29·826	29·742	29·796	29·544	29·877	29·806	29·761
18	29·682	29·619	29·826	29·812	29·804	29·822	29·824	29·741	29·797	29·554	29·881	29·809	29·764
19	29·685	29·621	29·833	29·822	29·808	29·825	29·825	29·745	29·806	29·558	29·882	29·813	29·769
20	29·687	29·625	29·838	29·832	29·816	29·830	29·830	29·755	29·811	29·558	29·884	29·821	29·774
21	29·688	29·627	29·841	29·838	29·824	29·841	29·839	29·761	29·814	29·563	29·887	29·826	29·779
22	29·689	29·627	29·845	29·839	29·828	29·844	29·842	29·763	29·814	29·564	29·888	29·829	29·781
23	29·687	29·630	29·849	29·840	29·832	29·844	29·843	29·765	29·813	29·561	29·886	29·834	29·782
24	29·685	29·634	29·852	29·840	29·833	29·843	29·841	29·766	29·811	29·562	29·889	29·835	29·783
Means { 0h.–23h.	29·685	29·623	29·838	29·830	29·823	29·827	29·841	29·759	29·813	29·546	29·878	29·823	29·774
Means { 1h.–24h.	29·685	29·623	29·839	29·830	29·823	29·828	29·841	29·758	29·812	29·546	29·879	29·823	29·774
Number of Days employed.	31	29	31	30	31	30	31	31	30	31	30	27	...

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

Hour, Greenwich Civil Time.	1892. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Midnight	35·8	37·9	34·8	41·3	48·7	52·5	54·8	56·9	52·6	43·0	44·0	35·7	44·8
1h.	35·7	37·6	34·6	40·6	47·9	52·1	54·1	56·4	52·0	42·6	43·8	35·3	44·4
2	35·5	37·3	34·2	39·8	47·4	51·6	53·8	56·0	51·5	42·5	43·7	35·0	44·0
3	35·4	37·2	33·8	39·2	46·7	51·0	53·4	55·5	51·2	42·5	43·6	34·8	43·7
4	35·2	37·0	33·4	38·6	46·3	50·5	53·1	55·2	51·1	42·5	43·4	34·8	43·4
5	35·2	36·9	33·1	38·2	46·6	50·9	53·4	55·3	51·1	42·5	43·3	34·9	43·4
6	35·1	37·0	33·0	38·5	48·6	52·4	54·5	55·7	51·3	42·3	43·4	35·0	43·9
7	35·1	36·8	33·4	40·2	51·6	54·7	56·4	57·4	52·5	42·5	43·5	35·0	44·9
8	35·2	37·0	35·0	43·7	55·1	57·6	58·8	60·3	54·9	43·7	43·9	34·8	46·7
9	35·5	38·0	37·1	47·6	58·2	60·7	61·0	63·6	58·2	45·3	44·6	35·4	48·8
10	36·5	39·4	39·1	50·7	60·6	62·3	62·9	65·5	60·1	47·0	45·7	36·5	50·5
11	37·6	40·6	40·5	53·1	61·9	63·6	64·0	67·0	61·7	49·0	46·8	37·7	52·0
Noon	38·6	41·5	41·9	54·9	62·6	64·3	65·3	68·5	62·7	50·0	47·9	38·5	53·1
13h.	38·9	42·2	42·6	55·8	63·0	65·3	66·3	69·4	63·7	50·8	48·6	39·3	53·8
14	38·9	42·2	42·8	56·3	63·5	66·0	66·4	69·5	63·2	50·4	48·5	39·6	53·9
15	38·8	42·2	42·7	56·2	63·5	65·9	66·7	69·5	62·8	49·6	48·0	39·3	53·8
16	38·2	41·5	41·9	55·1	62·7	65·3	65·8	68·5	61·6	48·8	47·1	38·7	52·9
17	37·7	40·7	40·6	53·4	60·5	63·9	64·8	66·8	60·2	47·5	46·2	38·1	51·7
18	37·4	39·9	39·1	51·0	58·7	62·1	63·2	65·0	58·5	46·4	45·6	37·7	50·4
19	37·1	39·2	37·8	48·2	56·3	60·2	61·3	62·9	56·5	45·4	45·0	37·4	48·9
20	36·9	38·7	37·0	46·1	54·0	57·9	59·3	60·9	55·4	44·5	44·6	36·8	47·7
21	36·5	38·4	36·3	44·6	52·3	55·7	57·5	59·3	54·3	44·0	44·1	36·4	46·6
22	36·2	38·1	35·8	43·3	51·3	54·3	56·5	58·3	53·8	43·6	43·8	36·3	45·9
23	36·0	37·8	35·4	42·4	50·3	53·2	55·7	57·4	53·0	43·3	43·8	36·0	45·4
24	36·0	37·5	34·9	41·3	49·2	52·4	55·0	56·8	52·4	43·0	43·7	35·5	44·8
Means { 0h.–23h.	36·6	39·0	37·3	46·6	54·9	58·1	59·5	61·7	56·4	45·4	45·1	36·6	48·1
Means { 1h.–24h.	36·6	38·9	37·3	46·6	54·9	58·1	59·5	61·7	56·4	45·4	45·1	36·6	48·1
Number of Days employed.	31	29	31	30	31	30	31	31	30	29	30	31	...

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

Hour, Greenwich Civil Time.	1892.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
	°	°	°	°	°	°	°	°	°	°	°	°	°
Midnight	34.6	36.6	33.3	38.9	46.2	50.9	52.8	55.1	51.1	42.0	43.3	34.5	43.3
1h.	34.5	36.4	33.0	38.3	45.7	50.5	52.6	54.6	50.7	41.6	43.0	34.1	42.9
2	34.5	36.0	32.8	37.8	45.3	50.1	52.1	54.3	50.3	41.4	42.9	33.9	42.6
3	34.4	35.9	32.3	37.4	45.0	49.7	51.7	53.9	50.2	41.5	42.8	34.0	42.4
4	34.2	35.8	31.9	37.0	44.7	49.2	51.5	53.6	50.0	41.6	42.7	34.0	42.2
5	34.3	35.7	31.8	36.8	44.9	49.5	51.6	53.8	49.8	41.6	42.5	34.1	42.2
6	34.2	35.8	31.6	36.9	46.3	50.3	52.3	54.0	49.9	41.5	42.6	34.1	42.5
7	34.2	35.8	32.0	38.4	48.3	51.7	53.4	55.2	50.8	41.7	42.8	34.1	43.2
8	34.3	35.9	33.3	40.8	50.0	53.4	54.6	57.1	52.4	42.7	43.1	34.0	44.3
9	34.5	36.5	34.7	43.3	51.8	54.9	55.8	58.7	54.4	43.8	43.8	34.5	45.6
10	35.2	37.4	35.9	45.0	52.8	55.6	56.7	59.7	55.4	45.0	44.6	35.4	46.6
11	35.9	38.2	36.8	46.2	53.4	56.0	57.4	60.2	56.2	46.2	45.5	36.3	47.4
Noon	36.6	38.8	37.7	46.9	53.8	56.5	58.1	60.8	56.9	46.6	46.1	36.8	48.0
13h.	36.8	39.2	38.3	47.2	54.1	57.0	58.4	61.3	57.4	47.0	46.6	37.4	48.4
14	36.7	39.1	38.2	47.3	54.3	57.3	58.6	61.2	57.1	46.7	46.4	37.4	48.4
15	36.7	39.1	38.1	47.0	54.4	57.5	58.9	61.2	56.9	46.2	46.1	37.4	48.3
16	36.3	38.9	37.7	46.5	54.0	57.3	58.6	60.7	56.2	45.6	45.6	37.0	47.9
17	36.0	38.4	37.0	45.6	53.1	56.5	58.3	59.7	55.5	44.9	44.8	36.6	47.2
18	35.8	37.9	36.1	44.5	52.1	55.5	57.4	59.0	54.6	44.2	44.4	36.2	46.5
19	35.6	37.4	35.4	43.1	50.9	54.6	56.8	58.3	53.7	43.6	44.0	35.9	45.8
20	35.4	37.1	34.8	41.9	49.8	53.6	55.8	57.5	53.0	43.0	43.6	35.4	45.1
21	35.0	37.0	34.3	41.2	48.7	52.7	54.8	56.7	52.3	42.7	43.2	35.0	44.5
22	34.9	36.7	33.9	40.4	48.1	52.0	54.0	56.2	51.8	42.4	43.0	34.9	44.0
23	34.8	36.4	33.6	39.8	47.3	51.5	53.4	55.6	51.2	42.2	43.0	34.7	43.6
24	34.8	36.2	33.2	39.1	46.7	50.8	52.9	55.0	50.9	42.0	42.9	34.3	43.2
Means 0h.–23h.	35.2	37.2	34.8	42.0	49.8	53.5	55.2	57.4	53.2	43.6	44.0	35.3	45.1
Means 1h.–24h.	35.2	37.1	34.8	42.0	49.8	53.5	55.2	57.4	53.2	43.6	44.0	35.3	45.1
Number of Days employed	31	29	31	30	31	30	31	31	30	29	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.	1892.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
	°	°	°	°	°	°	°	°	°	°	°	°	°
Midnight	32.8	34.8	30.9	35.9	43.5	49.3	50.8	53.5	49.6	40.8	42.5	32.6	41.4
1h.	32.7	34.1	30.4	35.4	43.3	48.9	51.1	52.9	49.4	40.4	42.0	32.2	41.1
2	32.9	34.2	30.4	35.2	43.0	48.6	50.4	52.7	49.1	40.1	42.0	32.2	40.9
3	32.8	34.1	29.6	35.1	43.1	48.4	50.0	52.4	49.2	40.3	41.8	32.7	40.8
4	32.6	34.1	29.1	34.8	42.9	47.8	49.9	52.1	48.9	40.5	41.9	32.7	40.6
5	32.8	34.0	29.2	34.9	43.0	48.0	49.8	52.3	48.5	40.5	41.5	32.8	40.6
6	32.8	34.1	28.8	34.7	43.8	48.2	50.1	52.4	48.5	40.5	41.6	32.7	40.7
7	32.8	34.4	29.4	36.1	45.0	48.8	50.6	53.2	49.1	40.7	42.0	32.7	41.2
8	32.8	34.4	30.5	37.4	45.1	49.6	50.8	54.3	50.0	41.5	42.1	32.7	41.8
9	33.0	34.5	31.3	38.5	46.1	49.8	51.3	54.6	51.0	42.1	42.8	33.1	42.3
10	33.4	34.8	31.7	39.1	46.0	49.8	51.4	55.0	51.3	42.8	43.3	33.8	42.7
11	33.6	35.1	32.1	39.3	46.0	49.7	51.9	54.8	51.5	43.2	44.1	34.4	43.0
Noon	33.9	35.4	32.5	39.2	46.3	50.1	52.2	54.8	51.9	43.0	44.1	34.5	43.2
13h.	34.0	35.5	33.1	39.1	46.6	50.2	52.0	55.0	52.2	43.0	44.4	34.9	43.3
14	33.7	35.3	32.7	38.9	46.6	50.2	52.3	54.8	52.0	42.8	44.1	34.5	43.2
15	33.9	35.3	32.5	38.4	46.8	50.7	52.6	54.8	51.8	42.6	44.0	34.9	43.2
16	33.7	35.7	32.5	38.3	46.5	50.8	52.7	54.6	51.6	42.2	44.0	34.7	43.1
17	33.7	35.5	32.4	37.9	46.6	50.3	52.9	54.0	51.4	42.0	43.2	34.5	42.9
18	33.6	35.3	32.1	37.8	46.2	49.8	52.5	54.1	51.1	41.7	43.0	34.2	42.6
19	33.5	35.1	32.1	37.5	45.9	49.7	52.9	54.4	51.1	41.5	42.8	33.8	42.5
20	33.3	34.9	31.7	37.1	45.7	49.7	52.7	54.6	50.7	41.3	42.4	33.5	42.3
21	32.9	35.1	31.4	37.1	45.0	49.9	52.4	54.4	50.3	41.1	42.1	33.0	42.1
22	33.0	34.8	31.0	36.9	44.8	49.7	51.6	54.3	49.8	41.0	42.0	32.9	41.8
23	33.0	34.5	30.8	36.7	44.1	49.8	51.2	54.0	49.4	40.9	42.0	32.7	41.6
24	33.0	34.4	30.5	36.4	44.0	49.2	50.9	53.4	49.4	40.8	42.0	32.5	41.4
Means 0h.–23h.	33.2	34.8	31.2	37.1	45.1	49.5	51.5	53.9	50.4	41.5	42.7	33.4	42.0
Means 1h.–24h.	33.2	34.8	31.2	37.2	45.1	49.5	51.5	53.9	50.4	41.5	42.7	33.4	42.0

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.	1892. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.
Midnight	89	88	85	82	83	89	86	89	90	92	94	89	88
1h.	89	87	84	82	85	89	89	88	91	92	94	89	88
2	90	89	85	84	86	90	88	89	92	91	94	89	89
3	90	89	85	86	88	91	88	89	93	92	94	92	90
4	90	89	84	87	89	91	89	89	92	93	94	92	90
5	91	89	85	88	88	90	88	90	91	93	94	92	90
6	91	89	84	87	84	86	85	89	90	94	94	91	89
7	91	91	85	86	78	80	81	86	89	94	94	91	87
8	91	90	83	78	69	74	75	81	83	92	94	92	84
9	90	87	80	72	64	67	71	73	77	89	94	91	80
10	89	84	76	65	59	64	66	69	73	86	92	91	76
11	85	82	72	60	56	61	65	65	70	80	91	88	73
Noon	84	80	70	55	55	60	62	61	68	78	87	86	71
13h.	83	78	70	54	55	58	61	60	66	75	86	85	69
14	83	77	68	52	55	57	61	59	67	76	85	82	68
15	84	77	68	51	55	57	61	59	68	77	87	85	69
16	84	80	70	54	55	59	63	61	70	78	90	86	71
17	85	82	72	56	60	61	65	64	72	82	90	87	73
18	86	84	77	60	64	64	68	68	76	85	91	87	76
19	87	86	81	67	68	68	74	74	82	87	92	87	79
20	87	87	81	72	73	74	79	80	85	89	92	88	82
21	87	88	83	74	77	82	83	85	86	90	93	88	85
22	88	88	83	78	79	84	84	86	86	90	94	88	86
23	89	88	83	81	80	88	86	88	87	91	94	88	87
24	89	89	83	83	83	89	86	88	90	92	94	89	88
Means { 0h.–23h.	88	85	79	71	71	74	76	77	81	87	92	88	81
Means { 1h.–24h.	88	85	79	71	71	74	76	77	81	87	92	88	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 1892.

Month, 1892.	Registered Duration of Sunshine in the Hour ending 5h.	6h.	7h.	8h.	9h.	10h.	11h.	Noon.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	Total registered Duration of Sunshine in each Month.	Corresponding aggregate Period during which the Sun was above Horizon.	Proportion of Sunshine.	Mean Altitude of the Sun at Noon.
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h		°
January ...	...	...	...	...	...	1·6	2·3	2·9	3·2	1·4	0·4	...	...	...	...	...	11·8	259·1	0·046	18
February ...	...	...	...	0·1	2·6	5·1	5·4	6·3	5·1	3·9	4·9	3·0	0·4	...	...	...	36·8	288·7	0·127	26
March	...	...	0·6	5·2	7·2	9·3	8·9	9·9	8·9	11·5	11·6	7·8	7·7	2·8	...	...	91·4	366·9	0·249	37
April.........	...	0·1	8·7	16·6	17·4	18·1	20·1	18·6	18·8	17·3	17·8	17·8	15·0	9·6	0·4	...	196·3	414·9	0·473	48
May	0·7	10·4	13·2	12·4	13·2	15·5	17·0	16·2	14·6	13·3	13·2	13·9	10·3	9·9	5·5	...	179·3	482·1	0·372	57
June	2·1	12·4	15·9	15·0	16·9	17·8	17·2	15·3	15·8	16·3	15·2	14·7	13·1	12·2	10·5	1·6	212·0	494·5	0·429	62
July	1·3	5·5	10·7	11·0	10·2	10·2	10·3	10·7	12·7	10·8	11·9	11·7	12·2	12·0	7·7	0·2	149·1	496·8	0·300	60
August	...	2·1	10·5	15·1	14·9	13·2	11·9	13·7	16·1	14·2	16·1	14·7	12·6	10·7	2·1	...	167·9	449·1	0·374	52
September ..	...	...	1·0	8·0	11·6	13·9	13·4	14·9	15·3	13·9	14·3	11·3	9·9	2·4	...	...	129·9	376·9	0·345	41
October......	...	...	...	0·8	3·9	4·7	8·9	12·0	11·4	12·6	8·9	4·4	1·3	...	...	...	68·9	328·7	0·210	30
November...	...	...	...	...	...	1·0	3·0	4·2	5·3	4·8	3·2	1·4	...	...	...	...	22·9	264·4	0·087	20
December...	...	...	...	...	...	...	1·7	2·8	2·9	2·8	0·6	...	...	...	...	...	10·8	242·7	0·044	16
For the Year	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1277·1	4464·8	0·286	...

The hours are reckoned from *apparent* midnight.

READINGS of DRY-BULB THERMOMETERS placed in a STEVENSON'S SCREEN near the Ordinary Stand, and of those mounted in a louvre-boarded shed on the ROOF of the MAGNET HOUSE at an elevation of 20 feet above the GROUND; and EXCESS of the READINGS above those of the corresponding THERMOMETERS on the ORDINARY STAND, in the YEAR 1892.

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

[Observations of the maximum and minimum thermometers only have been made on Sundays, Good Friday, Christmas Day, and Public Holidays.]

JANUARY.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h		Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	°	°
1	42·6	36·2	37·4	42·4	41·7	38·4	−0·3	+0·3	0·0	+0·2	+0·2	+0·3	1	42·5	35·7	37·7	42·4	42·0	39·1	−0·4	−0·2	+0·3	+0·2	+0·5	+1·0
2	41·1	30·4	32·3	39·0	40·3	39·9	−0·4	+0·3	−0·2	+0·1	−0·1	+0·1	2	41·3	30·0	32·8	39·6	40·8	40·1	−0·2	−0·1	+0·3	+0·7	+0·4	+0·3
3	42·9	34·4	...	...	...	...	−0·2	+0·3	...	...	...	...	3	43·0	34·5	...	...	...	...	−0·1	+0·4	...	...	...	...
4	36·9	28·2	30·4	32·9	33·8	30·4	+0·8	+0·3	−0·1	+0·1	+0·4	+0·5	4	36·0	28·7	31·3	32·8	33·8	30·9	−0·1	+0·8	+0·8	0·0	+0·4	+1·0
5	41·2	23·9	30·0	36·2	39·2	41·2	+0·1	−0·2	−0·2	+0·2	+0·2	+0·2	5	41·5	23·2	30·3	36·5	39·5	41·5	+0·4	−0·9	+0·1	+0·5	+0·5	+0·5
6	43·1	31·4	42·4	37·2	36·3	32·4	−0·4	+0·1	+0·1	−0·3	+0·2	+0·6	6	43·5	31·3	42·7	37·2	36·8	32·5	0·0	0·0	+0·4	−0·3	+0·7	+0·7
7	36·9	29·3	30·2	36·0	34·7	29·9	−0·3	−0·1	−0·1	−0·1	+0·2	+0·1	7	37·0	29·0	30·5	36·2	34·9	30·5	−0·2	−0·4	+0·2	+0·1	+0·4	+0·7
8	34·6	26·4	28·7	34·6	32·9	27·0	−0·5	+0·1	−0·3	−0·2	+0·2	+0·1	8	35·0	27·0	29·0	35·0	32·9	29·4	−0·1	+0·7	0·0	+0·2	+0·2	+2·5
9	31·7	26·0	28·8	28·3	27·1	30·2	−0·1	−0·3	−0·4	−0·4	−0·6	−0·5	9	32·0	25·8	29·1	28·2	27·2	30·7	+0·2	−0·5	−0·1	−0·5	−0·5	0·0
10	31·1	23·8	...	...	...	...	0·0	+0·1	...	...	...	...	10	31·3	23·0	...	...	...	...	+0·2	−0·7	...	...	...	...
11	35·1	29·0	33·7	34·8	34·9	34·6	−0·3	−0·7	0·0	−0·1	−0·1	+0·2	11	35·1	29·0	33·9	35·1	35·0	34·8	−0·3	−0·7	+0·2	+0·2	0·0	+0·4
12	34·7	22·3	23·4	28·7	32·6	33·6	0·0	0·0	−0·7	−0·1	+0·1	−0·2	12	34·9	22·0	24·2	29·6	33·0	34·1	+0·2	−0·3	+0·1	+0·8	+0·5	+0·3
13	35·2	31·0	31·6	35·0	34·8	32·6	−0·4	−0·2	+0·2	0·0	0·0	0·0	13	35·7	30·1	31·8	35·1	34·9	32·6	+0·1	−1·1	+0·4	+0·1	+0·1	0·0
14	34·1	29·0	29·9	33·9	33·4	30·9	−0·9	+0·2	−0·1	0·0	+0·1	0·0	14	34·2	28·8	30·1	33·8	33·3	31·0	−0·8	0·0	+0·1	−0·1	0·0	+0·1
15	32·7	25·8	27·5	32·0	32·0	28·9	+0·5	+0·7	0·0	+0·1	+0·2	+0·1	15	33·4	26·2	28·1	33·0	32·8	30·8	+1·2	+1·1	+0·6	+1·1	+1·0	+2·0
16	35·9	23·9	31·2	35·9	33·3	32·8	−0·5	+0·5	−0·2	+0·3	+0·1	−0·1	16	35·6	23·6	31·5	35·4	33·1	32·8	−0·8	+0·2	+0·1	−0·2	−0·1	−0·1
17	36·1	30·4	...	...	...	...	−0·5	−0·4	...	...	...	...	17	36·7	30·3	...	...	...	...	+0·1	−0·5	...	...	...	...
18	44·1	33·8	36·9	43·2	42·0	41·1	−0·3	0·0	+0·1	0·0	+0·1	0·0	18	44·5	33·8	37·0	43·7	42·3	41·7	+0·1	0·0	+0·2	+0·5	+0·4	+0·6
19	41·3	29·4	34·7	36·3	36·1	29·9	−0·1	0·0	0·0	−0·1	+0·1	+0·1	19	41·7	29·1	34·9	36·4	36·6	29·8	+0·3	−0·3	+0·2	0·0	+0·6	0·0
20	38·7	29·0	33·6	36·9	37·0	32·2	−0·6	+0·2	−0·1	+0·1	+0·1	−0·1	20	39·5	28·2	34·1	37·2	37·2	32·4	+0·2	−0·6	+0·4	+0·4	+0·3	+0·1
21	36·1	29·4	30·5	34·1	33·9	33·1	+0·7	+0·1	0·0	−0·3	+0·1	+0·1	21	36·1	29·3	30·9	34·5	33·9	33·3	+0·7	0·0	+0·4	+0·1	+0·1	+0·3
22	47·1	32·6	42·7	46·6	44·3	40·0	−1·0	+0·1	−0·1	0·0	+0·1	+0·2	22	48·3	34·0	43·9	46·8	44·8	41·4	+0·2	+1·5	+1·1	+0·2	+0·6	+1·6
23	49·1	39·7	45·7	47·9	48·9	45·1	−0·5	+0·1	+0·1	0·0	−0·1	+0·1	23	49·8	40·4	47·0	48·5	49·8	45·6	+0·2	+0·8	+1·4	+0·6	+0·8	+0·6
24	48·2	39·7	...	...	...	...	−0·3	+1·2	...	...	...	...	24	48·2	41·1	...	...	...	...	−0·3	+2·6	...	...	...	...
25	42·6	31·3	32·2	40·9	42·1	35·0	+0·3	−0·1	+0·1	+0·3	+0·5	+0·4	25	42·7	31·5	32·6	41·3	42·5	36·3	+0·4	+0·1	+0·5	+0·7	+0·9	+1·7
26	42·5	29·1	32·6	36·9	41·2	42·4	+0·2	0·0	0·0	−0·2	−0·1	+0·2	26	42·9	29·8	33·6	37·3	41·5	42·8	+0·6	+0·7	+1·0	+0·2	+0·2	+0·6
27	46·9	42·2	44·3	43·5	45·1	43·0	−0·2	+0·3	0·0	0·0	−0·1	0·0	27	47·0	42·2	44·5	43·6	45·3	43·5	−0·1	+0·3	+0·2	+0·1	+0·1	+0·5
28	46·3	35·8	37·6	42·3	44·8	45·7	−0·1	+0·6	+0·1	+0·1	0·0	+0·2	28	46·6	35·7	38·6	42·3	45·0	45·9	+0·2	+0·5	+1·1	+0·1	+0·2	+0·4
29	51·2	45·8	49·7	50·2	51·2	50·0	−0·2	+0·6	−0·1	−0·1	0·0	+0·4	29	51·5	45·5	50·0	50·5	51·1	50·4	+0·1	+0·3	+0·2	+0·2	−0·1	+0·8
30	51·3	45·2	47·6	49·9	50·9	49·5	−0·3	+0·4	0·0	+0·1	+0·1	+0·2	30	51·3	44·9	47·8	50·3	51·3	49·5	−0·3	+0·1	+0·2	+0·5	+0·5	+0·2
31	49·5	45·5	...	...	...	...	−0·1	0·0	...	...	...	...	31	49·5	44·3	...	...	...	...	−0·1	−1·2	...	...	...	...
Means	40·7	31·9	34·8	38·3	38·6	36·5	−0·2	+0·1	−0·1	0·0	+0·1	+0·1	Means	40·9	31·9	35·3	38·5	38·9	37·1	+0·1	+0·1	+0·4	+0·2	+0·3	+0·6

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

FEBRUARY.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·4	38·9	46·2	46·6	42·6	39·4	+1·0	+0·4	+0·1	−0·2	−0·2	+0·5
2	42·9	34·4	37·1	41·8	40·2	35·6	−1·0	0·0	+0·1	+0·1	+0·1	+0·1
3	43·4	34·9	38·6	41·8	43·1	37·1	−0·2	+0·1	−0·1	+0·1	+0·3	+0·3
4	44·6	30·3	32·3	43·6	41·3	44·6	+0·1	0·0	−0·2	+1·3	+0·1	+0·1
5	47·9	38·9	41·1	47·2	46·8	40·2	−0·8	+0·5	+0·5	+0·1	+0·3	+0·2
6	46·1	39·4	41·9	45·1	44·9	43·9	−0·9	+1·0	+0·1	−0·1	+0·1	+0·1
7	52·3	43·6	...	...	...	...	−0·3	+0·5	...	...	...	...
8	49·5	43·5	45·5	48·6	45·2	44·0	−0·6	+0·1	0·0	−0·6	0·0	−0·1
9	46·2	39·9	41·3	44·3	46·1	42·7	−0·9	+0·3	−0·2	0·0	+0·1	+0·2
10	47·6	42·3	47·2	47·6	47·6	45·7	−0·5	+0·2	−0·5	0·0	0·0	+0·3
11	48·9	40·2	44·0	47·8	48·7	40·2	−0·5	+1·1	−0·5	0·0	+0·1	+0·2
12	43·1	32·2	35·9	38·9	42·8	39·9	−0·1	+0·3	+0·1	−0·7	0·0	+0·1
13	42·1	35·8	38·6	41·9	40·6	36·2	−0·8	+0·4	+0·5	+0·1	−0·2	+0·1
14	39·9	31·0	...	...	...	...	−0·2	0·0	...	...	...	...
15	40·4	28·8	39·1	39·4	34·1	29·3	−0·2	−0·2	−0·3	−0·1	−0·3	−0·3
16	31·1	24·3	28·8	31·1	29·1	25·3	−1·1	−0·5	−0·4	+0·3	−0·1	−0·3
17	32·7	18·7	23·6	29·6	31·4	32·0	+0·1	−0·1	+0·6	+0·2	−0·2	+0·1
18	35·2	23·0	27·0	34·7	33·4	24·1	−0·9	−0·4	−0·3	+0·6	+0·4	−0·5
19	33·7	21·2	29·6	30·8	33·4	31·0	−0·4	+0·1	−0·2	−0·2	−0·2	0·0
20	37·3	28·9	31·3	33·8	35·9	36·2	−0·8	−0·4	−0·1	−0·3	+0·1	−0·2
21	46·6	34·4	...	...	...	...	−1·4	−0·3	...	...	...	...
22	51·3	37·6	40·5	49·7	50·9	40·9	−1·0	+0·1	−0·6	+0·4	+0·3	+0·1
23	48·7	33·8	39·1	44·8	48·7	41·4	−1·6	+0·3	+0·8	−0·1	+0·1	−0·3
24	48·1	39·0	40·5	44·6	47·5	39·9	−2·7	+0·7	−0·2	−0·5	−0·3	+0·1
25	53·7	36·2	39·3	41·1	53·7	43·7	+0·2	−0·2	−0·2	−0·7	+0·3	0·0
26	43·8	34·1	36·7	38·3	41·1	37·9	−0·3	+0·2	−0·1	−0·3	−0·2	0·0
27	38·9	33·1	35·1	34·4	38·9	38·4	−1·2	−0·2	−0·2	−0·1	−0·4	−0·1
28	41·4	33·5	...	...	...	...	−1·4	+0·4	...	...	...	...
29	41·9	35·0	38·5	41·6	39·5	35·5	−0·1	0·0	0·0	+0·4	+0·1	−0·1
Means	43·7	34·0	37·6	41·2	41·9	37·8	−0·6	+0·2	0·0	0·0	0·0	0·0

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	49·6	38·4	46·3	46·8	43·1	39·6	+2·2	−0·1	+0·2	0·0	+0·3	+0·7
2	42·7	34·0	37·6	41·5	39·8	36·0	−1·2	−0·4	+0·6	−0·2	−0·3	+0·5
3	43·5	34·7	39·3	41·7	43·4	36·8	−0·1	−0·1	+0·6	0·0	+0·6	0·0
4	45·0	30·2	32·7	42·9	42·1	45·0	+0·5	−0·1	+0·2	+0·6	+0·9	+0·5
5	47·6	38·5	41·6	46·7	47·1	40·7	−1·1	+0·1	+1·0	−0·4	+0·6	+0·7
6	46·1	38·4	42·1	45·5	45·1	44·3	−0·9	0·0	+0·3	+0·3	+0·3	+0·5
7	52·7	43·0	...	...	...	...	+0·1	−0·1	...	...	...	...
8	49·5	43·1	45·6	47·2	43·3	44·0	−0·6	−0·3	+0·1	−2·0	−1·9	−0·1
9	46·5	39·7	41·6	44·7	46·3	42·8	−0·6	+0·1	+0·1	+0·4	+0·3	+0·3
10	48·2	41·1	48·0	48·1	47·8	45·8	+0·1	−1·0	+0·3	+0·5	+0·2	+0·4
11	49·1	40·5	45·0	47·8	49·1	41·8	−0·3	+1·4	+0·5	0·0	+0·5	+1·8
12	43·5	32·6	36·5	39·8	43·1	40·2	+0·3	+0·7	+0·7	+0·2	+0·3	+0·4
13	41·9	35·3	38·3	40·9	40·7	36·2	−1·0	−0·1	+0·2	−0·9	−0·1	+0·1
14	40·1	31·2	...	...	...	...	0·0	+0·2	...	...	...	...
15	42·7	28·0	39·6	39·8	34·1	29·4	+2·1	−1·0	+0·2	+0·3	−0·3	−0·2
16	30·9	24·0	28·9	30·9	29·5	25·5	−1·3	−0·8	−0·3	+0·1	+0·3	−0·1
17	32·3	18·7	23·5	29·0	31·8	32·2	−0·3	−0·1	+0·5	−0·4	+0·2	+0·3
18	34·3	22·9	27·7	33·8	33·4	23·8	−1·8	−0·5	+0·4	−0·3	+0·4	−0·8
19	33·8	20·3	29·8	31·0	33·8	30·9	−0·3	−0·8	0·0	0·0	+0·2	−0·1
20	38·1	28·6	31·3	33·8	36·8	36·4	0·0	−0·7	−0·1	−0·3	+1·0	0·0
21	47·2	34·2	...	...	...	...	−0·8	−0·5	...	...	...	...
22	51·9	38·1	41·8	49·8	51·6	40·6	−0·4	+0·6	+0·7	+0·5	+1·0	−0·2
23	49·8	33·1	38·7	45·1	49·1	42·8	−0·5	−0·4	+0·4	+0·2	+0·5	+1·1
24	50·3	39·1	40·8	45·4	48·1	40·8	−0·5	+0·8	+0·1	+0·3	+0·3	+1·0
25	54·3	36·1	39·3	41·2	54·1	43·8	+0·8	−0·3	−0·2	−0·6	+0·7	+0·1
26	44·2	33·7	36·8	38·6	41·8	37·8	+0·1	−0·2	0·0	0·0	+0·5	−0·1
27	39·8	33·1	35·2	34·5	39·0	38·5	−0·3	−0·2	−0·1	0·0	−0·3	0·0
28	41·7	32·8	...	...	...	...	−1·1	−0·3	...	...	...	...
29	41·2	35·0	38·0	40·8	39·1	35·5	−0·8	0·0	−0·5	−0·4	−0·3	−0·1
Means	44·1	33·7	37·8	41·1	42·1	38·0	−0·3	−0·1	+0·2	−0·1	+0·2	+0·3

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

MARCH.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	40·0	32·8	36·3	37·7	37·6	33·0	−0·9	−0·1	−0·3	−0·1	0·0	0·0
2	33·0	28·0	29·9	29·6	29·9	29·0	−0·4	−0·3	−0·3	0·0	0·0	0·0
3	31·3	26·9	28·7	29·1	31·0	29·9	−0·8	−0·2	−0·1	−0·2	−0·2	−0·1
4	33·6	29·2	29·9	32·3	32·1	31·1	−1·7	+0·4	−0·4	−0·3	0·0	−0·2
5	39·6	27·0	32·2	38·8	37·9	34·1	−1·8	+0·7	−0·2	0·0	−0·1	+0·4
6	37·6	28·6	...	...	...	...	−1·0	−0·2	...	...	...	...
7	36·1	28·0	30·8	35·5	34·9	28·9	−1·0	−0·1	+0·3	−0·7	−0·3	−0·2
8	36·1	24·9	31·6	33·2	34·3	29·4	−1·3	+0·3	−0·2	−0·6	−0·2	−0·1
9	37·5	22·4	33·2	33·9	34·0	28·9	−1·6	+0·1	+0·1	−0·2	−0·8	+0·2
10	38·0	23·1	31·4	36·9	37·8	30·2	−2·1	0·0	−0·3	0·0	+0·4	−0·1
11	37·8	26·7	31·7	33·7	37·4	32·6	−1·1	−0·2	−0·1	−0·1	−0·2	+0·3
12	37·2	27·8	31·6	36·7	36·2	33·5	−1·3	0·0	+0·1	−0·1	−0·1	+0·4
13	41·1	24·0	...	...	...	...	−0·8	+0·1	...	...	...	...
14	39·9	24·6	29·4	34·5	38·3	32·5	−1·2	+0·3	−0·4	−0·1	0·0	0·0
15	43·1	29·9	41·2	40·6	37·9	40·1	−0·3	+0·2	−0·1	−0·2	−0·1	0·0
16	52·9	36·1	40·9	48·0	52·9	46·2	−1·1	−0·1	+0·1	+0·5	+0·1	0·0
17	57·9	45·9	49·7	57·9	57·1	47·6	−2·0	+0·4	−0·1	−0·9	+0·3	−0·4
18	59·2	41·5	51·2	58·5	56·3	41·9	−0·8	+1·0	+1·0	+0·3	+0·2	+0·1
19	52·0	36·2	46·9	51·1	49·4	40·1	−1·1	+0·7	+0·7	−0·6	+0·2	−0·3
20	48·3	33·2	...	...	...	...	−0·5	+0·4	...	...	...	...
21	53·5	27·5	34·0	49·9	53·2	43·1	−1·3	+0·1	−0·1	−0·8	+0·5	0·0
22	43·3	37·2	39·6	40·3	39·3	39·2	−0·4	−0·1	−0·2	−0·2	0·0	0·0
23	47·1	33·0	40·0	46·8	45·9	43·4	−1·9	−0·4	−0·1	−0·4	−0·2	0·0
24	44·7	36·2	39·9	42·9	44·1	36·8	−0·8	−0·5	−0·5	−0·1	−0·4	+0·1
25	51·2	34·9	37·9	41·5	51·2	38·3	−0·6	−0·2	−0·1	−0·6	+0·4	+0·1
26	59·7	36·2	43·8	55·7	59·7	49·4	−0·8	0·0	−0·3	−0·5	+0·6	+0·3
27	49·5	41·7	...	...	...	...	−0·5	+0·2	...	...	...	...
28	42·8	32·0	35·2	36·8	38·0	32·8	+0·4	−0·4	−0·4	−0·3	−0·2	+0·1
29	41·1	30·2	36·3	41·1	39·2	35·3	−1·5	−0·2	−0·1	−0·9	−0·4	0·0
30	50·0	30·7	41·7	48·0	49·9	38·1	−1·0	0·0	+0·5	−0·5	+0·2	0·0
31	56·2	29·0	45·9	54·4	56·2	40·9	−1·4	+0·7	+1·1	−0·1	+0·8	0·0
Means	44·2	31·1	37·1	41·7	42·7	36·5	−1·1	+0·1	0·0	−0·3	0·0	0·0

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	39·5	32·0	35·8	37·4	37·3	32·6	−1·4	−0·9	−0·8	−0·4	−0·3	−0·4
2	33·3	28·0	30·1	29·8	30·0	29·5	−0·1	−0·3	−0·1	+0·2	+0·1	+0·5
3	32·9	26·8	28·9	29·8	31·3	29·8	+0·8	−0·3	+0·1	+0·5	+0·1	−0·2
4	34·5	28·9	30·6	32·3	32·6	31·2	−0·8	+0·1	+0·3	−0·3	+0·5	−0·1
5	39·2	26·1	32·5	37·8	37·5	34·5	−2·2	−0·2	+0·1	−1·0	−0·5	+0·8
6	39·5	28·7	...	...	...	...	+0·9	−0·1	...	...	...	...
7	37·0	27·1	30·5	35·5	35·3	29·0	−0·1	−1·0	0·0	−0·7	+0·1	−0·1
8	36·3	24·3	31·8	33·8	34·2	29·6	−1·1	−0·3	0·0	0·0	−0·3	+0·1
9	38·1	22·0	34·4	34·1	33·8	29·0	−1·0	−0·3	+1·3	0·0	−1·0	+0·3
10	38·7	23·0	31·5	36·7	37·7	30·2	−1·4	−0·1	−0·2	−0·2	+0·3	−0·1
11	37·2	26·9	31·8	33·8	36·6	32·2	−1·7	0·0	0·0	0·0	−1·0	−0·1
12	37·5	27·2	31·3	36·1	36·4	33·8	−1·0	−0·6	−0·2	−0·7	+0·1	+0·7
13	41·4	23·2	...	...	...	...	−0·5	−0·7	...	...	...	...
14	40·1	24·9	30·2	35·4	38·4	33·1	−1·0	+0·6	+0·4	+0·8	+0·1	+0·6
15	44·4	29·8	42·1	41·5	38·4	40·8	+1·0	+0·1	+0·8	+0·7	+0·4	+0·7
16	53·3	35·9	40·8	48·2	53·2	46·9	−0·7	−0·3	0·0	+0·7	+0·4	+0·7
17	57·9	46·2	50·8	56·6	57·1	48·6	−2·0	+0·7	+1·0	−2·2	+0·3	+0·6
18	58·8	41·2	50·5	57·4	56·8	41·8	−1·2	+0·7	+0·3	−0·8	+0·7	0·0
19	52·4	35·1	45·5	51·2	49·5	39·8	−0·7	−0·4	−0·7	−0·5	+0·3	−0·6
20	49·5	32·2	...	...	...	...	+0·7	−0·6	...	...	...	...
21	54·7	27·0	35·0	50·8	52·9	43·2	−0·1	−0·4	+0·9	+0·1	+0·2	+0·1
22	43·8	36·4	39·7	40·2	37·8	39·2	+0·1	−0·9	−0·1	−0·3	−1·5	0·0
23	47·5	33·0	40·2	47·2	45·9	43·0	−1·5	−0·4	+0·1	0·0	−0·2	−0·4
24	45·7	35·1	40·2	43·3	44·7	36·3	+0·2	−1·6	−0·2	+0·3	+0·2	−0·4
25	51·3	35·0	38·0	41·9	50·6	38·6	−0·5	−0·1	0·0	−0·2	−0·2	+0·4
26	60·4	36·0	43·6	55·6	59·8	50·1	−0·1	−0·2	−0·5	−0·6	+0·7	+1·0
27	50·1	41·3	...	...	...	...	+0·1	−0·2	...	...	...	...
28	41·9	31·1	32·2	36·2	37·7	33·2	−0·5	−1·3	−3·4	−0·9	−0·5	+0·5
29	40·4	30·0	35·2	39·4	38·9	35·6	−2·2	−0·4	−1·2	−2·6	−0·7	+0·3
30	50·5	30·2	41·2	46·6	50·0	38·2	−0·5	−0·5	0·0	−1·9	+0·3	+0·1
31	57·3	29·0	43·8	53·5	56·2	40·3	−0·3	+0·7	−1·0	−1·0	+0·8	−0·6
Means	44·7	30·8	37·0	41·6	42·6	36·7	−0·6	−0·3	−0·1	−0·4	0·0	+0·2

READINGS OF DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

APRIL.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°	°	°	°	°
1	69·5	29·9	47·1	63·8	69·5	45·5	+0·8	+0·8	+1·0	+0·4	+1·5	−0·3
2	63·7	38·2	51·8	63·7	63·7	45·9	−1·7	+1·4	0·0	−0·6	+0·4	0·0
3	63·9	35·5	...	...	...	...	−0·2	+0·6	...	...	...	...
4	73·9	37·2	55·9	69·9	71·2	55·9	−1·4	+1·1	+0·2	−1·1	+0·3	+0·6
5	72·5	42·9	64·8	70·7	72·5	54·7	−0·8	+1·4	+2·2	+0·9	+0·9	+0·6
6	66·3	43·3	57·7	66·3	65·3	49·6	−1·2	+0·9	+0·9	−0·2	+0·2	−0·3
7	65·7	39·8	56·3	64·7	65·5	50·4	−0·6	+0·3	+0·6	−0·6	0·0	+0·2
8	65·0	39·3	44·9	63·5	59·9	49·2	−0·8	+0·5	−0·3	−0·3	−0·2	+0·1
9	59·3	39·8	51·2	57·6	59·3	47·8	−0·8	+0·6	+0·4	−0·2	+0·4	0·0
10	63·8	38·3	...	...	...	...	−1·4	+0·9	...	...	...	...
11	66·1	33·7	47·6	59·6	65·3	46·1	−0·7	+0·7	+0·9	−0·2	+0·2	−0·3
12	50·0	33·8	44·5	46·6	42·9	37·1	−2·1	+0·5	+0·1	−0·5	−0·1	+0·2
13	40·0	35·0	36·2	39·1	37·2	35·7	−1·2	−0·3	−0·4	−0·7	−0·2	−0·2
14	47·2	29·1	39·6	43·9	46·8	32·0	−2·5	+0·1	+0·5	−1·4	+0·8	+0·1
15	47·8	28·0	...	...	...	...	−2·4	+0·2	...	...	...	...
16	41·1	32·0	34·5	38·9	40·4	35·9	−1·0	−0·1	−0·4	+0·1	−0·4	−0·4
17	46·1	27·2	...	...	...	...	−2·2	+0·5	...	...	...	...
18	49·5	31·9	...	...	...	...	−1·8	−0·1	...	...	...	...
19	49·3	30·7	46·1	45·5	49·3	38·7	−1·7	+0·6	−0·6	−0·3	+0·6	+0·4
20	49·1	36·1	45·9	46·4	47·9	46·4	−2·6	+1·1	−0·1	0·0	−0·3	−0·1
21	61·4	46·3	52·2	59·3	60·9	53·9	−1·7	+0·2	+0·1	+0·1	+0·1	+0·4
22	67·1	49·2	57·6	62·5	66·7	56·9	−2·9	+1·0	−0·2	+0·4	−0·1	+0·4
23	65·1	43·0	54·9	62·8	65·1	55·0	−2·5	+0·8	+0·9	0·0	0·0	+0·1
24	64·0	47·8	...	...	...	...	+0·5	+0·6	...	...	...	...
25	56·1	42·1	43·3	45·7	54·9	43·9	−1·0	+0·1	+0·1	−0·3	−0·2	+0·7
26	54·1	36·2	47·9	51·9	52·9	40·0	−1·8	+0·3	−0·8	−0·7	+0·1	0·0
27	57·5	30·1	47·3	54·5	54·6	40·6	−1·6	−0·3	+0·2	−0·5	+0·1	0·0
28	44·5	37·2	40·3	41·5	43·2	38·0	−1·6	+0·1	+0·1	0·0	−0·3	0·0
29	48·7	34·1	45·1	46·2	45·5	40·9	−3·0	+0·1	−0·1	+0·2	−0·2	+0·3
30	57·9	30·2	47·5	55·2	57·6	46·9	−2·0	+0·6	−0·3	−0·5	0·0	−0·1
Means	57·5	36·6	48·3	55·0	56·6	45·3	−1·5	+0·5	+0·2	−0·3	+0·1	+0·1

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°	°	°	°	°
1	69·5	30·1	47·6	63·3	69·3	45·8	+0·8	+1·0	+1·5	−0·1	+1·3	0·0
2	64·7	37·5	50·8	63·6	64·0	45·8	−0·7	+0·7	−1·0	−0·7	+0·7	−0·1
3	64·8	34·7	...	...	...	...	+0·7	−0·2	...	...	...	...
4	73·8	36·7	56·8	69·2	71·3	57·3	−1·5	+0·6	+1·1	−1·8	+0·4	+2·0
5	72·5	43·2	64·8	69·5	71·5	55·1	−0·8	+1·7	+2·2	−0·3	−0·1	+1·0
6	66·9	42·8	57·2	66·1	66·2	49·5	−0·6	+0·4	+0·4	−0·4	+1·1	−0·4
7	66·9	40·3	55·3	64·4	65·5	50·6	+0·6	+0·8	−0·4	−0·9	0·0	+0·4
8	65·4	39·0	45·5	62·4	60·4	49·0	−0·4	+0·2	+0·3	−1·4	+0·3	−0·1
9	60·9	39·0	50·4	57·2	60·4	47·8	+0·8	−0·2	−0·4	−0·6	+1·5	0·0
10	65·5	36·4	...	...	...	...	+0·3	−1·0	...	...	...	...
11	66·4	34·3	45·6	57·8	65·7	45·6	−0·4	+1·3	−1·1	−2·0	+0·6	−0·8
12	50·0	33·7	43·8	46·4	43·5	36·8	−2·1	+0·4	−0·6	−0·7	+0·5	−0·1
13	41·2	34·3	36·7	40·1	37·5	35·9	0·0	−1·0	+0·1	+0·3	+0·1	0·0
14	46·4	29·0	38·5	43·8	45·6	32·0	−3·3	0·0	−0·6	−1·5	−0·4	+0·1
15	48·7	28·0	...	...	...	...	−1·5	+0·2	...	...	...	...
16	41·6	31·6	33·9	37·7	41·0	36·8	−0·5	−0·5	−1·0	−1·1	+0·2	+0·5
17	46·1	26·4	...	...	...	...	−2·2	−0·3	...	...	...	...
18	49·3	31·6	...	...	...	...	−2·0	−0·4	...	...	...	...
19	49·6	30·0	46·3	44·8	48·7	39·2	−1·4	−0·1	−0·4	−1·0	0·0	+0·9
20	49·9	37·1	46·0	46·4	48·2	46·7	−1·8	+2·1	0·0	0·0	0·0	+0·2
21	62·0	46·4	52·4	57·8	61·5	54·5	−1·1	+0·3	+0·3	−1·4	+0·7	+1·0
22	67·7	48·9	57·5	62·8	66·8	57·1	−2·3	+0·7	−0·3	+0·7	0·0	+0·6
23	65·0	42·9	54·1	61·6	64·3	55·6	−2·6	+0·7	+0·1	−1·2	−0·8	+0·7
24	61·5	47·4	...	...	...	...	−2·0	+0·2	...	...	...	...
25	55·3	41·5	43·2	45·8	53·6	43·8	−1·8	−0·5	0·0	−0·2	−1·5	+0·6
26	53·5	35·5	46·8	50·9	52·9	39·8	−2·4	−0·4	−1·9	−1·7	+0·1	−0·2
27	56·8	30·0	48·2	54·2	54·3	40·3	−2·3	−0·4	+1·1	−0·8	−0·2	−0·3
28	44·7	36·1	40·0	40·6	42·9	37·0	−1·4	−1·0	−0·2	−0·9	−0·6	−1·0
29	48·3	33·6	43·9	45·9	45·6	40·9	−3·4	−0·4	−1·3	−0·1	−0·1	+0·3
30	57·5	29·9	46·7	52·7	56·2	49·0	−2·4	+0·3	−1·1	−3·0	−1·4	+2·0
Means	57·7	36·3	48·0	54·4	56·5	45·5	−1·3	+0·2	−0·1	−0·9	+0·1	+0·3

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

MAY.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°	°	°	°	°
1	57.1	34.0	...	...	...	...	−0.7	+0.9	...	...	...	...
2	47.2	37.9	47.2	44.4	44.9	42.9	−1.3	+0.5	−0.3	−0.1	−0.4	+0.1
3	46.1	41.7	43.8	44.1	44.7	44.4	−1.8	+0.2	−0.1	−0.8	+0.2	+0.1
4	48.9	42.8	44.9	46.1	48.9	44.7	−0.6	+0.4	−0.6	−0.4	−0.1	0.0
5	47.1	36.8	44.6	45.1	46.9	42.9	−1.1	+0.5	+0.1	−0.4	−0.7	+0.1
6	52.6	34.3	44.9	48.0	52.6	40.4	−1.7	+0.3	−0.1	−0.6	−0.3	+0.2
7	62.1	28.9	50.2	58.6	61.5	49.8	−2.3	+0.2	−1.9	+0.6	0.0	+0.2
8	62.7	40.4	...	...	...	...	−1.7	+0.5	...	...	...	...
9	68.3	39.5	62.3	68.1	65.2	49.7	−1.5	+1.0	+0.8	−0.3	0.0	+0.2
10	63.9	39.3	58.5	63.5	62.2	50.9	−0.6	+1.0	−0.2	−0.8	−0.3	+0.2
11	69.3	41.5	58.8	68.2	68.4	53.3	−1.6	+0.4	−0.2	−0.3	+0.2	0.0
12	70.4	42.2	59.8	67.4	70.4	52.9	−0.4	+0.6	−0.5	−1.1	−0.4	+0.3
13	68.9	42.5	61.2	68.9	67.1	57.2	−2.2	+1.1	+1.1	+0.5	+0.3	+0.1
14	66.9	52.3	58.7	61.2	65.2	53.0	−1.6	+0.5	+0.2	−0.2	0.0	+0.3
15	59.0	42.4	...	...	...	...	−2.6	+0.7	...	...	...	...
16	59.8	44.0	55.7	56.8	57.0	50.9	−1.4	+0.7	+0.1	−0.5	−0.2	+0.5
17	64.0	48.1	56.3	58.6	62.2	48.4	−2.3	+0.7	−0.7	+1.7	−1.5	+0.3
18	64.7	45.1	59.7	62.0	62.1	53.7	−3.3	+0.7	−0.1	0.0	−0.6	+0.1
19	61.3	46.5	55.6	60.1	57.3	55.1	−1.4	+0.5	+0.1	−0.2	−0.4	+0.2
20	63.5	51.4	56.9	61.8	61.6	55.6	−1.8	+0.4	−0.2	0.0	0.0	+1.0
21	66.2	43.7	54.1	61.5	64.9	51.3	−2.2	+0.9	+0.7	−0.3	+0.1	+0.5
22	66.8	43.8	...	...	...	...	−1.3	+0.7	...	...	...	...
23	72.8	44.8	64.0	70.8	72.8	57.4	−2.7	+1.0	+1.0	−0.3	+0.3	+0.3
24	73.1	50.5	64.9	71.2	72.2	58.7	−3.1	+1.0	−0.4	−0.5	−0.9	−0.1
25	81.9	53.8	...	...	...	...	−2.1	+1.0	...	...	...	...
26	75.7	55.6	60.1	73.5	70.3	59.7	−1.5	+0.8	−0.9	−0.3	−0.5	+0.3
27	73.3	58.0	68.9	71.6	71.3	62.2	−3.0	+0.6	+0.4	−0.3	−0.5	−0.4
28	80.0	55.3	76.2	78.4	79.4	55.5	−1.8	+0.5	−0.5	−0.5	−0.5	0.0
29	68.7	50.0	...	...	...	...	−3.1	+0.8	...	...	...	...
30	74.6	53.3	64.5	72.1	73.8	60.0	−2.3	+0.8	−1.2	+0.3	−0.3	+0.1
31	82.3	54.3	74.1	82.2	80.4	58.1	−2.8	+0.6	−0.7	−0.5	−0.1	−0.4
Means	65.1	45.0	57.8	62.6	63.3	52.3	−1.9	+0.7	−0.2	−0.2	−0.3	+0.2

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°	°	°	°	°
1	57.5	34.0	...	...	...	...	−0.3	+0.9	...	...	...	...
2	47.7	37.1	47.5	43.9	45.5	42.8	−0.8	−0.3	0.0	−0.6	+0.2	0.0
3	46.5	40.4	44.0	43.9	43.7	44.5	−1.4	−1.1	+0.1	−1.0	−0.8	+0.2
4	48.8	42.5	44.6	46.2	48.8	44.6	−0.7	+0.1	−0.9	−0.3	−0.2	−0.1
5	47.1	36.1	44.3	44.9	46.9	42.9	−1.1	−0.2	−0.2	−0.6	−0.7	+0.1
6	51.2	34.0	44.6	47.5	50.1	40.9	−3.1	0.0	−0.4	−1.1	−2.8	+0.7
7	62.1	28.7	49.0	56.8	61.6	49.8	−2.3	0.0	−3.1	−1.2	+0.1	+0.2
8	64.4	40.2	...	...	...	...	0.0	+0.3	...	...	...	...
9	68.4	40.0	61.1	67.1	65.9	49.4	−1.4	+1.5	−0.4	−1.3	+0.7	−0.1
10	64.8	38.9	58.5	64.8	62.8	50.8	+0.3	+0.6	−0.2	+0.5	+0.3	+0.1
11	70.3	40.9	57.8	68.7	68.8	53.5	−0.6	−0.2	−1.2	+0.2	+0.6	+0.2
12	70.5	42.0	57.8	67.2	70.5	52.5	−0.3	+0.4	−2.5	−1.3	−0.3	−0.1
13	70.5	42.1	60.8	69.0	68.4	58.8	−0.6	+0.7	+0.7	+0.6	+1.6	+1.7
14	67.7	52.2	59.1	61.9	64.4	54.7	−0.8	+0.4	+0.6	+0.5	−0.8	+2.0
15	59.3	42.3	...	...	...	...	−2.3	+0.6	...	...	...	...
16	59.5	43.1	55.1	57.0	57.3	50.8	−1.7	−0.2	−0.5	−0.3	+0.1	+0.4
17	63.4	47.2	54.8	57.1	61.7	48.5	−2.9	−0.2	−2.2	+0.2	−2.0	+0.4
18	64.9	44.7	59.9	61.8	61.8	53.3	−3.1	+0.3	+0.1	−0.2	−0.9	−0.3
19	61.4	46.2	56.0	60.5	57.8	55.9	−1.3	+0.2	+0.5	+0.2	+0.1	+1.0
20	63.5	51.2	57.9	62.9	61.8	56.0	−1.8	+0.2	+0.8	+1.1	+0.2	+1.4
21	66.9	42.7	52.5	60.6	64.5	51.8	−1.5	−0.1	−0.9	−1.2	−0.3	+1.0
22	67.4	43.1	...	...	...	...	−0.7	0.0	...	...	...	...
23	73.0	44.6	63.0	69.4	73.0	57.8	−2.5	+0.8	0.0	−1.7	+0.5	+0.7
24	73.0	50.4	65.5	70.3	71.8	59.8	−3.2	+0.9	+0.2	−1.4	−1.3	+1.0
25	81.6	53.3	...	...	...	...	−2.4	+0.5	...	...	...	...
26	76.1	55.2	61.3	72.7	70.8	60.1	−1.1	+0.4	+0.3	−1.1	0.0	+0.7
27	74.7	57.4	69.3	72.5	71.7	63.3	−1.6	0.0	+0.8	+0.6	−0.1	+0.7
28	79.5	54.4	75.8	77.3	78.9	55.2	−2.3	−0.4	−0.9	−1.6	−1.0	−0.3
29	68.0	49.1	...	...	...	...	−3.8	−0.1	...	...	...	...
30	74.6	52.6	64.3	70.8	72.8	60.7	−2.3	+0.1	−1.4	−1.0	−1.3	+0.8
31	82.3	53.8	74.3	79.9	80.9	57.9	−2.8	+0.1	−0.5	−2.8	+0.4	−0.6
Means	65.4	44.5	57.6	62.2	63.3	52.7	−1.6	+0.2	−0.4	−0.6	−0.3	+0.5

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

JUNE.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h		Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	°	°
1	69·1	51·2	61·7	66·5	69·1	55·3	−2·6	+0·6	+0·7	0·0	−0·4	+0·2	1	69·0	50·2	62·1	64·5	67·1	55·3	−2·7	−0·4	+1·1	−2·0	−2·4	+0·2
2	66·8	53·7	55·8	58·2	64·5	55·4	−1·5	+0·5	−0·1	−0·3	−0·3	+0·3	2	66·8	53·2	56·1	58·8	64·1	55·5	−1·5	0·0	+0·2	+0·3	−0·7	+0·4
3	68·1	50·1	60·8	63·9	66·8	53·7	−3·0	+0·7	−0·2	−0·5	+1·1	+0·2	3	67·7	49·2	59·6	62·3	66·3	54·0	−3·4	−0·2	−1·4	−2·1	+0·6	+0·5
4	67·2	43·6	60·6	63·7	65·0	52·1	−3·4	+0·9	−0·9	−0·9	−1·3	0·0	4	66·6	41·9	60·8	62·7	65·5	52·2	−4·0	−0·8	−0·7	−1·9	−0·8	+0·1
5	66·2	50·4	...	...	...	...	−2·4	+0·4	...	...	...	...	5	66·5	50·0	...	...	...	...	−2·1	0·0	...	...	...	...
6	74·7	48·9	...	...	...	...	−1·5	+0·8	...	...	...	...	6	74·2	48·3	...	...	...	...	−2·0	+0·2	...	...	...	...
7	69·0	50·5	56·6	67·1	68·2	52·8	−1·9	+1·1	0·0	−0·1	+0·4	+0·1	7	68·5	49·5	57·2	66·5	67·4	52·3	−2·4	+0·1	+0·6	−0·7	−0·4	−0·4
8	71·2	48·3	59·8	67·6	70·5	56·2	−0·9	+0·4	+1·0	+0·2	−0·2	+0·1	8	70·2	47·6	59·1	65·9	69·1	56·2	−1·9	−0·3	+0·3	−1·5	−1·6	+0·1
9	76·0	53·9	71·0	74·2	75·0	61·2	−1·1	+0·6	+0·1	−0·1	+0·2	+0·1	9	74·5	53·2	67·7	72·6	73·6	61·3	−2·6	−0·1	−3·2	−1·7	−1·2	+0·2
10	83·3	52·9	72·8	77·6	81·7	63·3	−2·6	+1·0	−0·9	0·0	−1·0	−0·1	10	83·7	52·2	74·4	77·4	80·5	63·8	−2·2	+0·3	+0·7	−0·2	−2·2	+0·4
11	70·0	55·0	64·6	68·1	69·3	62·3	−2·5	+0·6	−1·4	−1·2	+0·5	+0·1	11	69·8	54·1	63·7	67·7	69·0	62·6	−2·7	−0·3	−2·3	−1·6	+0·2	+0·4
12	63·7	49·5	...	...	...	...	+0·9	+0·4	...	...	...	...	12	62·9	48·2	...	...	...	...	+0·1	−0·9	...	...	...	...
13	59·9	39·0	53·9	56·4	56·3	47·8	−1·8	−2·0	+0·4	+0·1	−0·5	0·0	13	58·5	40·1	51·8	55·1	56·7	47·5	−3·2	−0·9	−1·7	−1·2	−0·1	−0·3
14	55·3	41·5	51·2	52·0	54·5	48·9	−1·5	+0·7	+0·3	−0·2	+0·5	0·0	14	54·6	40·1	49·6	51·6	54·6	48·8	−2·2	−0·7	−1·3	−0·6	+0·6	−0·1
15	62·7	37·7	56·9	60·7	61·5	53·4	−2·7	+0·5	+0·6	−1·5	−0·3	+0·3	15	62·5	36·9	55·9	59·6	61·1	53·5	−2·9	−0·3	−0·4	−2·6	−0·7	+0·4
16	61·4	46·0	56·8	58·0	59·3	53·9	−1·4	+0·8	0·0	−0·7	+0·4	+0·2	16	61·3	45·6	57·5	58·7	59·2	53·5	−1·5	+0·4	+0·7	0·0	+0·3	−0·2
17	62·2	45·9	52·3	54·5	62·2	52·7	−1·9	0·0	−0·1	0·0	+0·4	+0·4	17	62·5	45·7	53·7	54·3	61·6	52·5	−1·6	−0·2	+1·3	−0·2	−0·2	+0·2
18	62·9	42·4	54·9	59·9	56·7	50·9	−2·6	+0·4	−0·6	−0·8	+0·2	0·0	18	62·4	41·3	53·6	59·6	55·8	51·5	−3·1	−0·7	−1·9	−1·1	−0·7	+0·6
19	66·1	46·1	...	...	...	...	−3·9	+0·4	...	...	...	...	19	66·4	45·1	...	...	...	...	−3·6	−0·6	...	...	...	...
20	65·2	44·5	60·4	61·2	63·7	53·6	−1·9	+0·6	+0·6	+0·6	+0·1	+0·2	20	64·7	43·2	60·5	60·3	63·2	53·5	−2·4	−0·7	+0·7	−0·3	−0·4	+0·1
21	69·0	45·5	62·6	68·1	64·8	57·9	−3·4	+0·8	+0·6	+0·5	−0·8	+0·1	21	68·7	44·7	60·8	67·8	65·1	57·8	−3·7	0·0	−1·2	+0·2	−0·5	0·0
22	73·9	55·5	64·4	67·5	73·9	57·8	−2·2	+0·6	+0·6	+0·8	0·0	0·0	22	73·5	55·1	64·5	67·1	72·6	57·8	−2·6	+0·2	+0·7	+0·4	−1·3	0·0
23	60·2	50·6	52·8	51·1	52·4	56·0	−0·2	−0·1	0·0	−0·2	−0·5	+0·3	23	61·3	49·4	52·5	50·9	52·4	56·4	+0·9	−1·3	−0·3	−0·4	−0·5	+0·7
24	73·0	46·7	66·8	69·9	69·8	57·2	−2·8	+0·6	+1·1	+0·2	0·0	+0·1	24	72·7	45·7	66·7	69·9	70·0	57·6	−3·1	−0·4	+1·0	+0·2	+0·2	+0·5
25	69·4	50·9	64·7	68·7	65·1	58·7	−2·6	+0·6	+0·3	+0·1	−0·5	−0·1	25	69·7	50·3	63·7	68·8	65·9	58·7	−2·3	0·0	−0·7	+0·2	+0·3	−0·1
26	78·5	54·4	...	...	...	...	−2·9	+0·5	...	...	...	...	26	77·8	53·9	...	...	...	...	−3·6	0·0	...	...	...	...
27	80·0	59·4	69·0	77·7	77·4	65·1	−2·3	+1·2	−0·8	+0·2	0·0	+0·1	27	79·7	58·4	68·4	76·2	77·2	65·8	−2·6	+0·2	−1·4	−1·3	−0·2	+0·8
28	80·9	55·1	69·6	75·2	77·7	63·6	−1·2	+0·5	+0·8	+0·3	+0·4	+0·3	28	80·4	54·2	69·7	75·8	77·5	63·2	−1·7	−0·4	+0·9	+0·9	+0·2	−0·1
29	64·7	53·1	59·2	57·8	58·2	53·5	+0·6	+0·2	0·0	−0·1	−0·1	+0·3	29	63·5	53·1	59·2	57·9	58·3	53·2	−0·6	+0·2	0·0	0·0	0·0	0·0
30	72·3	42·7	64·9	70·7	65·1	57·9	−3·1	+0·4	−0·3	+0·5	−0·5	+0·4	30	73·4	41·4	64·4	68·7	65·0	57·7	−2·0	−0·9	−0·8	−1·5	−0·6	+0·2
Means	68·8	48·8	61·0	64·7	65·9	56·0	−2·0	+0·5	+0·1	−0·1	−0·1	+0·1	Means	68·5	48·1	60·5	64·0	65·6	56·1	−2·3	−0·3	−0·4	−0·7	−0·5	+0·2

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

JULY.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	73·0	48·3	66·8	68·5	68·9	60·9	−2·5	+0·7	+0·2	−0·7	−0·1	+0·4
2	76·7	51·6	71·0	74·0	75·4	62·0	−4·1	+0·7	−1·1	−0·2	−0·4	−0·2
3	80·4	56·0	...	...	...	...	−2·0	+0·8	...	...	...	...
4	77·9	58·3	68·0	72·6	77·2	62·8	−2·6	+0·5	+0·2	+0·9	−0·7	+0·6
5	69·0	52·3	62·7	67·2	61·9	56·3	−1·7	+0·4	+0·1	+0·4	−0·4	0·0
6	67·8	52·7	62·2	67·3	64·8	60·3	−3·9	+0·4	+0·4	+0·1	−0·2	0·0
7	71·8	58·7	65·5	64·6	71·1	61·1	−0·5	+0·4	−0·6	+0·3	+0·6	+0·4
8	70·9	50·7	62·8	68·7	68·6	58·9	−2·6	+0·3	−0·4	−1·1	−0·2	+0·4
9	72·7	51·1	65·8	72·7	66·4	59·4	−2·8	+0·7	+2·0	0·0	−0·4	+0·3
10	68·0	51·3	...	...	...	...	−2·0	+0·6	...	...	...	...
11	68·7	52·8	61·9	67·7	66·6	54·9	−2·7	+0·8	+0·5	0·0	+0·5	+0·3
12	66·5	51·5	63·9	64·7	59·8	57·0	−1·6	−0·4	−0·3	−0·1	−0·1	+0·2
13	63·0	53·7	58·9	57·7	60·4	53·9	−1·1	+0·4	+0·1	+0·2	+0·1	+0·1
14	57·7	52·4	54·6	55·6	57·4	54·7	−0·4	+0·3	−0·1	−0·2	0·0	+0·2
15	65·0	50·8	58·1	62·0	61·5	56·2	−1·1	+0·6	+0·3	−0·2	0·0	0·0
16	71·0	49·5	62·8	68·3	70·2	59·9	−2·1	+0·9	+0·2	−0·5	−0·4	+0·2
17	62·3	52·6	...	...	...	...	+2·2	−0·2	...	...	...	...
18	62·9	49·6	57·0	62·2	57·7	50·7	−2·9	+0·4	+0·5	−0·3	+0·3	−0·2
19	61·1	47·5	57·9	58·5	53·6	53·7	−1·4	+0·5	+0·1	−0·2	−0·3	−0·1
20	63·2	51·5	56·2	59·9	62·3	52·1	−1·2	+0·5	+0·1	−0·3	+1·0	+0·2
21	67·4	48·5	56·1	63·1	65·8	57·5	−1·6	+0·2	−0·6	−0·3	+0·5	0·0
22	70·7	47·8	61·9	66·6	69·9	57·8	−0·4	+0·6	+0·7	+1·3	+0·1	+0·2
23	72·0	49·7	63·2	70·0	70·0	63·4	−2·3	+0·5	+0·2	−0·3	−0·4	−0·1
24	65·0	53·6	...	...	...	...	−1·9	+0·2	...	...	...	...
25	63·2	52·2	55·1	58·6	61·9	55·3	−1·8	+0·5	0·0	+0·1	−0·2	0·0
26	71·9	53·6	60·4	65·9	71·9	59·8	−0·6	+0·5	−0·3	+0·1	+0·1	+0·2
27	68·7	54·7	62·5	66·2	68·7	55·0	−2·3	+0·6	0·0	+0·5	−0·3	+0·2
28	72·7	53·5	56·7	67·7	72·7	55·1	−1·5	+0·3	−0·2	+0·5	+0·2	+0·3
29	75·7	48·4	62·3	70·6	75·6	59·9	−1·4	+0·4	+0·1	−0·9	−0·3	+0·3
30	72·7	52·3	56·2	63·6	70·2	59·9	−1·4	+0·2	+0·3	+0·1	−0·4	+0·6
31	74·5	54·4	...	...	...	...	−1·8	+0·4	...	...	...	...
Means	69·2	52·0	61·2	65·6	66·6	57·6	−1·7	+0·4	+0·1	0·0	−0·1	+0·2

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	74·5	47·2	66·2	68·8	69·2	61·0	−1·0	−0·4	−0·4	−0·4	+0·2	+0·5
2	77·5	51·2	71·6	74·9	74·7	62·8	−3·3	+0·3	−0·5	+0·7	−1·1	+0·6
3	80·3	55·5	...	...	...	...	−2·1	+0·3	...	...	...	...
4	78·2	57·5	68·3	72·1	77·7	62·5	−2·3	−0·3	+0·5	+0·4	−0·2	+0·3
5	68·7	50·4	62·7	67·0	61·8	56·1	−2·0	−1·5	+0·1	+0·2	−0·5	−0·2
6	67·6	52·2	62·1	67·5	65·1	60·4	−4·1	−0·1	+0·3	+0·3	+0·1	+0·1
7	71·1	58·3	66·0	64·2	70·2	61·0	−1·2	0·0	−0·1	−0·1	−0·3	+0·3
8	70·8	50·2	62·2	67·2	69·1	58·7	−2·7	−0·2	−1·0	−2·6	+0·3	+0·2
9	71·7	50·2	64·8	71·5	67·1	59·5	−3·8	−0·2	+1·0	−1·2	+0·3	+0·4
10	68·6	49·8	...	...	...	...	−1·4	−0·9	...	...	...	...
11	68·0	52·2	61·2	67·6	65·9	54·6	−3·4	+0·2	−0·2	−0·1	−0·2	0·0
12	66·2	50·3	62·8	65·7	59·7	56·8	−1·9	−1·6	−1·4	+0·9	−0·2	0·0
13	61·8	53·2	58·6	57·8	60·6	53·8	−2·3	−0·1	−0·2	+0·3	+0·3	0·0
14	57·2	51·3	54·2	55·8	57·2	54·3	−0·9	−0·8	−0·5	0·0	−0·2	−0·2
15	65·5	49·8	58·3	62·7	61·3	56·6	−0·6	−0·4	+0·5	+0·5	−0·2	+0·4
16	71·5	48·4	63·6	68·7	70·8	59·6	−1·6	−0·2	+1·0	−0·1	+0·2	−0·1
17	59·9	51·9	...	...	...	...	−0·2	−0·9	...	...	...	...
18	63·0	49·2	55·4	61·1	57·7	50·7	−2·8	0·0	−1·1	−1·4	+0·3	−0·2
19	60·7	46·4	57·8	58·8	53·3	52·8	−1·8	−0·6	0·0	+0·1	−0·6	−1·0
20	62·7	50·4	56·4	60·5	61·8	52·3	−1·7	−0·6	+0·3	+0·3	+0·5	+0·4
21	66·5	48·2	55·0	61·6	64·8	57·7	−2·5	−0·1	−1·7	−1·8	−0·5	+0·2
22	70·8	47·2	61·6	66·6	69·8	58·5	−0·3	0·0	+0·4	+1·3	0·0	+0·9
23	73·5	49·8	63·5	69·8	71·0	63·9	−0·8	+0·6	+0·5	−0·5	+0·6	+0·4
24	65·0	53·0	...	...	...	...	−1·9	−0·4	...	...	...	...
25	63·0	52·0	54·8	58·4	62·4	55·3	−2·0	+0·3	−0·3	−0·1	+0·3	0·0
26	70·4	52·9	60·3	66·1	70·4	59·3	−2·1	−0·2	−0·4	+0·3	−1·4	−0·3
27	68·8	54·2	62·0	64·8	68·8	55·0	−2·2	+0·1	−0·5	−0·9	−0·2	+0·2
28	71·2	53·2	56·6	65·2	70·8	54·9	−3·0	0·0	−0·3	−2·0	−1·7	+0·1
29	74·5	47·9	60·5	68·2	73·8	59·8	−2·6	−0·1	−1·7	−3·3	−2·1	+0·2
30	73·0	52·0	55·7	62·9	69·9	59·6	−1·1	−0·1	−0·2	−0·6	−0·7	+0·3
31	75·5	53·8	...	...	...	...	−0·8	−0·2	...	...	...	...
Means	68·9	51·3	60·9	65·2	66·3	57·6	−1·9	−0·3	−0·2	−0·4	−0·3	+0·1

READINGS OF DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

AUGUST.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	68·2	58·7	...	...	...	...	−1·9	+0·6	...	...	...	...
2	63·1	51·6	60·7	62·8	61·7	57·7	−2·1	+0·5	+0·5	0·0	−0·1	+0·1
3	71·5	53·2	60·6	63·9	71·3	60·9	−2·4	+0·9	−0·1	+0·7	0·0	+0·4
4	68·6	56·2	59·7	61·8	68·6	56·3	−0·7	+0·9	0·0	0·0	+0·4	+0·3
5	74·7	46·2	64·6	71·1	74·7	59·3	−2·4	+0·8	+0·8	−2·1	−0·3	−0·1
6	73·9	51·6	69·1	70·3	71·9	59·3	−3·2	+0·6	−1·0	0·0	−0·4	+0·5
7	70·8	57·2	...	...	...	...	−2·5	+1·0	...	...	...	...
8	79·0	56·5	64·2	74·6	77·8	63·7	−2·2	+0·7	+0·5	+0·1	−0·1	+0·6
9	64·6	53·9	55·0	60·7	58·6	53·9	+0·5	+0·6	−0·6	−0·2	−0·4	+0·1
10	63·7	50·9	56·6	58·5	61·8	53·7	−1·5	+0·3	0·0	+0·2	−0·2	−0·1
11	72·0	44·4	62·9	68·9	71·8	57·3	−2·6	+0·6	+0·5	+0·5	+0·2	+0·3
12	75·6	49·5	68·2	74·1	74·5	57·4	−2·2	+1·2	+1·2	−0·3	−0·3	+0·5
13	75·8	52·6	70·9	74·9	66·3	60·3	−2·6	+1·3	−0·5	−0·3	−0·2	+0·1
14	74·4	56·9	...	...	...	...	−3·5	+0·7	...	...	...	...
15	76·1	56·7	66·8	75·3	75·5	60·9	−2·3	+0·6	+0·5	+0·1	+0·4	+0·1
16	69·9	51·9	67·8	62·2	66·7	60·1	−0·3	+0·9	+0·2	−0·7	−0·3	+0·3
17	82·5	57·4	73·2	79·6	82·5	67·1	−1·8	+1·1	+1·0	+0·3	+0·4	+0·4
18	73·0	59·4	64·1	70·5	67·0	62·9	−1·1	+0·5	−0·1	−0·6	−0·2	+0·1
19	64·2	58·7	62·3	62·6	61·9	60·2	−1·3	+0·7	+0·1	0·0	−0·3	+0·1
20	72·0	53·4	62·6	69·4	71·8	57·5	−1·6	+1·1	−0·2	+2·3	+0·2	+0·7
21	76·5	49·8	...	...	...	...	−0·9	+0·9	...	...	...	...
22	77·3	49·5	65·4	76·1	73·9	61·6	−2·4	+1·2	+0·6	0·0	+0·4	+0·1
23	80·2	54·2	72·5	77·6	76·1	62·7	−1·8	+1·1	+1·0	+0·4	+0·3	0·0
24	76·7	59·8	64·1	72·7	76·2	63·8	−1·1	+1·0	0·0	+0·2	+1·4	+0·1
25	70·7	57·5	59·0	65·0	67·6	59·5	−1·6	+0·7	+0·1	−0·3	+0·5	+1·1
26	72·0	54·8	60·6	68·3	71·1	56·3	−1·1	+0·7	+0·2	+0·1	−0·8	+0·5
27	66·1	52·6	65·0	64·2	59·1	60·0	−1·4	+0·6	+0·1	−0·3	−0·3	−0·2
28	67·8	52·7	...	...	...	...	−1·8	+0·3	...	...	...	...
29	71·6	51·4	61·8	68·8	69·1	62·9	−1·6	+1·3	−0·2	0·0	−0·1	+0·2
30	71·0	59·4	63·0	70·1	67·8	59·4	−1·1	+0·5	+0·2	+0·3	−1·2	+0·2
31	65·5	54·7	63·2	63·7	63·4	55·1	−1·6	+0·7	−0·1	+0·7	−0·2	+0·2
Means	71·9	54·0	64·0	68·8	69·6	59·6	−1·7	+0·8	+0·2	0·0	0·0	+0·3

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	68·5	58·2	...	...	...	...	−1·6	+0·1	...	...	...	...
2	64·3	51·2	59·8	64·2	61·9	57·6	−0·9	+0·1	−0·4	+1·4	+0·1	0·0
3	71·9	52·2	60·8	64·3	71·7	61·0	−2·0	−0·1	+0·1	+1·1	+0·4	+0·5
4	68·2	55·5	59·3	62·0	68·2	56·7	−1·1	+0·2	−0·4	+0·2	0·0	+0·7
5	74·3	45·0	63·6	70·3	73·8	59·0	−2·8	−0·4	−0·2	−2·9	−1·2	−0·4
6	73·1	50·7	67·8	69·5	71·8	59·4	−4·0	−0·3	−2·3	−0·8	−0·5	+0·6
7	71·4	56·4	...	...	...	...	−1·9	+0·2	...	...	...	...
8	79·5	56·3	64·5	72·8	77·2	63·5	−1·7	+0·5	+0·8	−1·7	−0·7	+0·4
9	63·9	53·8	55·5	59·5	58·4	53·9	−0·2	+0·5	−0·1	−1·4	−0·6	+0·1
10	63·5	50·9	55·8	58·8	62·9	53·6	−1·7	+0·3	−0·8	+0·5	+0·9	−0·2
11	72·8	44·4	62·5	67·9	70·5	57·7	−1·8	+0·6	+0·1	−0·5	−1·1	+0·7
12	74·9	49·6	67·5	71·8	74·9	57·4	−2·9	+1·3	+0·5	−2·6	+0·1	+0·5
13	75·9	52·5	70·9	74·4	66·2	60·5	−2·5	+1·2	−0·5	−0·8	−0·3	+0·3
14	73·8	56·3	...	...	...	...	−4·1	+0·1	...	...	...	...
15	76·1	56·4	66·1	72·7	74·8	60·9	−2·3	+0·3	−0·2	−2·5	−0·3	+0·1
16	69·9	51·2	67·5	63·7	66·2	60·0	−0·3	+0·2	−0·1	+0·8	−0·8	+0·2
17	82·1	56·5	71·9	76·5	81·0	67·7	−2·2	+0·2	−0·3	−2·8	−1·1	+1·0
18	74·4	58·8	64·7	71·8	66·9	62·7	+0·3	−0·1	+0·5	+0·7	−0·3	−0·1
19	65·5	58·3	62·7	62·7	62·6	60·1	0·0	+0·3	+0·5	+0·1	+0·4	0·0
20	73·3	52·9	61·9	68·1	71·9	57·9	−0·3	+0·6	−0·9	+1·0	+0·3	+1·1
21	76·9	49·2	...	...	...	...	−0·5	+0·3	...	...	...	...
22	77·8	48·6	64·6	75·7	73·7	63·1	−1·9	+0·3	−0·2	−0·4	+0·2	+1·6
23	79·5	53·7	70·8	77·1	75·9	62·8	−2·5	+0·6	−0·7	−0·1	+0·1	+0·1
24	77·0	58·9	64·7	72·2	76·0	64·1	−0·8	+0·1	+0·6	−0·3	+1·2	+0·4
25	70·2	56·5	58·9	65·7	67·5	59·6	−2·1	−0·3	0·0	+0·4	+0·4	+1·2
26	71·5	54·2	60·9	67·7	70·4	56·2	−1·6	+0·1	+0·5	−0·5	−1·5	+0·4
27	67·0	51·5	64·7	64·8	59·3	60·3	−0·5	−0·5	−0·2	+0·3	−0·1	+0·1
28	69·3	51·9	...	...	...	...	−0·3	−0·5	...	...	...	...
29	72·5	50·9	62·8	69·5	69·7	62·8	−0·7	+0·8	+0·8	+0·7	+0·5	+0·1
30	70·6	59·3	63·1	68·8	69·2	59·5	−1·5	+0·4	+0·3	−1·0	+0·2	+0·3
31	66·3	54·0	62·8	62·8	63·8	55·2	−0·8	0·0	−0·5	−0·2	+0·2	+0·3
Means	72·1	53·4	63·7	68·3	69·5	59·7	−1·5	+0·2	−0·1	−0·4	−0·1	+0·4

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

SEPTEMBER.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	65·7	50·5	60·2	61·8	60·4	59·1	−1·4	+0·6	+0·4	+0·1	−0·4	+0·1
2	63·0	55·1	61·3	61·7	59·8	55·1	−0·2	+0·7	0·0	−0·1	−0·4	+0·1
3	63·1	47·6	59·8	59·9	58·9	50·7	−2·0	+0·5	+1·0	+0·6	−0·3	+0·7
4	61·8	47·7	...	...	...	...	−1·3	+0·8	...	...	...	...
5	63·5	39·2	51·4	60·0	62·8	48·9	−1·5	+0·8	+0·4	+0·4	+0·6	+0·5
6	63·7	44·1	59·0	61·3	62·1	54·0	−1·9	+1·1	+0·4	+1·5	−0·4	+0·2
7	61·1	45·7	60·8	58·8	55·9	51·9	−1·3	+0·9	+1·1	+0·1	−0·1	0·0
8	61·8	43·4	54·4	59·7	61·1	48·7	−1·3	+0·4	+0·6	−0·1	+0·5	+0·4
9	62·6	42·4	54·9	58·7	60·7	57·7	−1·1	+0·8	+0·1	+0·5	+0·3	+0·1
10	65·5	56·3	59·8	62·8	63·2	60·2	−2·6	+0·9	+0·1	+0·1	+0·1	+0·4
11	67·8	53·5	...	...	...	...	−3·1	+0·6	...	...	...	...
12	69·7	57·8	63·8	68·0	69·4	60·3	−1·9	+0·7	0·0	−0·3	+0·2	+0·1
13	69·8	57·9	63·7	66·1	68·7	57·9	−1·3	+0·2	+0·1	−0·1	0·0	+0·2
14	69·0	44·1	61·2	65·0	65·8	53·5	−1·3	+0·7	+2·0	−0·3	−0·2	+0·6
15	68·3	46·5	62·9	66·6	66·6	56·1	−1·3	+0·8	+0·2	+0·3	+0·1	+0·1
16	70·9	52·1	64·8	69·3	61·4	52·1	−1·7	+1·1	+0·6	+1·5	−1·3	+0·8
17	61·0	45·4	54·6	60·6	59·1	45·7	−0·8	+0·7	+1·1	+0·9	+0·1	+0·1
18	67·0	37·9	...	...	...	...	−0·1	+0·7	...	...	...	...
19	73·7	48·7	63·3	68·9	72·2	57·3	−0·9	+0·7	+1·9	+0·8	−0·7	+0·5
20	70·3	54·0	62·3	68·6	65·5	60·5	−0·8	+0·8	+0·3	+0·3	−0·1	0·0
21	67·1	55·4	61·1	64·8	64·8	56·9	−2·4	+1·0	−0·3	−1·0	+0·2	+0·1
22	61·5	56·1	57·4	58·7	60·8	56·3	−0·6	+0·7	−0·2	−0·1	−0·1	−0·1
23	67·0	53·6	55·8	62·0	63·7	56·0	−0·4	+0·5	0·0	+0·6	−0·1	+0·5
24	66·3	51·2	59·8	66·2	63·3	51·2	−1·1	+0·5	+0·2	0·0	−0·1	+0·1
25	64·9	45·9	...	...	...	...	−1·5	+0·6	...	...	...	...
26	67·5	52·3	55·2	65·9	64·1	57·2	−1·1	+1·2	−0·5	+1·7	0·0	+0·4
27	68·1	52·4	64·8	67·5	64·9	62·4	−1·7	+0·7	+0·1	0·0	−0·3	+0·1
28	62·3	46·4	49·9	58·6	58·3	47·1	−0·3	+0·1	−0·1	+1·1	+0·1	+0·6
29	59·8	42·4	54·9	59·2	58·8	51·7	−0·5	+0·2	+1·2	+0·4	−0·3	+0·1
30	59·6	47·2	49·8	57·8	57·8	50·0	−0·6	+0·2	−0·1	+1·3	−0·5	+0·2
Means	65·4	49·1	58·7	63·0	62·7	54·6	−1·3	+0·7	+0·4	+0·4	−0·1	+0·3

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	64·5	49·3	58·7	61·9	60·8	59·2	−2·6	−0·6	−1·1	+0·2	0·0	+0·2
2	62·8	54·6	61·6	61·8	60·6	55·5	−0·4	+0·2	+0·3	0·0	+0·4	+0·5
3	62·1	46·7	58·2	60·0	58·7	50·8	−3·0	−0·4	−0·6	+0·7	−0·5	+0·8
4	61·0	46·7	...	...	...	...	−2·1	−0·2	...	...	...	...
5	63·5	38·1	51·6	59·1	62·1	49·4	−1·5	−0·3	+0·6	−0·5	−0·1	+1·0
6	64·4	43·2	58·9	61·8	62·7	54·4	−1·2	+0·2	+0·3	+2·0	+0·2	+0·6
7	61·5	45·3	60·7	59·1	56·2	51·9	−0·9	+0·5	+1·0	+0·4	+0·2	0·0
8	61·6	42·4	53·9	59·1	60·5	49·8	−1·5	−0·6	+0·1	−0·7	−0·1	+1·5
9	62·5	41·7	54·7	58·8	60·8	57·9	−1·2	+0·1	−0·1	+0·6	+0·4	+0·3
10	66·4	55·5	60·0	62·9	63·7	60·5	−1·7	+0·1	+0·3	+0·2	+0·6	+0·7
11	68·0	52·4	...	...	...	...	−2·9	−0·5	...	...	...	...
12	69·9	57·0	63·9	68·0	69·6	60·7	−1·7	−0·1	+0·1	−0·3	+0·4	+0·5
13	69·8	57·8	64·1	66·8	68·6	57·8	−1·3	+0·1	+0·5	+0·6	−0·1	+0·1
14	68·7	42·6	59·8	65·8	65·9	54·1	−1·6	−0·8	+0·6	+0·5	−0·1	+1·2
15	67·9	45·7	62·8	64·8	66·2	56·2	−1·7	0·0	+0·1	−1·5	−0·3	+0·2
16	70·6	51·2	65·2	68·2	62·1	51·8	−2·0	+0·2	+1·0	+0·4	−0·6	+0·5
17	59·9	44·9	53·2	57·8	59·3	46·0	−1·9	+0·2	−0·3	−1·9	+0·3	+0·4
18	66·5	37·1	...	...	...	...	−0·6	−0·1	...	...	...	...
19	73·2	47·9	63·4	68·8	71·8	58·5	−1·4	−0·1	+2·0	+0·7	−1·1	+1·7
20	69·8	54·2	61·9	67·8	66·3	60·8	−1·3	+1·0	−0·1	−0·5	+0·7	+0·3
21	68·5	55·0	61·8	66·5	65·6	56·8	−1·0	+0·6	+0·4	+0·7	+1·0	0·0
22	61·3	55·4	57·6	59·0	60·6	56·0	−0·8	0·0	0·0	+0·2	−0·3	−0·4
23	66·5	51·9	55·7	61·4	64·4	56·8	−0·9	−1·2	−0·1	0·0	+0·6	+1·3
24	66·6	50·8	59·8	65·8	62·8	51·6	−0·8	+0·1	+0·2	−0·4	−0·6	+0·5
25	64·5	45·2	...	...	...	...	−1·9	−0·1	...	...	...	...
26	67·4	51·3	56·3	64·9	64·6	57·8	−1·2	+0·2	+0·6	+0·7	+0·5	+1·0
27	68·0	52·2	64·4	67·3	64·7	62·8	−1·8	+0·5	−0·3	−0·2	−0·5	+0·5
28	62·5	45·4	49·8	56·8	59·7	47·2	−0·1	−0·9	−0·2	−0·7	+1·5	+0·7
29	59·3	42·1	53·8	58·2	58·7	51·7	−1·0	−0·1	+0·1	−0·6	−0·4	+0·1
30	58·7	47·0	50·5	56·2	58·4	50·6	−1·5	0·0	+0·6	−0·3	+0·1	+0·8
Means	65·3	48·4	58·5	62·6	62·9	54·9	−1·4	−0·1	+0·2	0·0	+0·1	+0·6

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued.*

OCTOBER.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	55·2	43·7	49·4	45·8	53·6	46·6	−0·2	+0·6	+0·5	−0·2	−0·1	+0·5
2	51·8	40·9	...	...	...	...	−1·8	+0·7	...	...	...	...
3	57·3	41·2	49·8	55·9	51·5	47·6	−1·3	+0·3	+0·1	+0·3	−0·6	+0·1
4	60·5	41·7	53·7	60·5	53·9	48·3	−0·9	+0·5	+1·9	+2·5	+0·1	−0·1
5	55·2	44·3	47·0	48·4	53·8	44·4	0·0	+0·7	−0·2	−0·4	+0·3	+0·4
6	51·1	40·9	49·7	50·4	49·9	48·4	−0·5	+0·8	0·0	−0·1	−0·2	−0·1
7	57·8	43·8	48·1	54·1	51·7	44·8	−0·7	+0·6	−0·1	+0·6	−0·1	+0·2
8	52·8	41·2	47·6	52·1	48·9	42·4	−0·9	+0·3	−0·1	−0·1	+0·1	+0·2
9	53·6	40·3	...	...	...	...	−0·5	+0·3	...	...	...	...
10	54·0	42·8	47·8	51·2	50·0	42·9	−0·6	+0·8	+0·1	+0·3	+0·5	+0·4
11	53·6	35·3	40·3	51·8	51·8	41·7	+0·5	0·0	−0·1	+1·3	0·0	+0·5
12	54·8	37·6	45·6	52·7	50·1	46·3	+1·0	+0·9	+0·4	+1·0	0·0	+0·2
13	54·2	44·6	49·0	53·0	52·7	47·8	−0·9	+0·5	0·0	0·0	0·0	0·0
14	53·0	46·5	47·2	49·5	50·2	47·0	+0·2	+1·2	−0·3	+0·1	+0·2	+0·1
15	59·7	40·0	44·7	57·6	56·4	49·6	+0·4	+0·2	−0·1	+0·8	+0·3	+0·1
16	51·5	42·6	...	...	...	...	−0·6	+0·5	...	...	...	...
17	50·4	37·0	45·5	47·9	44·0	39·0	−0·3	+0·8	+0·7	+0·1	0·0	+0·5
18	48·0	34·9	38·0	47·5	43·6	39·8	−1·1	+0·3	−0·3	+0·1	−0·1	+0·2
19	47·7	33·4	35·1	46·8	47·1	42·2	+0·1	+0·4	+0·3	+0·8	+0·4	0·0
20	50·5	34·0	41·1	47·9	46·9	40·7	+0·5	−0·1	+0·1	+0·2	+0·1	−0·3
21	51·0	39·8	44·9	49·9	48·0	40·9	−0·6	+0·7	−0·1	+0·1	+0·1	+0·1
22	45·9	35·0	40·3	43·9	44·5	35·3	−0·5	+0·7	−0·1	+0·1	+0·3	+0·2
23	47·1	32·4	...	...	...	...	0·0	−0·2	...	...	...	...
24	48·6	30·1	37·7	47·0	44·1	37·7	+0·4	−0·1	+0·2	+1·4	+0·2	+0·3
25	42·9	34·7	38·4	42·9	42·0	38·3	−0·4	+0·3	−0·1	0·0	0·0	+0·1
26	49·7	27·8	32·2	49·3	47·7	37·7	+0·9	+0·4	+0·6	+2·9	+0·5	−0·1
27	55·2	37·1	45·9	50·5	54·5	53·9	−0·1	+0·1	+0·1	−0·1	−0·1	+0·2
28	59·6	53·9	59·3	57·1	55·8	54·9	0·0	+0·4	0·0	0·0	0·0	−0·1
29	61·6	52·4	57·8	60·6	58·7	52·4	−0·3	+0·5	0·0	+0·3	+0·8	+0·5
30	56·3	44·5	...	...	...	...	+1·0	+1·4	...	...	...	...
31	52·0	44·2	45·8	45·7	44·8	44·7	+1·9	+0·3	−0·2	−0·3	−0·2	+0·1
Means	53·0	40·0	45·5	50·8	49·9	44·4	−0·2	+0·5	+0·1	+0·4	+0·1	+0·2

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h	Excess above readings of Thermometers on ordinary stand, 4 feet above the ground. Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	55·4	43·3	49·7	46·3	54·3	47·5	0·0	+0·2	+0·8	+0·3	+0·6	+1·4
2	52·5	40·4	...	...	...	...	−1·1	+0·2	...	...	...	...
3	56·8	40·1	49·0	56·1	51·9	47·6	−1·8	−0·8	−0·7	+0·5	−0·2	+0·1
4	60·2	42·3	52·8	59·2	54·1	48·3	−1·2	+1·1	+1·0	+1·2	+0·3	−0·1
5	55·6	44·3	46·9	49·1	54·9	45·0	+0·4	+0·7	−0·3	+0·3	+1·4	+1·0
6	51·3	41·0	49·6	50·4	50·0	49·0	−0·3	+0·9	−0·1	−0·1	−0·1	+0·5
7	57·7	43·7	48·2	54·2	51·9	44·6	−0·8	+0·5	0·0	+0·7	+0·1	0·0
8	52·6	40·3	47·9	52·2	49·3	42·0	−1·1	−0·6	+0·2	0·0	+0·5	−0·2
9	54·7	39·3	...	...	...	...	+0·6	−0·7	...	...	...	...
10	53·9	42·0	47·8	51·5	49·8	42·8	−0·7	0·0	+0·1	+0·6	+0·3	+0·3
11	52·7	34·6	41·0	50·5	52·6	42·6	−0·4	−0·7	+0·6	0·0	+0·8	+1·4
12	51·7	37·7	44·2	50·3	49·8	46·1	−2·1	+1·0	−1·0	−1·4	−0·3	0·0
13	53·8	43·9	48·8	52·8	52·3	47·8	−1·3	−0·2	−0·2	−0·2	−0·4	0·0
14	52·4	45·3	46·5	49·5	50·2	46·9	−0·4	0·0	−1·0	+0·1	+0·2	0·0
15	60·2	40·0	44·1	56·1	56·0	49·5	+0·9	+0·2	−0·7	−0·7	−0·1	0·0
16	50·9	42·1	...	...	...	...	−1·2	0·0	...	...	...	...
17	49·5	35·8	44·4	47·1	43·6	38·7	−1·2	−0·4	−0·4	−0·7	−0·4	+0·2
18	47·7	34·1	38·2	46·5	43·3	39·8	−1·4	−0·5	−0·1	−0·9	−0·4	+0·2
19	47·5	33·0	34·9	46·6	47·2	42·4	−0·1	0·0	+0·1	+0·6	+0·5	+0·2
20	49·1	33·6	40·8	47·8	47·1	41·5	−0·9	−0·5	−0·2	+0·1	+0·3	+0·5
21	50·5	39·1	45·1	50·0	47·9	40·9	−1·1	0·0	+0·1	+0·2	0·0	+0·1
22	45·9	34·5	40·5	43·8	44·2	35·5	−0·5	+0·2	+0·1	0·0	0·0	+0·4
23	47·5	32·0	...	...	...	...	+0·4	−0·6	...	...	...	...
24	47·6	29·9	37·8	45·4	44·5	37·7	−0·6	−0·3	+0·3	−0·2	+0·6	+0·3
25	42·9	34·0	38·1	42·9	41·9	38·8	−0·4	−0·4	−0·4	0·0	−0·1	+0·6
26	49·5	27·6	32·4	47·0	47·8	38·0	+0·7	+0·2	+0·8	+0·6	+0·6	+0·2
27	55·7	38·0	46·0	50·9	54·9	54·3	+0·4	+1·0	+0·2	+0·3	+0·3	+0·6
28	59·7	54·3	59·7	57·3	56·3	55·8	+0·1	+0·8	+0·4	+0·2	+0·5	+0·8
29	60·9	52·5	58·1	60·6	58·4	52·8	−1·0	+0·6	+0·3	+0·3	+0·5	+0·9
30	55·7	44·2	...	...	...	...	+0·4	+1·1	...	...	...	...
31	49·9	43·1	45·2	45·4	44·0	43·8	−0·2	−0·8	−0·8	−0·6	−1·0	−0·8
Means	52·6	39·5	45·3	50·4	49·9	44·6	−0·5	+0·1	0·0	0·0	+0·2	+0·3

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*continued*.

NOVEMBER.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·3	39·7	43·5	46·6	48·2	39·8	−0·6	+1·4	−0·1	−0·1	0·0	+0·7
2	49·9	31·3	33·6	45·3	48·8	48·5	−0·4	−0·3	−0·2	−1·2	0·0	0·0
3	56·0	43·8	51·6	54·4	54·9	46·0	+0·1	−0·3	+0·3	+0·6	+0·4	+0·3
4	58·8	44·5	52·9	56·6	54·9	53·9	−0·3	+0·8	+0·1	+0·1	+0·1	+0·1
5	57·0	50·8	53·3	56·2	56·4	51·6	−0·8	+0·7	−0·3	0·0	−0·1	+0·1
6	52·9	44·4	...	...	...	...	−0·3	+1·3	...	...	...	...
7	45·2	35·1	37·7	40·9	41·9	38·6	+1·5	0·0	0·0	+0·4	0·0	−0·2
8	48·0	30·7	35·2	46·2	46·3	43·5	−0·3	−0·5	−0·4	+0·7	+0·2	−0·1
9	49·3	41·0	44·1	49·3	48·6	46·0	−0·8	+0·8	−0·2	−0·1	0·0	+0·2
10	52·8	40·3	44·0	52·5	50·9	43·2	−0·2	+0·4	−0·2	+0·8	+0·7	0·0
11	49·0	40·6	43·7	47·4	48·7	48·1	−0·1	+0·4	−0·1	−0·2	+0·1	−0·1
12	53·0	44·3	47·8	50·4	50·4	44·3	0·0	+0·9	0·0	−0·3	−0·1	+0·2
13	56·9	43·4	...	...	...	...	−0·1	+0·1	...	...	...	...
14	61·0	49·6	52·2	58·1	57·8	54·9	+0·1	+0·7	+0·2	+0·8	+0·6	+0·3
15	57·1	50·1	55·2	52·2	51·4	50·1	0·0	0·0	+0·1	+0·1	−0·2	−0·1
16	54·0	47·0	51·9	50·3	48·9	47·0	−0·1	−0·3	0·0	−0·3	−0·6	−0·3
17	48·0	42·3	45·4	46·5	46·0	42·9	−0·1	+0·4	−0·4	−0·5	−0·1	+0·1
18	44·2	36·2	40·8	41·7	41·9	36·2	+1·2	+0·5	0·0	0·0	+0·1	+0·5
19	48·2	31·8	41·4	47·3	47·7	42·9	−0·9	+0·1	−0·2	−0·3	+0·1	0·0
20	45·8	38·3	...	...	...	...	−0·9	+1·0	...	...	...	...
21	44·5	33·1	35·6	41·8	44·3	37·3	−0·5	−0·2	0·0	−0·3	−0·3	+0·1
22	43·6	36·5	42·9	41·7	43·2	43·4	0·0	+0·3	0·0	0·0	+0·1	0·0
23	44·0	39·7	43·4	43·8	42·2	39·9	−0·2	+0·6	0·0	0·0	−0·1	+0·1
24	43·7	36·9	38·9	40·5	42·2	43·7	−0·4	+0·2	−0·4	−0·1	−0·1	−0·2
25	44·8	34·3	37·0	42·9	43·3	44·8	0·0	+0·4	−0·2	−0·2	+0·1	+0·1
26	50·0	40·2	41·9	46·7	49·8	44·1	−0·1	+0·1	0·0	0·0	0·0	+0·4
27	49·0	40·0	...	...	...	...	+0·4	+0·8	...	...	...	...
28	48·3	40·3	46·7	47·6	47·2	47·5	+0·3	+0·7	0·0	0·0	0·0	+0·2
29	52·2	42·3	50·2	52·2	49·0	42·8	−0·2	+0·9	0·0	+0·1	+0·2	+0·4
30	43·2	32·9	38·6	42·1	41·0	32·9	+0·7	−0·1	−0·1	+0·1	+0·2	−0·4
Means	50·0	40·0	44·2	47·7	47·9	44·4	−0·1	+0·4	−0·1	0·0	+0·1	+0·1

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	47·8	40·0	43·2	46·0	47·8	40·8	−1·1	+1·7	−0·4	−0·7	−0·4	+1·7
2	50·0	31·0	33·2	46·2	48·8	49·2	−0·3	−0·6	−0·6	−0·3	0·0	+0·7
3	55·1	44·9	51·6	54·1	55·0	47·3	−0·8	+0·8	+0·3	+0·3	+0·5	+1·6
4	58·7	43·1	53·1	56·6	55·0	54·3	−0·4	−0·6	+0·3	+0·1	+0·2	+0·5
5	58·1	51·0	54·6	57·3	56·5	52·6	+0·3	+0·9	+1·0	+1·1	0·0	+1·1
6	52·8	44·1	...	...	...	...	−0·4	+1·0	...	...	...	...
7	45·5	34·8	37·3	40·9	42·2	38·7	+1·8	−0·3	−0·4	+0·4	+0·3	−0·1
8	48·3	30·4	35·6	45·7	46·1	43·6	0·0	−0·8	0·0	+0·2	0·0	0·0
9	49·7	40·0	44·1	49·5	48·7	46·1	−0·4	−0·2	−0·2	+0·1	+0·1	+0·3
10	52·2	40·1	44·5	51·7	50·8	43·6	−0·8	+0·2	+0·3	0·0	+0·6	+0·4
11	48·8	40·2	43·7	47·6	48·8	47·9	−0·3	0·0	−0·1	0·0	+0·2	−0·3
12	53·0	44·8	47·9	50·7	50·5	45·6	0·0	+1·4	+0·1	0·0	0·0	+1·5
13	56·5	43·9	...	...	...	...	−0·5	+0·6	...	...	...	...
14	60·5	49·2	52·8	57·3	57·6	55·0	−0·4	+0·3	+0·8	0·0	+0·4	+0·4
15	57·3	50·2	55·7	52·2	51·6	50·2	+0·2	+0·1	+0·6	+0·1	0·0	0·0
16	54·4	46·5	51·8	50·6	49·2	46·7	+0·3	−0·8	−0·1	0·0	−0·3	−0·6
17	47·8	41·2	45·7	46·5	46·6	42·6	−0·3	−0·7	−0·1	−0·5	+0·5	−0·2
18	43·5	35·3	40·8	41·5	41·7	36·1	+0·5	−0·4	0·0	−0·2	−0·1	+0·4
19	48·4	31·0	41·1	47·2	47·6	42·9	−0·7	−0·7	−0·5	−0·4	0·0	0·0
20	45·9	38·1	...	...	...	...	−0·8	+0·8	...	...	...	...
21	44·6	33·0	35·1	41·8	44·6	37·2	−0·4	−0·3	−0·5	−0·3	0·0	0·0
22	43·5	36·1	42·8	41·5	43·1	43·4	−0·1	−0·1	−0·1	−0·2	0·0	0·0
23	43·8	38·6	43·3	43·6	42·2	39·8	−0·4	−0·5	−0·1	−0·2	−0·1	0·0
24	44·2	36·5	39·1	40·4	42·3	44·0	+0·1	−0·2	−0·2	−0·2	0·0	+0·1
25	44·7	33·4	36·8	43·3	43·1	44·7	−0·1	−0·5	−0·4	+0·2	−0·1	0·0
26	51·2	39·9	41·8	46·8	50·1	44·8	+1·1	−0·2	−0·1	+0·1	+0·3	+1·1
27	48·4	41·0	...	...	...	...	−0·2	+1·8	...	...	...	...
28	47·8	40·3	46·8	47·7	47·3	47·6	−0·2	+0·7	+0·1	+0·1	+0·1	+0·3
29	52·5	41·1	50·3	52·5	47·8	42·8	+0·1	−0·3	+0·1	+0·4	−1·0	+0·4
30	43·3	33·1	38·9	42·1	41·5	34·2	+0·8	+0·1	+0·2	+0·1	+0·7	+0·9
Means	49·9	39·8	44·3	47·7	47·9	44·7	−0·1	+0·1	0·0	0·0	+0·1	+0·4

READINGS of DRY-BULB THERMOMETERS in a STEVENSON'S SCREEN and on the ROOF of the MAGNET HOUSE—*concluded.*

DECEMBER.

Days of the Month.	Readings of Thermometers in Stevenson's Screen, 4 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·0	32·9	41·3	43·6	45·8	43·6	+0·2	−0·2	−0·1	0·0	0·0	+0·6
2	44·0	31·2	32·4	37·0	38·3	38·1	−0·1	+0·2	0·0	−0·3	+0·2	+0·3
3	51·0	34·7	47·0	50·2	50·2	45·2	−0·3	−0·7	+0·2	−0·1	+0·2	+0·2
4	46·8	31·0	...	...	...	...	+1·7	0·0	...	...	...	...
5	35·7	28·9	29·9	34·3	34·9	30·6	+0·3	+0·3	0·0	+0·1	+0·4	+0·4
6	38·7	28·1	31·9	33·9	37·4	36·1	+0·4	−0·1	−0·4	+0·1	+0·5	+0·2
7	40·0	32·9	33·5	37·0	38·5	35·2	+0·8	0·0	+0·2	−0·3	+0·3	+0·4
8	37·0	32·0	33·7	32·8	36·1	33·8	+0·6	0·0	+0·5	−0·1	+0·3	0·0
9	41·3	32·9	35·4	37·5	36·4	34·3	+0·1	−0·2	−0·2	−0·1	0·0	+0·2
10	35·4	29·6	32·1	35·2	34·2	33·9	+0·3	−1·8	−0·1	+0·3	0·0	+0·1
11	44·7	33·4	...	...	...	...	−0·1	0·0	...	...	...	...
12	43·9	38·4	42·1	42·8	43·1	38·5	−0·3	+0·8	+0·2	+0·1	+0·1	−0·1
13	40·1	32·2	35·3	39·6	39·0	33·0	+0·2	+0·1	+0·2	+0·5	+0·4	+0·4
14	50·0	30·0	41·2	45·8	48·8	49·9	0·0	+0·4	+0·1	+0·1	+0·1	+0·2
15	54·1	49·6	51·1	53·7	52·1	50·8	−0·6	+0·5	+0·1	0·0	+0·3	+0·1
16	51·1	37·7	41·7	50·2	49·9	48·4	+0·1	+0·5	0·0	0·0	+0·1	+0·2
17	49·0	47·4	47·9	48·8	48·7	47·4	−0·2	+0·4	+0·1	+0·1	+0·2	+0·2
18	48·5	46·5	...	...	...	...	+0·4	+0·3	...	...	...	...
19	47·4	41·6	43·3	42·8	43·4	41·9	+0·2	−0·1	0·0	0·0	+0·1	0·0
20	43·0	40·7	41·4	42·7	42·9	41·7	−0·1	+0·2	0·0	0·0	−0·3	0·0
21	43·9	37·1	39·3	42·2	42·9	38·8	0·0	0·0	+0·1	−0·4	+0·1	+0·1
22	39·8	29·5	33·5	35·9	39·2	35·1	−0·3	−0·3	−0·3	−0·3	0·0	−0·1
23	38·0	32·3	35·8	37·7	36·1	32·8	−0·1	−0·1	+0·1	−0·2	+0·1	+0·2
24	33·0	26·4	...	...	...	...	−0·1	+0·2	...	...	...	...
25	33·3	23·7	...	...	...	...	+0·5	0·0	...	...	...	...
26	36·0	22·9	...	...	...	...	0·0	+0·5	...	...	...	...
27	31·9	17·4	18·5	24·3	30·3	27·9	+0·7	−0·2	−0·6	−0·6	−0·5	+0·2
28	29·4	24·8	26·7	27·8	28·9	26·2	+0·6	−0·1	−0·2	0·0	+0·2	−0·3
29	34·8	23·3	27·6	32·5	33·0	28·7	−0·1	−0·9	−0·2	−0·7	+0·1	−1·1
30	32·7	20·6	23·2	29·0	31·8	29·7	+0·3	−0·3	−1·4	−0·8	0·0	−0·2
31	33·3	26·0	31·4	32·4	33·1	30·0	−0·1	0·0	−0·1	−0·1	+0·1	0·0
Means	41·2	32·1	35·9	38·8	39·8	37·3	+0·2	0·0	−0·1	−0·1	+0·1	+0·1

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 feet above the ground.						Excess above readings of Thermometers on ordinary stand, 4 feet above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	49·8	33·0	41·4	43·7	46·0	43·2	0·0	−0·1	0·0	+0·1	+0·2	+0·2
2	44·0	30·8	33·0	37·4	38·2	37·6	−0·1	−0·2	+0·6	+0·1	+0·1	−0·2
3	51·1	34·9	48·5	51·1	50·8	45·8	−0·2	−0·5	+1·7	+0·8	+0·8	+0·8
4	45·6	30·9	...	...	...	...	+0·5	−0·1	...	...	...	...
5	35·8	28·2	29·7	34·5	35·5	31·2	+0·4	−0·4	−0·2	+0·3	+1·0	+1·0
6	39·0	27·8	32·4	34·0	38·4	36·6	+0·7	−0·4	+0·1	+0·2	+1·5	+0·7
7	39·3	32·3	33·6	37·3	38·6	34·8	+0·1	−0·6	+0·3	0·0	+0·4	0·0
8	37·5	31·9	34·3	33·7	36·6	33·8	+1·1	−0·1	+1·1	+0·8	+0·8	0·0
9	41·1	32·9	35·6	37·6	36·6	34·0	−0·1	−0·2	0·0	0·0	+0·2	−0·1
10	36·5	31·0	32·4	35·4	34·8	35·6	+1·4	−0·4	+0·2	+0·5	+0·6	+1·8
11	44·9	34·3	...	...	...	...	+0·1	+0·9	...	...	...	...
12	43·6	38·3	42·3	42·8	43·5	39·3	−0·6	+0·7	+0·4	+0·1	+0·5	+0·7
13	40·5	32·0	35·8	39·8	39·8	33·8	+0·6	−0·1	+0·7	+0·7	+1·2	+1·2
14	50·2	30·2	41·8	46·4	49·0	50·2	+0·2	+0·6	+0·7	+0·7	+0·3	+0·5
15	54·3	49·7	51·6	53·8	52·6	51·1	−0·4	+0·6	+0·6	+0·1	+0·8	+0·4
16	51·5	38·3	43·3	50·6	50·0	48·6	+0·5	+1·1	+1·6	+0·4	+0·2	+0·4
17	48·9	47·2	48·1	48·8	48·7	47·6	−0·3	+0·2	+0·3	+0·1	+0·2	+0·4
18	47·7	46·4	...	...	...	...	−0·4	+0·2	...	...	...	...
19	47·1	41·3	43·4	42·7	43·2	42·2	−0·1	−0·4	+0·1	−0·1	−0·1	+0·3
20	43·3	40·5	41·7	42·8	43·2	41·7	+0·2	0·0	+0·3	+0·1	0·0	0·0
21	43·8	37·4	39·7	42·8	43·2	38·8	−0·1	+0·3	+0·5	+0·2	+0·4	+0·1
22	39·4	29·4	33·7	35·8	39·4	34·8	−0·7	−0·4	−0·1	−0·4	+0·2	−0·4
23	37·8	31·9	35·8	37·8	36·1	32·4	−0·3	−0·5	+0·1	−0·1	+0·1	−0·2
24	33·3	25·3	...	...	...	...	+0·2	−0·9	...	...	...	...
25	33·1	23·0	...	...	...	...	+0·3	−0·7	...	...	...	...
26	36·4	23·3	...	...	...	...	+0·4	+0·9	...	...	...	...
27	32·5	18·0	20·3	26·0	32·0	28·9	+1·3	+0·4	+1·2	+1·1	+1·2	+1·2
28	29·7	25·0	27·6	28·7	28·6	26·7	+0·9	+0·1	+0·7	+0·9	−0·1	+0·2
29	34·3	24·1	28·7	33·5	31·4	29·4	−0·6	−0·1	+0·9	+0·3	−1·5	−0·4
30	32·6	20·0	24·1	29·8	32·0	29·7	+0·2	−0·9	−0·5	0·0	+0·2	−0·2
31	33·3	25·8	31·6	32·3	32·9	29·8	−0·1	−0·2	+0·1	−0·2	−0·1	−0·2
Means	41·2	32·1	36·4	39·2	40·0	37·5	+0·2	0·0	+0·5	+0·3	+0·4	+0·3

READINGS of the WET-BULB THERMOMETER placed in a STEVENSON'S SCREEN near the Ordinary Stand; and EXCESS of the READINGS above those of the corresponding THERMOMETER on the ORDINARY STAND, in the YEAR 1892.

[No observations have been made of this thermometer on Sundays, Good Friday, Christmas Day, and public holidays.]

JANUARY.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	36·3	39·3	38·8	36·1	+0·1	+0·3	+0·3	+0·3
2	32·0	36·7	37·3	38·0	+0·3	+0·3	0·0	+0·2
4	28·4	30·1	30·9	28·4	+0·3	+0·3	+0·3	+0·4
5	29·4	33·9	36·7	39·8	−0·2	+0·2	+0·2	+0·3
6	39·9	36·1	33·4	30·1	+0·1	0·0	+0·1	+0·5
7	29·7	33·9	32·5	27·8	−0·1	−0·1	+0·2	+0·1
8	28·1	32·0	30·2	25·8	−0·2	+0·1	+0·1	+0·1
9	28·0	27·6	26·5	29·3	−0·3	−0·2	−0·5	−0·4
11	33·5	34·1	34·1	33·1	+0·3	+0·2	0·0	+0·2
12	23·4	27·8	31·7	33·1	−0·6	0·0	0·0	+0·1
13	30·3	33·1	33·3	31·0	+0·1	0·0	0·0	−0·2
14	28·5	30·9	30·8	29·1	0·0	−0·1	+0·2	+0·1
15	26·9	29·8	30·2	28·0	0·0	−0·1	+0·1	+0·1
16	30·5	33·4	31·3	30·1	−0·1	−0·1	0·0	0·0
18	36·1	41·0	40·1	38·6	+0·2	0·0	−0·2	−0·2
19	34·1	34·9	34·4	29·2	−0·1	0·0	−0·2	−0·1
20	32·5	35·0	35·0	31·7	+0·2	+0·2	0·0	0·0
21	30·3	32·3	33·1	31·1	+0·1	+0·1	+0·3	+0·2
22	41·5	44·3	43·7	39·5	−0·1	−0·4	−0·1	+0·2
23	45·3	47·4	47·3	43·1	−0·1	−0·3	−0·3	+0·2
25	32·0	38·5	39·2	34·7	+0·2	0·0	+0·2	+0·3
26	31·9	35·9	39·2	41·4	+0·3	+0·1	−0·2	+0·3
27	43·1	42·6	43·6	41·1	0·0	−0·1	−0·1	−0·2
28	35·5	38·8	41·4	43·7	+0·1	+0·1	−0·1	+0·1
29	47·7	48·1	48·6	48·1	−0·1	−0·2	0·0	+0·1
30	44·7	46·1	47·2	48·4	0·0	+0·1	−0·2	+0·7
Means	33·8	36·3	36·6	35·0	0·0	0·0	0·0	+0·1

FEBRUARY.

Days of the Month.	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	43·8	44·9	40·4	36·9	−0·2	+0·1	0·0	+0·3
2	33·4	37·1	37·1	34·5	+0·2	0·0	0·0	0·0
3	36·9	38·5	38·0	34·2	−0·1	+0·2	+0·4	+0·3
4	31·1	38·1	37·1	43·6	+0·1	+0·8	−0·4	+0·1
5	39·2	42·9	40·7	37·3	+0·2	+0·1	+0·2	+0·2
6	39·8	41·4	42·3	43·3	0·0	−0·4	0·0	0·0
8	45·1	47·1	43·9	42·4	+0·1	−0·2	−0·2	−0·1
9	39·4	42·0	44·2	42·1	−0·2	+0·2	+0·2	+0·3
10	46·3	45·1	44·4	43·0	−0·1	+0·1	0·0	+0·4
11	41·8	44·8	45·3	39·7	0·0	0·0	+0·2	+0·2
12	35·8	38·2	40·3	38·7	0·0	−0·1	0·0	+0·1
13	36·1	37·1	36·4	33·5	+0·3	+0·1	+0·2	+0·3
15	38·1	37·8	33·9	28·4	0·0	+0·1	+0·1	−0·2
16	26·4	27·1	26·1	23·8	−0·2	+0·2	0·0	−0·2
17	22·1	25·1	26·4	31·5	+0·5	0·0	−0·1	0·0
18	26·4	30·3	28·8	22·5	−0·2	+0·6	+0·1	−0·4
19	26·1	26·5	29·9	30·2	0·0	−0·1	−0·1	+0·2
20	30·4	32·4	34·3	35·5	−0·1	0·0	−0·1	−0·3
22	40·1	45·5	45·4	39·1	−0·3	0·0	+0·2	+0·1
23	37·7	42·4	45·0	40·3	+0·4	−0·2	+0·2	−0·1
24	40·1	44·1	45·1	39·7	−0·3	−0·5	−0·1	+0·2
25	39·1	40·7	47·4	41·6	−0·3	−0·4	+0·4	−0·1
26	36·7	38·2	40·1	37·8	−0·1	−0·2	−0·4	0·0
27	35·1	34·1	37·2	36·3	+0·1	−0·1	−0·2	0·0
29	36·6	38·0	37·4	34·1	−0·3	+0·3	0·0	+0·1
Means	36·1	38·4	38·7	36·4	0·0	0·0	0·0	+0·1

MARCH.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	35·9	36·5	35·3	32·9	0·0	−0·1	0·0	+0·1
2	27·2	26·8	26·4	27·1	−0·1	+0·1	+0·1	+0·3
3	25·9	26·3	28·0	26·9	+0·1	−0·2	0·0	+0·2
4	26·6	28·8	28·7	27·9	+0·1	−0·2	−0·3	0·0
5	30·2	35·4	34·9	32·7	+0·2	−0·4	−0·1	+0·4
7	27·9	30·8	30·2	27·0	+0·1	−0·1	−0·2	+0·2
8	27·9	29·0	29·8	27·4	−0·3	−0·5	−0·1	−0·1
9	30·9	33·4	32·0	27·1	−0·1	−0·1	+0·1	+0·6
10	29·6	34·1	33·9	29·0	−0·2	−0·3	+0·3	+0·2
11	30·3	31·4	33·7	31·1	−0·3	−0·1	0·0	+0·2
12	30·3	32·1	32·2	31·1	+0·1	−0·1	+0·1	+0·5
14	28·5	31·9	34·5	31·1	−0·3	+0·3	0·0	+0·4
15	38·4	38·8	37·1	39·2	−0·1	0·0	0·0	0·0
16	38·1	42·7	46·1	45·1	0·0	+0·4	0·0	+0·2
17	46·4	52·1	50·1	45·4	−0·3	−0·4	+0·2	−0·1
18	47·7	51·1	49·7	40·1	+0·4	−0·2	+0·2	+0·1
19	43·3	44·9	43·4	38·1	0·0	−0·6	+0·1	+0·2
21	33·8	44·2	47·4	42·1	−0·2	−0·7	+0·1	0·0
22	38·2	38·3	38·0	37·2	0·0	−0·2	−0·3	0·0
23	38·5	43·3	43·5	42·1	−0·1	−0·7	−0·2	+0·2
24	39·1	40·2	40·5	36·0	−0·3	−0·1	−0·3	+0·2
25	36·9	39·3	46·1	38·1	−0·1	−0·8	−0·4	0·0
26	42·9	50·2	53·0	48·2	0·0	−0·4	+0·2	−0·1
28	32·9	32·6	33·1	29·6	+0·2	−0·3	−0·1	+0·1
29	32·1	35·0	34·2	32·0	−0·2	−0·8	−0·1	+0·3
30	36·6	40·6	42·0	35·1	−0·1	−0·5	+0·4	+0·1
31	38·1	42·6	44·1	35·1	+0·8	+0·1	+0·7	+0·1
Means	34·6	37·5	38·1	34·6	0·0	−0·3	0·0	+0·2

APRIL.

Days of the Month.	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	40·6	47·7	52·2	38·8	+0·6	+0·4	+1·2	+0·4
2	44·7	50·4	50·3	38·5	−0·2	−0·5	+0·3	+0·1
4	49·6	59·8	60·0	50·1	+0·4	0·0	+0·7	+0·9
5	55·4	58·4	60·1	50·6	+0·9	+0·6	+0·6	+0·6
6	51·6	55·9	54·7	44·8	+0·5	+0·4	+0·2	−0·3
7	49·1	54·5	54·1	47·4	+0·8	+0·5	+0·5	+0·8
8	43·8	55·1	52·6	45·2	−0·1	+0·1	−0·2	+0·2
9	47·1	50·1	50·1	44·3	+0·4	−0·6	+0·3	−0·1
11	43·1	50·7	52·2	41·0	+0·3	−0·4	−0·1	+0·1
12	40·4	42·1	40·1	35·1	−0·2	−0·6	−0·3	+0·1
13	35·5	38·1	36·7	35·0	−0·3	−0·5	+0·1	+0·2
14	36·1	37·2	38·6	31·5	0·0	−1·1	+0·1	+0·2
16	34·1	35·6	36·0	34·8	+0·2	+0·2	+0·2	0·0
19	39·7	40·1	41·1	37·1	−0·5	+0·3	+1·3	+0·3
20	42·0	43·1	43·9	46·1	+0·1	+0·2	+0·1	0·0
21	49·3	51·4	52·1	51·1	−0·5	−0·1	+0·6	+0·4
22	54·3	57·4	59·1	50·3	−0·2	0·0	0·0	+0·5
23	49·9	53·1	53·2	50·1	+0·4	+0·3	+0·1	+0·2
25	42·8	43·7	46·2	40·8	+0·2	−0·6	−0·3	+0·5
26	43·4	44·7	42·9	39·2	−0·9	−0·6	+0·3	+0·2
27	43·1	45·7	45·9	40·1	−0·1	−0·3	+0·2	−0·1
28	37·9	38·3	40·1	36·8	+0·1	0·0	+0·2	0·0
29	38·8	39·4	39·8	37·1	−0·6	+0·1	0·0	+0·3
30	41·3	44·9	46·8	41·9	−0·5	−0·6	0·0	+0·3
Means	43·9	47·4	47·9	42·8	0·0	−0·1	+0·3	+0·2

READINGS of the WET-BULB THERMOMETER in a STEVENSON'S SCREEN—*continued.*

MAY.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
2	43·8	43·1	43·1	41·7	0·0	0·0	0·0	+ 0·2
3	42·1	42·0	42·0	43·1	0·0	− 0·7	+ 0·3	+ 0·1
4	44·2	44·7	46·5	42·5	− 0·2	− 0·1	0·0	+ 0·1
5	40·5	41·2	43·4	39·6	+ 0·2	− 0·4	− 0·5	+ 0·1
6	39·3	42·7	42·8	36·6	− 0·1	− 0·1	+ 0·1	+ 0·3
7	43·5	48·1	49·4	44·1	− 0·8	+ 0·1	+ 0·3	− 0·1
9	51·6	54·4	53·4	44·6	0·0	− 0·6	− 0·3	+ 0·1
10	49·0	52·4	52·7	49·0	− 0·7	− 0·4	+ 0·1	+ 0·2
11	52·3	57·6	56·1	48·1	− 0·6	− 0·2	+ 0·4	0·0
12	52·1	55·6	57·2	48·1	− 0·4	− 1·2	+ 0·1	+ 0·3
13	53·0	54·1	55·9	52·1	+ 0·6	− 0·1	+ 0·3	+ 0·3
14	51·7	55·1	58·1	48·2	+ 0·2	− 0·1	− 0·2	0·0
16	48·8	47·7	47·0	46·1	0·0	− 0·1	+ 0·3	+ 0·3
17	49·2	51·1	52·0	45·7	− 0·6	+ 1·3	− 1·0	+ 0·2
18	52·2	52·9	54·8	51·5	− 0·6	+ 0·1	− 0·6	0·0
19	50·3	53·1	54·1	50·0	+ 0·1	− 0·3	− 0·2	+ 0·2
20	53·3	53·1	53·3	49·4	− 0·1	+ 0·2	+ 0·3	+ 0·2
21	48·2	50·3	51·2	45·9	+ 0·3	− 0·8	+ 0·2	+ 0·4
23	56·1	60·4	60·6	52·6	+ 0·4	+ 0·2	+ 0·2	+ 0·2
24	57·9	60·7	61·1	54·4	− 0·4	0·0	− 0·7	− 0·2
26	59·8	65·4	64·1	58·5	0·0	− 0·3	− 0·1	+ 0·1
27	64·8	65·4	64·3	60·4	+ 0·7	− 0·1	− 0·7	− 0·1
28	63·4	63·8	65·3	51·4	− 0·4	− 0·6	− 0·4	− 0·4
30	58·1	62·7	63·1	56·0	− 1·2	+ 0·4	+ 0·1	+ 0·2
31	62·5	65·4	64·7	56·1	− 0·4	− 0·2	+ 0·4	− 0·2
Means	51·5	53·7	54·2	48·6	− 0·2	− 0·2	− 0·1	+ 0·1

JUNE.

Days of the Month.	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	56·3	58·0	59·5	53·0	+ 0·5	− 0·4	− 0·6	+ 0·3
2	55·1	57·1	59·0	51·9	0·0	− 0·3	− 0·5	+ 0·1
3	52·5	54·3	57·6	49·1	0·0	− 0·5	+ 1·5	+ 0·1
4	50·9	52·5	54·0	49·0	− 0·8	− 0·9	− 0·7	0·0
7	54·0	59·3	59·1	50·6	− 0·1	− 0·3	− 0·3	0·0
8	54·1	59·2	61·1	54·1	+ 0·3	+ 0·6	0·0	+ 0·4
9	64·0	64·9	64·7	57·6	+ 0·4	+ 0·2	+ 0·2	+ 0·2
10	65·1	67·0	69·1	58·8	− 0·9	+ 0·3	0·0	+ 0·2
11	57·6	59·1	59·3	56·1	− 0·9	− 0·2	+ 0·5	+ 0·3
13	49·0	48·6	48·7	44·1	+ 0·7	+ 0·1	− 0·2	+ 0·3
14	46·1	46·9	47·7	44·6	+ 0·5	+ 0·4	+ 0·9	+ 0·3
15	49·3	52·1	52·0	48·7	+ 0·5	− 0·4	+ 0·3	+ 0·5
16	52·8	54·2	55·3	53·4	+ 0·6	− 0·3	+ 0·5	+ 0·1
17	46·4	47·0	52·0	48·0	− 0·2	+ 0·1	− 0·3	+ 1·0
18	48·0	50·1	49·1	48·9	− 0·1	0·0	+ 0·2	+ 0·3
20	53·1	53·9	57·1	51·3	+ 0·4	+ 1·1	+ 0·7	+ 0·2
21	55·2	58·0	56·2	56·1	+ 0·1	+ 0·7	− 0·6	+ 0·3
22	59·1	60·1	61·5	54·2	+ 0·5	+ 1·0	− 0·2	+ 0·2
23	52·5	50·7	51·6	53·4	+ 0·3	+ 0·1	− 0·2	+ 0·8
24	56·9	59·2	60·2	54·0	+ 0·7	+ 0·2	0·0	+ 0·1
25	59·6	58·7	57·7	57·1	+ 0·9	− 0·2	− 0·5	− 0·2
27	63·7	67·6	67·7	61·1	− 0·6	+ 0·1	− 0·1	0·0
28	64·1	67·0	69·0	61·1	+ 0·1	0·0	+ 0·2	0·0
29	56·4	53·9	53·2	50·4	− 0·3	− 0·3	− 0·3	+ 0·2
30	55·8	58·1	57·7	53·5	0·0	0·0	− 0·5	0·0
Means	55·1	56·7	57·6	52·8	+ 0·1	0·0	0·0	+ 0·2

JULY.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	58·2	59·0	59·2	54·6	+ 0·2	− 0·6	− 0·2	+ 0·4
2	60·9	62·5	62·6	56·2	− 0·1	+ 0·4	− 0·1	+ 0·1
4	60·8	62·7	63·1	58·4	+ 0·6	− 0·2	− 0·8	+ 0·1
5	57·3	60·5	59·3	56·0	+ 0·1	+ 0·6	− 0·1	+ 0·2
6	55·4	59·1	58·3	58·1	+ 0·3	+ 0·6	+ 0·2	+ 0·3
7	59·1	58·6	61·1	56·0	− 0·3	+ 0·4	+ 0·9	+ 0·4
8	55·2	57·5	56·0	55·0	+ 0·4	+ 0·3	+ 0·1	+ 0·6
9	58·3	60·5	59·1	54·6	+ 1·5	0·0	+ 0·5	+ 0·3
11	57·5	58·7	59·3	53·1	+ 0·7	0·0	+ 0·6	+ 0·4
12	58·2	59·1	57·4	56·4	+ 0·2	+ 0·7	0·0	+ 0·2
13	57·2	56·0	57·0	52·7	+ 0·1	+ 0·2	+ 0·5	+ 0·4
14	54·1	54·1	54·4	52·3	+ 0·3	+ 0·3	+ 0·2	+ 0·3
15	53·1	57·2	56·6	54·8	+ 0·3	+ 0·5	+ 0·2	+ 0·4
16	59·1	61·4	61·4	57·6	+ 0·5	− 0·3	− 0·3	− 0·1
18	49·8	52·3	50·6	50·2	0·0	− 0·7	− 0·1	− 0·2
19	52·2	52·5	53·1	52·8	+ 0·2	0·0	− 0·2	0·0
20	53·0	54·2	56·0	48·7	− 0·1	− 0·2	+ 1·0	+ 0·1
21	50·4	53·8	54·8	53·2	− 0·5	− 0·2	+ 0·9	+ 0·2
22	57·1	58·6	61·0	56·1	+ 0·2	+ 0·5	− 0·1	0·0
23	58·2	62·4	62·0	60·3	+ 0·1	− 0·2	+ 0·4	+ 0·3
25	51·3	53·1	54·8	50·9	+ 0·1	+ 0·1	0·0	+ 0·5
26	55·5	59·0	62·3	57·0	+ 0·1	+ 0·1	+ 0·4	+ 0·4
27	58·2	59·9	61·0	53·1	− 0·4	+ 0·1	− 0·1	+ 0·4
28	53·6	60·1	63·2	53·8	0·0	+ 0·5	+ 0·8	+ 0·2
29	56·1	61·2	65·1	57·1	+ 0·4	− 0·3	+ 0·3	+ 0·3
30	54·1	59·3	62·7	58·4	+ 0·3	+ 0·1	0·0	+ 0·1
Means	55·9	58·2	58·9	54·9	+ 0·2	+ 0·1	+ 0·2	+ 0·2

AUGUST.

Days of the Month.	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
2	54·0	55·1	56·9	55·1	+ 0·5	+ 0·2	+ 0·3	+ 0·3
3	57·3	58·4	62·1	56·8	0·0	+ 0·5	+ 0·5	+ 0·6
4	54·1	55·1	57·1	53·6	+ 0·3	+ 0·5	− 0·1	+ 0·4
5	56·5	59·2	61·1	54·9	+ 0·7	− 1·2	+ 0·3	+ 0·5
6	61·6	62·6	59·8	55·0	+ 0·1	+ 0·1	+ 0·6	+ 0·7
8	59·9	64·0	65·1	60·1	+ 0·4	0·0	+ 0·4	+ 0·5
9	54·1	56·1	53·9	50·1	− 0·4	− 0·2	− 0·5	+ 0·3
10	49·5	50·4	53·7	49·9	− 0·3	− 0·7	0·0	− 0·1
11	54·4	58·4	59·5	54·1	+ 0·3	+ 0·1	− 0·3	0·0
12	60·3	62·4	60·8	53·6	+ 0·5	− 0·4	− 0·3	+ 0·3
13	61·4	63·5	61·0	58·7	− 0·7	− 0·1	− 0·1	+ 0·1
15	58·7	62·1	62·4	57·9	+ 0·3	+ 0·1	+ 0·4	+ 0·1
16	60·2	59·4	60·7	58·3	+ 0·1	− 0·6	0·0	+ 0·2
17	65·8	68·7	69·7	64·2	+ 0·6	+ 0·2	+ 0·4	+ 0·2
18	62·9	66·5	64·4	62·6	+ 0·3	− 0·1	− 0·4	+ 0·3
19	62·0	61·4	61·3	59·9	+ 0·2	0·0	− 0·1	+ 0·1
20	56·8	59·1	61·4	54·2	− 0·5	+ 0·6	+ 0·5	+ 0·3
22	60·4	65·4	65·1	57·5	+ 0·2	− 0·2	+ 0·3	0·0
23	66·1	67·2	69·1	61·8	+ 0·7	+ 0·4	+ 0·5	+ 0·1
24	62·7	66·5	66·1	61·1	+ 0·2	+ 0·1	+ 0·5	− 0·1
25	58·1	61·4	60·4	55·5	+ 0·1	− 0·5	+ 0·2	+ 0·7
26	56·0	58·5	59·2	51·9	− 0·1	+ 0·7	− 0·1	+ 0·3
27	59·5	58·8	57·8	59·4	+ 0·2	+ 0·2	0·0	0·0
29	60·9	64·1	64·2	62·1	− 0·1	− 0·2	− 0·3	+ 0·3
30	60·3	61·4	61·0	55·6	+ 0·2	0·0	− 0·8	− 0·1
31	55·7	55·8	57·2	53·9	+ 0·1	+ 0·5	− 0·4	+ 0·1
Means	58·8	60·8	61·2	56·8	+ 0·1	0·0	+ 0·1	+ 0·2

READINGS of the WET-BULB THERMOMETER in a STEVENSON'S SCREEN—*concluded.*

SEPTEMBER.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	53·4	56·1	58·0	57·0	+ 0·1	+ 0·4	− 0·1	+ 0·2
2	58·7	60·5	58·8	51·2	0·0	− 0·1	− 0·3	− 0·1
3	53·4	54·8	51·1	46·8	+ 0·3	+ 0·2	− 0·7	+ 0·5
5	47·2	51·9	53·3	46·6	+ 0·2	0·0	− 0·1	+ 0·3
6	53·5	54·4	55·0	50·4	− 0·1	+ 0·6	+ 0·3	− 0·2
7	53·8	53·2	54·3	50·2	+ 0·5	+ 0·1	− 0·5	− 0·4
8	49·1	51·2	51·6	46·2	+ 0·4	− 0·7	− 0·1	+ 0·3
9	51·1	53·5	54·9	56·0	+ 0·3	− 0·3	+ 0·2	+ 0·2
10	57·1	59·8	61·0	59·5	+ 0·1	0·0	0·0	− 0·1
12	60·1	63·0	63·1	59·4	− 0·1	− 0·2	− 0·3	+ 0·1
13	59·1	61·9	61·2	53·3	− 0·1	+ 0·1	− 0·6	− 0·6
14	54·5	55·5	55·1	51·9	+ 0·4	− 0·1	+ 0·2	+ 0·3
15	57·1	57·1	56·5	51·8	− 0·4	− 0·2	+ 0·1	+ 0·1
16	60·1	60·1	57·4	48·0	+ 0·1	+ 0·6	− 1·3	+ 0·4
17	48·0	50·1	50·3	43·1	+ 0·5	− 0·5	− 0·4	+ 0·1
19	57·5	59·0	61·3	52·9	+ 1·5	+ 0·2	− 1·1	+ 0·2
20	58·3	62·2	62·4	59·1	− 0·4	+ 0·1	0·0	0·0
21	60·1	62·1	61·1	56·1	− 0·3	− 0·4	− 0·6	− 0·4
22	56·1	57·1	57·9	55·8	− 0·2	0·0	− 0·3	0·0
23	55·1	58·6	59·2	55·2	+ 0·2	+ 0·4	− 0·9	+ 0·1
24	58·3	59·9	55·5	48·5	− 0·1	− 0·5	− 0·1	0·0
26	54·5	60·1	59·9	56·3	0·0	+ 0·3	− 0·4	− 0·1
27	60·0	62·1	60·4	60·1	0·0	0·0	− 0·7	0·0
28	48·3	51·2	50·9	46·0	− 0·2	+ 0·1	+ 0·7	+ 0·6
29	49·7	52·6	54·3	51·1	+ 0·7	− 0·1	− 0·3	+ 0·1
30	49·0	52·3	50·9	48·1	+ 0·2	+ 0·5	− 0·3	+ 0·3
Means	54·7	56·9	56·7	52·3	+ 0·1	0·0	− 0·3	+ 0·1

OCTOBER.

Days of the Month.	9h	Noon.	15h	21h	Excess 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	48·9	45·1	49·4	45·1	+ 0·2	− 0·2	− 0·6	+ 0·3
3	46·9	50·2	49·1	45·4	+ 0·8	+ 0·1	− 0·5	+ 0·1
4	47·9	52·7	50·1	48·1	+ 0·3	+ 1·5	− 0·2	+ 0·2
5	46·9	47·9	49·5	43·3	− 0·1	− 0·2	+ 0·1	+ 0·3
6	49·0	49·9	49·6	48·0	+ 0·3	+ 0·1	+ 0·2	+ 0·2
7	47·1	50·4	48·5	43·5	+ 0·2	+ 0·4	− 0·6	+ 0·3
8	45·3	47·7	46·2	40·8	− 0·3	− 0·2	0·0	+ 0·2
10	45·7	47·0	46·8	41·9	+ 0·1	+ 0·2	+ 0·2	+ 0·5
11	39·5	46·0	46·2	40·9	+ 0·1	+ 0·6	− 0·3	+ 0·7
12	43·6	48·1	46·4	45·3	+ 0·4	+ 0·3	0·0	+ 0·1
13	47·3	49·0	49·1	46·4	− 0·1	+ 0·4	− 0·2	+ 0·1
14	46·5	46·0	46·9	45·9	− 0·1	+ 0·2	+ 0·3	+ 0·3
15	44·7	51·8	51·3	47·6	− 0·1	+ 0·1	+ 0·1	+ 0·1
17	42·4	43·6	42·1	38·1	+ 0·1	− 0·2	− 0·2	+ 0·6
18	37·1	42·6	40·6	39·0	− 0·3	− 0·2	+ 0·3	+ 0·3
19	34·6	42·0	42·4	40·1	+ 0·3	+ 0·5	+ 0·3	+ 0·1
20	40·1	44·6	44·1	40·1	+ 0·1	+ 0·1	+ 0·2	+ 0·3
21	43·3	44·8	44·3	39·0	− 0·1	0·0	+ 0·2	+ 0·2
22	38·1	40·1	38·0	33·4	+ 0·1	0·0	+ 0·2	+ 0·3
24	36·1	41·7	40·0	37·0	+ 0·5	+ 0·8	+ 0·2	+ 0·3
25	38·1	41·0	40·6	36·8	+ 0·1	0·0	0·0	+ 0·5
26	31·6	42·4	42·2	36·5	+ 0·4	+ 1·6	− 0·1	− 0·1
27	44·2	49·4	53·3	52·9	− 0·2	− 0·1	− 0·3	+ 0·1
28	56·2	56·0	55·1	54·1	0·0	0·0	0·0	− 0·1
29	54·3	56·1	54·1	51·0	− 0·2	+ 0·2	0·0	+ 0·2
31	45·1	45·4	44·1	44·1	+ 0·1	− 0·1	− 0·2	+ 0·2
Means	43·9	47·0	46·5	43·2	+ 0·1	+ 0·2	0·0	+ 0·2

NOVEMBER.

Days of the Month.	Readings of the Wet-bulb Thermometer in Stevenson's Screen, 4 feet above the ground. 9h	Noon.	15h	21h	Excess above readings of the Thermometer on ordinary stand, 4 feet above the ground. 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	42·1	43·9	45·1	38·4	− 0·2	− 0·2	− 0·5	+ 0·4
2	33·5	44·1	46·3	47·9	− 0·3	− 0·5	− 0·3	+ 0·2
3	50·1	49·5	49·4	45·2	− 0·2	− 0·2	− 0·1	+ 0·2
4	51·8	53·1	52·1	53·1	0·0	0·0	0·0	0·0
5	52·5	54·2	54·3	51·2	− 0·2	− 0·1	0·0	+ 0·1
7	37·5	40·1	41·1	38·4	− 0·1	+ 0·4	0·0	− 0·3
8	35·2	45·0	44·2	42·1	− 0·4	+ 0·4	+ 0·1	+ 0·1
9	43·9	47·1	46·9	45·1	+ 0·1	− 0·3	0·0	+ 0·1
10	43·9	48·1	47·8	43·0	+ 0·1	+ 0·3	+ 0·4	0·0
11	43·3	46·9	47·9	47·4	− 0·2	0·0	+ 0·1	− 0·2
12	47·3	49·5	49·5	44·0	− 0·3	− 0·2	0·0	+ 0·3
14	51·1	54·4	53·1	52·9	+ 0·3	+ 0·3	− 0·1	+ 0·1
15	54·3	51·0	50·3	50·1	− 0·2	+ 0·1	− 0·2	+ 0·2
16	51·9	50·1	48·4	46·9	+ 0·2	0·0	− 0·1	+ 0·2
17	43·4	44·1	44·1	41·3	− 0·4	− 0·4	− 0·1	0·0
18	39·4	40·1	40·0	36·1	− 0·3	− 0·1	0·0	+ 0·6
19	41·2	45·7	45·3	42·3	0·0	− 0·3	− 0·1	− 0·2
21	35·5	41·5	43·9	37·1	− 0·1	− 0·3	0·0	+ 0·2
22	42·0	41·1	42·1	42·1	+ 0·1	− 0·4	− 0·4	+ 0·2
23	42·4	42·0	40·1	38·3	0·0	− 0·2	− 0·5	− 0·2
24	38·9	40·4	41·9	43·3	+ 0·1	0·0	0·0	− 0·1
25	36·2	40·4	41·3	42·2	− 0·4	− 0·5	− 0·3	− 0·2
26	41·0	46·2	49·1	43·1	0·0	− 0·1	− 0·1	+ 0·3
28	45·7	46·5	45·4	45·6	− 0·1	0·0	+ 0·1	+ 0·1
29	48·1	50·2	48·8	39·7	+ 0·1	0·0	+ 0·2	0·0
30	36·2	38·0	37·1	31·4	− 0·2	− 0·1	+ 0·1	− 0·5
Means	43·4	45·9	46·0	43·4	− 0·1	− 0·1	− 0·1	+ 0·1

DECEMBER.

Days of the Month.	9h	Noon.	15h	21h	Excess 9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°
1	39·4	42·6	45·3	42·1	− 0·3	0·0	− 0·1	+ 0·3
2	32·1	35·5	35·3	35·0	+ 0·2	− 0·2	+ 0·2	+ 0·2
3	47·0	49·5	49·1	42·7	+ 0·3	− 0·1	0·0	+ 0·2
5	28·9	31·4	31·9	28·6	+ 0·2	+ 0·2	+ 0·2	+ 0·2
6	31·2	33·9	36·0	35·0	+ 0·3	+ 0·3	+ 0·4	+ 0·3
7	33·1	36·1	36·9	34·1	+ 0·4	0·0	+ 0·2	+ 0·5
8	33·0	32·4	34·5	32·3	+ 0·6	+ 0·1	+ 0·5	+ 0·3
9	34·6	35·8	34·3	33·1	0·0	− 0·4	− 0·1	+ 0·5
10	31·1	33·4	33·0	33·5	0·0	+ 0·4	+ 0·4	+ 0·2
12	41·1	42·1	42·1	37·1	+ 0·4	+ 0·2	+ 0·2	+ 0·3
13	34·3	35·8	36·0	32·5	+ 0·2	+ 0·4	+ 0·7	+ 0·7
14	41·0	44·3	48·2	49·1	+ 0·3	+ 0·2	− 0·1	+ 0·3
15	50·1	51·1	48·6	49·1	+ 0·2	− 0·3	+ 0·4	+ 0·2
16	41·0	49·1	48·5	46·8	+ 0·2	0·0	+ 0·1	+ 0·3
17	46·0	46·7	46·6	46·9	+ 0·1	0·0	0·0	+ 0·3
19	41·5	40·7	41·3	40·3	+ 0·2	0·0	+ 0·1	+ 0·1
20	40·6	41·1	41·3	40·6	+ 0·2	+ 0·2	0·0	− 0·1
21	39·0	40·6	41·0	38·1	+ 0·2	− 0·1	+ 0·2	+ 0·2
22	33·3	35·9	39·2	33·3	− 0·3	− 0·3	0·0	+ 0·1
23	33·3	34·4	33·8	29·8	+ 0·2	0·0	+ 0·3	− 0·1
27	18·1	23·6	29·5	27·4	− 0·6	− 0·6	− 0·4	+ 0·2
28	26·6	27·7	28·7	26·2	− 0·2	0·0	+ 0·2	− 0·3
29	27·5	31·5	31·9	28·2	− 0·1	− 0·1	+ 0·1	− 0·8
30	23·2	28·7	30·8	28·7	− 1·4	− 0·7	0·0	− 0·1
31	29·8	30·8	30·3	26·8	− 0·1	0·0	− 0·8	+ 0·1
Means	35·1	37·4	38·2	35·9	0·0	0·0	+ 0·1	+ 0·2

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	51·86	51·22	50·31	49·46	48·76	48·52	48·75	49·54	50·55	51·34	52·03	52·13
2	51·83	51·17	50·26	49·44	48·73	48·51	48·75	49·64	50·59	51·42	52·02	52·13
3	51·82	51·14	50·23	49·41	48·72	48·52	48·79	49·70	50·61	51·44	52·09	52·13
4	51·79	51·12	50·21	49·38	48·70	48·50	48·82	49·74	50·61	51·45	52·08	52·18
5	51·76	51·09	50·17	49·36	48·69	48·50	48·83	49·76	50·63	51·45	52·10	52·08
6	51·76	51·07	50·15	49·33	48·68	48·50	48·85	49·70	50·67	51·47	52·12	52·14
7	51·73	51·05	50·12	49·32	48·67	48·51	48·87	49·73	50·69	51·51	52·11	52·10
8	51·71	51·02	50·09	49·28	48·67	48·52	48·90	49·77	50·73	51·53	52·13	52·06
9	51·68	50·97	50·06	49·26	48·65	48·52	48·92	49·78	50·75	51·55	52·15	52·05
10	51·68	50·95	50·04	49·23	48·64	48·52	48·94	49·81	50·79	51·58	52·16	52·03
11	51·66	50·87	50·00	49·19	48·64	48·52	48·96	49·86	50·79	51·61	52·16	52·04
12	51·62	50·87	49·97	49·17	48·62	48·51	48·98	49·89	50·85	51·65	52·17	52·04
13	51·62	50·84	49·94	49·13	48·61	48·52	49·02	49·93	50·85	51·68	52·20	52·00
14	51·60	50·81	49·92	49·10	48·60	48·55	49·03	49·96	50·91	51·69	52·21	52·03
15	51·57	50·77	49·90	49·08	48·58	48·53	49·07	49·98	50·94	51·72	52·21	52·06
16	51·55	50·73	49·87	49·05	48·57	48·55	49·10	50·02	50·98	51·74	52·21	52·00
17	51·55	50·68	49·87	49·03	48·58	48·58	49·12	50·05	50·98	51·76	52·18	52·02
18	51·53	50·67	49·85	49·02	48·61	48·56	49·15	50·08	51·01	51·77	52·19	52·00
19	51·51	50·63	49·80	48·99	48·60	48·56	49·17	50·10	51·08	51·79	52·17	51·98
20	51·49	50·60	49·77	48·97	48·56	48·58	49·18	50·15	51·08	51·80	52·17	51·93
21	51·46	50·60	49·75	48·96	48·55	48·60	49·22	50·17	51·10	51·79	52·19	51·93
22	51·45	50·57	49·71	48·94	48·53	48·61	49·26	50·22	51·13	51·83	52·19	51·90
23	51·43	50·53	49·70	48·92	48·56	48·60	49·27	50·23	51·15	51·78	52·20	51·87
24	51·41	50·51	49·66	48·89	48·56	48·67	49·30	50·26	51·18	51·87	52·16	51·86
25	51·36	50·47	49·63	48·86	48·53	48·67	49·33	50·31	51·23	51·88	52·16	51·81
26	51·34	50·43	49·62	48·85	48·52	48·67	49·36	50·32	51·26	51·91	52·18	51·83
27	51·32	50·40	49·58	48·82	48·52	48·68	49·38	50·37	51·28	51·94	52·19	51·81
28	51·30	50·37	49·55	48·79	48·53	48·68	49·34	50·41	51·30	51·96	52·17	51·80
29	51·29	50·38	49·53	48·78	48·53	48·72	49·40	50·44	51·34	52·00	52·17	51·75
30	51·26		49·52	48·77	48·52	48·73	49·47	50·53	51·35	52·00	52·17	51·73
31	51·25		49·49		48·52		49·51	50·54		52·00		51·72
Means	51·55	50·78	49·88	49·09	48·60	48·57	49·10	50·03	50·95	51·71	52·15	51·97
The mean of the twelve monthly values is 50°·36.												

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·52	47·68	46·51	45·40	46·26	47·97	51·23	53·66	55·26	55·68	54·37	52·32
2	50·41	47·60	46·45	45·40	46·30	48·06	51·34	53·71	55·32	55·68	54·31	52·24
3	50·31	47·51	46·44	45 40	46·35	48·18	51·41	53·78	55·34	55·68	54·21	52·21
4	50·20	47·45	46·39	45·40	46·39	48·28	51·50	53·80	55·41	55·73	54·11	52·21
5	50·09	47·40	46·39	45·41	46·43	48·39	51·57	53·90	55·41	55·69	54·03	52·00
6	50·00	47·36	46·34	45·41	46·48	48·50	51·66	53·94	55·52	55·70	53·97	51·97
7	49·90	47·32	46·30	45·40	46·52	48·61	51·72	53·99	55·55	55·70	53·81	51·97
8	49·80	47·26	46·28	45·41	46·57	48·75	51·81	54·10	55·58	55·69	53·79	51·82
9	49·72	47·21	46·24	45·44	46·61	48·91	51·93	54·07	55·60	55·67	53·72	51·78
10	49·64	47·18	46·20	45·44	46·62	49·02	52·01	54·10	55·68	55·67	53·67	51·67

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at Noon on every Day of the Year—*concluded.*

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
11	49·58	47·14	46·18	45·44	46·68	49·11	52·12	54·22	55·63	55·65	53·57	51·63
12	49·46	47·10	46·14	45·51	46·71	49·20	52·23	54·28	55·69	55·63	53·52	51·56
13	49·40	47·10	46·09	45·52	46·71	49·32	52·30	54·33	55·70	55·61	53·44	51·42
14	49·32	47·05	46·05	45·56	46·75	49·46	52·39	54·42	55·73	55·57	53·43	51·40
15	49·21	47·00	46·01	45·61	46·78	49·59	52·50	54·43	55·73	55·51	53·37	51·37
16	49·12	46·97	45·96	45·64	46·81	49·72	52·63	54·50	55·78	55·49	53·27	51·19
17	49·05	46·93	45·93	45·70	46·85	49·83	52·66	54·58	55·70	55·41	53·15	51·17
18	48·96	46·92	45·88	45·76	46·93	49·97	52·79	54·60	55·70	55·33	53·08	51·06
19	48·85	46·90	45·83	45·83	46·98	50·10	52·88	54·60	55·76	55·28	53·00	50·94
20	48·78	46·88	45·76	45·89	47·04	50·20	52·91	54·70	55·74	55·20	52·93	50·79
21	48·67	46·88	45·71	45·95	47·11	50·35	53·02	54·74	55·72	55·20	52·90	50·68
22	48·59	46·86	45·66	46·00	47·16	50·47	53·11	54·86	55·70	55·08	52·85	50·54
23	48·50	46·81	45·62	46·03	47·25	50·50	53·19	54·89	55·70	55·03	52·82	50·47
24.	48·42	46·80	45·55	46·04	47·32	50·65	53·22	54·90	55·73	54·93	52·71	50·36
25	48·27	46·74	45·52	46·09	47·40	50·76	53·28	54·96	55·80	54·84	52·67	50·27
26	48·17	46·70	45·50	46·10	47·46	50·87	53·38	54·97	55·79	54·79	52·66	50·27
27	48·12	46·67	45·46	46·13	47·54	50·93	53·45	55·08	55·76	54·76	52·61	50·18
28	48·00	46·62	45·43	46·13	47·64	50·98	53·49	55·05	55·77	54·72	52·51	50·12
29	47·93	46·57	45·41	46·19	47·71	51·05	53·51	55·19	55·78	54·65	52·50	50·01
30	47·85		45·41	46·22	47·79	51·17	53·53	55·16	55·76	54·54	52·48	49·95
31	47·75		45·40		47·91		53·62	55·20		54·41		49·89
Means	49·12	47·06	45·94	45·71	46·94	49·63	52·53	54·47	55·64	55·31	53·32	51·14

The mean of the twelve monthly values is 50°·57.

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	47·04	44·51	44·32	44·30	47·44	52·37	56·37	58·32	59·89	58·49	52·80	50·79
2	47·05	44·62	44·36	44·31	47·40	52·61	56·58	58·45	59·88	58·41	52·82	50·64
3	47·09	44·72	44·37	44·40	47·46	52·94	56·72	58·55	59·85	58·39	52·92	50·50
4	47·09	44·85	44·23	44·46	47·48	53·30	56·82	58·61	59·81	58·20	52·88	50·36
5	47·07	44·90	44·30	44·58	47·51	53·41	56·93	58·73	59·71	57·93	52·81	50·19
6	47·00	44·90	44·20	44·71	47·53	53·57	57·12	58·78	59·70	57·77	52·78	50·03
7	46·88	44·87	44·08	44·92	47·55	53·74	57·30	58·78	59·59	57·60	52·70	49·89
8	46·71	44·86	43·99	45·14	47·58	53·94	57·49	58·89	59·47	57·40	52·70	49·52
9	46·55	44·87	43·90	45·41	47·61	54·12	57·63	58·80	59·32	57·20	52·69	49·40
10	46·39	44·92	43·80	45·67	47·65	54·32	57·70	58·83	59·27	57·02	52·60	49·10
11	46·21	45·00	43·69	45·91	47·76	54·50	57·84	58·99	59·09	56·85	52·49	48·90
12	46·01	45·04	...	46·16	47·89	54·63	57·97	59·07	59·00	56·69	52·40	48·68
13	45·85	45·15	...	46·36	48·04	54·91	57·99	59·12	58·91	56·50	52·31	48·40
14	45·68	45·20	...	46·52	48·24	55·16	58·00	59·18	58·91	56·29	52·23	48·30
15	45·50	45·22	...	46·67	48·50	55·29	58·11	59·17	58·90	56·09	52·20	48·19

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at Noon on every Day of the Year—*concluded.*

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	45·33	45·20	...	46·70	48·70	55·38	58·19	59·19	58·97	55·90	52·11	47·97
17	45·18	45·19	...	46·71	48·98	55·38	58·07	59·29	58·88	55·70	52·03	47·93
18	45·02	45·10	...	46·70	49·18	55·36	58·10	59·30	58·83	55·58	52·00	47·90
19	44·89	45·00	...	46·64	49·38	55·36	58·09	59·32	58·90	55·40	52·05	47·93
20	44·72	44·87	...	46·55	49·58	55·34	58·02	59·44	58·83	55·22	52·03	47·91
21	44·60	44·71	...	46·50	49·74	55·35	58·00	59·51	58·74	55·10	51·98	47·98
22	44·51	44·55	...	46·45	49·90	55·33	57·99	59·61	58·66	54·80	51·90	47·99
23	44·42	44·38	...	46·44	50·07	55·32	57·91	59·61	58·68	54·62	51·80	48·00
24	44·33	44·26	...	46·50	50·26	55·37	57·86	59·61	58·71	54·41	51·60	47·98
25	44·29	44·20	...	46·63	50·41	55·48	57·84	59·66	58·76	54·20	51·48	47·89
26	44·29	44·19	43·73	46·82	50·83	55·58	57·92	59·68	58·73	54·00	51·39	47·81
27	44·34	44·22	43·83	47·03	50·89	55·66	57·99	59·80	58·70	53·80	51·27	47·67
28	44·32	44·26	43·92	47·17	51·17	55·72	58·00	59·92	58·67	53·60	51·08	47·42
29	44·34	44·30	44·07	47·31	51·45	55·90	58·04	60·00	58·67	53·39	50·98	47·12
30	44·37		44·20	47·40	51·72	56·15	58·09	59·95	58·60	53·17	50·91	46·90
31	44·39		44·28		52·10		58·23	59·90		52·63		46·62
Means	45·53	44·76	...	46·04	49·03	54·72	57·71	59·23	59·09	55·88	52·13	48·58

At temperatures below 43°·60 the fluid of this thermometer passes beyond range of the scale, and descends into the capillary tube. The readings were out of range from March 12 to 25 inclusive.

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	43·42	42·12	41·28	42·21	46·50	57·12	60·10	61·40	61·61	58·05	50·47	47·27
2	43·50	42·32	41·20	42·45	46·45	57·37	60·07	61·49	61·32	57·60	50·23	46·80
3	43·22	42·20	40·90	42·90	46·50	57·58	60·23	61·31	61·10	57·11	50·12	46·42
4	43·01	41·90	40·47	43·40	46·45	57·49	60·79	61·20	60·79	56·62	50·02	46·15
5	42·51	41·60	40·10	43·95	46·44	57·39	61·29	61·25	60·30	56·00	50·11	45·78
6	42·08	41·54	39·90	44·68	46·40	57·46	61·50	61·12	60·01	55·77	50·43	45·08
7	41·79	41·60	39·82	45·40	46·34	57·54	61·30	61·20	59·75	55·50	50·45	44·58
8	41·39	41·94	39·73	45·98	46·53	57·73	61·39	61·40	59·51	55·20	50·03	44·08
9	41·00	42·27	39·52	46·40	47·01	58·25	61·40	61·39	59·14	54·90	49·68	43·72
10	40·68	42·48	39·32	46·76	47·44	58·90	61·29	61·53	58·91	54·50	49·49	43·40
11	40·36	42·67	38·93	47·01	48·01	59·39	61·25	61·49	58·93	54·19	49·35	43·12
12	40·18	42·82	38·70	47·13	48·54	59·60	61·26	61·34	59·13	53·80	49·30	43·10
13	39·94	42·75	38·60	47·02	49·40	59·52	61·13	61·41	59·43	53·45	49·32	43·13
14	39·76	42·55	38·40	46·66	49·98	58·79	60·90	61·56	59·85	53·31	49·58	43·09
15	39·61	42·22	38·27	46·08	50·42	58·27	60·62	61·56	59·81	53·30	49·87	43·13
16	39·41	42·02	38·22	45·65	50·66	57·80	60·40	61·75	59·80	53·19	50·15	43·42
17	39·24	41·59	38·52	45·20	50·71	57·52	60·13	61·88	59·70	53·08	50·30	44·01
18	39·08	41·03	39·40	44·70	50·89	57·34	60·15	61·91	59·49	52·72	50·18	44·43
19	39·03	40·53	40·23	44·42	51·15	57·02	59·75	62·04	59·19	52·21	49·82	44·78
20	39·10	40·13	40·80	44·37	51·38	56·82	59·34	62·12	59·06	51·69	49·29	44·90

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at Noon on every Day of the Year,—*concluded.*

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
21	39·09	39·80	41·09	44·43	51·54	56·82	59·14	61·91	59·20	51·40	49·02	44·89
22	39·02	39·75	41·24	44·92	51·71	57·00	59·26	61·93	59·38	51·04	48·60	44·66
23	39·13	40·11	41·45	45·70	51·94	57·30	59·47	61·91	59·42	50·82	48·32	44·41
24	39·63	40·39	41·50	46·43	52·23	57·75	59·51	62·03	59·46	50·36	48·00	43·96
25	40·18	40·70	41·61	47·00	52·76	57·81	59·63	62·36	59·50	49·82	47·78	43·22
26	40·25	41·00	41·82	47·43	54·06	58·01	59·79	62·41	59·30	49·52	47·62	42·58
27	40·20	41·19	42·12	47·47	54·49	58·48	60·00	62·41	59·13	49·13	47·61	42·00
28	40·30	41·28	42·55	47·18	55·17	59·23	60·40	62·28	59·19	49·09	47·47	41·40
29	40·55	41·27	42·56	46·93	55·75	60·04	60·66	62·01	59·09	49·63	47·47	40·80
30	41·02		42·30	46·59	56·24	60·41	60·92	61·74	58·58	50·22	47·69	40·39
31	41·53		42·14		56·71		61·28	61·73		50·30		40·11
Means	40·62	41·51	40·41	45·55	50·32	58·06	60·46	61·71	59·64	53·02	49·26	43·83

The mean of the twelve monthly values is 50°·37.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	40·3	43·2	38·0	40·5	45·0	62·0	60·9	63·3	59·5	53·0	47·9	41·3
2	37·1	39·1	35·2	44·6	46·0	60·8	62·1	61·2	61·1	52·0	44·0	39·9
3	40·0	38·9	34·5	44·0	45·8	60·0	65·4	62·0	58·0	51·9	48·3	42·8
4	34·0	36·2	34·3	45·7	46·1	58·8	66·2	62·0	57·0	51·0	48·9	39·8
5	33·2	40·3	35·5	49·0	45·1	59·8	65·0	60·9	60·1	51·8	51·0	36·0
6	37·2	40·7	35·8	50·0	44·3	59·0	62·6	62·5	56·9	50·9	49·7	36·7
7	35·3	43·7	35·2	50·0	45·1	58·0	63·3	62·9	57·3	51·0	44·9	38·5
8	34·2	44·0	34·3	49·2	49·0	60·9	62·2	64·0	55·0	50·4	42·9	36·0
9	33·6	41·0	34·2	49·1	50·0	63·7	63·8	62·8	55·5	50·6	46·0	38·1
10	33·0	43·0	34·0	49·0	50·0	65·2	61·6	60·4	58·8	49·9	46·2	36·0
11	36·1	43·2	34·0	48·0	52·4	64·6	62·8	60·0	59·0	47·0	45·2	40·0
12	32·0	39·0	34·2	46·0	53·7	60·4	64·0	61·7	60·9	48·0	47·9	40·9
13	34·2	40·7	34·0	44·0	55·0	56·4	61·8	63·6	61·4	49·9	49·0	36·8
14	33·0	38·2	33·1	41·4	56·0	56·0	59·1	63·0	58·8	50·2	50·1	39·0
15	32·1	39·6	35·0	40·6	53·0	55·8	59·9	63·0	58·8	49·2	52·0	45·0
16	34·1	35·0	37·0	40·0	53·1	57·9	61·2	62·9	60·8	50·0	51·1	44·2
17	34·0	33·0	42·8	39·6	53·8	56·0	59·7	64·2	57·0	47·2	47·0	45·3
18	35·0	34·0	43·0	40·0	54·9	55·4	57·9	65·0	55·0	46·0	45·0	45·3
19	36·0	33·7	41·2	40·9	55·0	55·8	57·9	63·5	58·4	44·1	44·0	44·7
20	36·1	34·2	40·2	43·0	55·0	56·8	57·3	61·2	60·0	45·4	45·0	42·3
21	33·8	37·2	39·1	46·1	53·4	57·0	58·1	61·2	60·0	46·9	43·0	42·2
22	38·2	38·9	40·5	50·7	54·1	60·8	60·0	62·1	59·3	45·2	43·0	39·0
23	38·2	38·0	40·0	50·0	55·9	58·8	60·0	64·0	58·4	43·1	44·1	38·3
24	41·6	41·0	40·1	51·0	58·3	57·9	60·4	65·0	59·8	42·0	42·0	34·2
25	39·4	41·0	40·2	48·9	60·8	60·9	59·9	64·0	57·8	43·3	42·0	33·8

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, at Noon on every Day of the Year—*concluded.*

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
26	35·3	40·0	42·2	46·7	61·1	61·3	61·1	62·5	58·1	40·0	43·2	32·9
27	40·7	38·0	44·0	46·2	63·0	64·7	63·1	62·9	59·8	44·2	44·7	31·2
28	38·0	38·3	40·1	43·2	64·0	66·1	62·2	60·3	57·1	50·4	45·0	31·5
29	45·0	39·2	39·0	44·0	64·0	64·0	62·1	61·8	55·0	52·0	46·0	31·8
30	44·2		39·8	44·0	63·0	60·0	62·0	62·8	54·9	49·8	43·0	32·0
31	44·2		39·2		64·8		63·6	61·1		47·1		33·0
Means	36·7	39·0	37·7	45·5	53·9	59·8	61·5	62·5	58·3	48·2	46·1	38·3

The mean of the twelve monthly values is 48°·96.

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at Noon on every Day of the Year.

1892.												
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	41·0	46·9	38·8	62·0	54·5	66·8	68·3	64·1	63·2	48·5	46·5	43·1
2	37·3	41·1	30·2	61·9	46·0	60·1	73·7	64·0	63·8	50·1	43·4	35·0
3	42·1	41·4	31·0	59·2	45·1	66·7	77·2	65·3	60·8	56·1	53·3	49·6
4	31·7	39·8	33·8	67·0	46·8	66·0	74·7	64·1	59·7	58·2	54·3	35·0
5	35·1	45·7	38·9	67·6	46·0	63·1	68·3	68·8	56·5	49·8	55·6	35·3
6	37·8	44·1	35·4	64·3	48·8	69·0	67·8	70·0	61·1	51·0	50·5	35·2
7	39·8	50·3	35·3	64·1	56·4	66·7	65·8	68·0	59·4	53·2	39·9	36·3
8	36·7	48·1	34·0	61·2	58·2	66·1	67·9	73·0	58·7	51·2	44·4	31·0
9	29·8	42·9	34·9	58·0	65·4	72·9	70·2	61·3	58·5	51·6	48·1	37·5
10	29·8	46·8	36·8	60·0	63·2	76·8	61·0	60·2	64·1	52·3	49·1	36·8
11	35·0	46·8	34·1	57·0	67·6	67·4	68·0	65·9	64·6	47·7	46·8	43·2
12	28·2	39·3	35·3	49·2	66·8	53·0	69·2	71·2	68·0	51·5	49·3	42·9
13	34·0	41·5	34·7	41·6	66·1	57·0	60·7	74·1	65·7	52·2	53·8	36·7
14	33·0	37·0	32·0	43·6	62·5	54·9	57·0	72·3	65·5	49·2	56·9	45·4
15	29·4	39·2	41·0	43·9	58·2	60·8	63·3	71·2	64·7	52·5	53·2	52·4
16	34·0	31·4	45·0	40·1	56·8	60·5	68·9	64·7	69·0	50·9	51·4	48·0
17	35·2	28·0	55·2	43·0	57·2	55·3	55·0	75·3	58·9	48·1	46·3	48·3
18	40·3	33·7	56·2	44·9	62·1	60·0	61·3	68·5	63·0	46·1	42·0	47·6
19	36·1	30·8	51·2	44·3	60·9	59·8	60·1	64·8	69·8	43·3	47·0	43·2
20	37·1	34·6	46·2	47·0	61·1	62·0	59·0	65·7	68·3	48·0	44·0	42·8
21	33·9	44·3	47·2	57·7	59·7	66·2	63·2	70·0	65·0	49·9	40·2	41·0
22	46·0	47·3	40·6	63·0	61·1	68·9	64·9	72·9	59·4	43·8	42·9	36·2
23	47·0	44·2	47·2	60·3	68·3	53·0	66·4	74·2	60·6	44·8	43·9	37·8
24	46·2	44·8	43·2	56·8	71·5	68·0	62·0	71·0	64·0	45·0	41·1	31·0
25	38·2	42·6	41·7	46·4	72·8	68·8	59·0	65·6	63·8	43·3	42·2	29·0
26	36·9	40·2	52·0	50·0	73·6	72·3	66·6	66·0	63·9	44·2	46·2	29·3
27	43·8	35·2	46·5	52·9	72·1	75·2	67·5	66·1	65·8	49·8	44·9	23·0
28	41·3	41·3	37·3	42·0	77·0	75·0	66·4	60·0	55·9	57·8	47·2	28·1
29	49·2	41·0	39·4	47·7	66·2	60·0	70·0	68·9	58·8	59·8	51·8	31·4
30	49·1		47·4	52·3	71·7	68·4	62·8	68·4	56·1	53·2	40·9	28·9
31	47·0		51·0		79·7		66·5	64·3		47·0		32·0
Means	38·1	41·0	41·1	53·6	62·0	64·7	65·6	67·7	62·6	50·0	47·2	37·8

The mean of the twelve monthly values is 52°·62.

ABSTRACT of the CHANGES of the DIRECTION of the WIND, as derived from the Records of OSLER'S ANEMOMETER in the Year 1892.

(It is to be understood that the direction of the wind was nearly constant in the intervals between the times given in the second column and those next following in the first column.)

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

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retro-grade.
				°	°
January.					
d h	d h				
1. 10½	1. 11	W.S.W.	W.N.W.	45	
1. 15	1. 16	W.N.W.	N.W.	22½	
2. 3	2. 4	N.W.	W.S.W.		67½
3. 10	3. 11	W.S.W.	W.N.W.	45	
3. 20	3. 23	W.N.W.	W.S.W.		45
4. 1½	4. 2	W.S.W.	W.	22½	
4. 5	4. 6	W.	N.N.W.	67½	
4. 21	5. 1	N.N.W.	S.W.		112½
5. 16	5. 23	S.W.	W.	45	
6. 7	6. 8	W.	W.S.W.		22½
6. 10	6. 10½	W.S.W.	N.W.	67½	
6. 12½	6. 13	N.W.	W.N.W.		22½
6. 16½	6. 18	W.N.W.	W.S.W.		45
7. 19	7. 21	W.S.W.	S.S.W.		45
8. 1	8. 3	S.S.W.	N.N.W.	135	
8. 6	8. 7	N.N.W.	W.S.W.		90
8. 16	8. 19	W.S.W.	S.S.W.		45
8. 22	8. 22½	S.S.W.	S.		22½
9. 6½	9. 7	S.	N.N.W.	157½	
9. 23	10. 4	N.N.W.	N.N.E.		315
10. 8	10. 9	N.N.E.	N.		22½
10. 19	10. 20	N.	N.N.W.		22½
11. 11	11. 11½	N.N.W.	N.	22½	
12. 5	12. 6½	N.	S.W.		135
12. 12	12. 16	S.W.	N.	135	
12. 20	12. 22	N.	N.E.	45	
13. 22	13. 22½	N.E.	N.N.E.		22½
14. 6½	14. 7	N.N.E.	N.		22½
14. 21	14. 21½	N.	N.N.W.		22½
15. 7	15. 9	N.N.W.	W.		67½
15. 10½	15. 11	W.	N.W.	45	
15. 14	15. 15	N.W.	S.W.		90
15. 19	15. 21	S.W.	S.		45
16. 0½	16. 2	S.	S.E.		45
16. 19	16. 20	S.E.	E.S.E.		22½
17. 9	17. 10	E.S.E.	E.		22½
18. 6	18. 7	E.	E.S.E.	22½	
19. 1	19. 2	E.S.E.	E.		22½
19. 17½	19. 18	E.	E.S.E.	22½	
20. 6½	20. 7	E.S.E.	E.		22½
20. 20	20. 22	E.	N.E.		45
21. 6½	21. 10	N.E.	S.E.	90	
21. 18	21. 19½	S.E.	S.S.W.	67½	
22. 15	22. 18	S.S.W.	S.W.	382½	
23. 0	23. 1	S.W.	S.S.W.		22½
23. 4	23. 7	S.S.W.	S.W.	22½	
23. 16½	23. 17	S.W.	W.S.W.	22½	
24. 6	24. 9	W.S.W.	N.W.	67½	
24. 11	24. 12	N.W.	N.N.W.	22½	
24. 20	24. 22	N.N.W.	W.S.W.		90

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retro-grade.
				°	°
Jan.—*cont.*					
d h	d h				
25. 10	25. 11	W.S.W.	N.N.W.	90	
25. 15	25. 16	N.N.W.	N.W.		22½
25. 17½	25. 21	N.W.	S.W.		90
26. 12	26. 13	S.W.	W.S.W.	22½	
27. 11	27. 12	W.S.W.	S.W.		22½
27. 19	27. 19½	S.W.	W.N.W.	67½	
28. 6	28. 7½	W.N.W.	W.S.W.		45
28. 11	28. 12	W.S.W.	S.W.		22½
28. 16	28. 19	S.W.	W.S.W.	22½	
29. 4	29. 5	W.S.W.	W.	22½	
29. 11	29. 12	W.	W.S.W.		22½
31. 7	31. 8	W.S.W.	N.W.	67½	
31. 11½	31. 13	N.W.	S.W.		90
31. 15	31. 17	S.W.	S.S.W.		22½
31. 22	31. 24	S.S.W.	S.W.	22½	
			Sums	1890	1912½

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retro-grade.
February.					
2. 5	2. 7	S.W.	W.S.W.	22½	
2. 16	2. 17	W.S.W.	S.W.		22½
3. 1	3. 3	S.W.	W.S.W.	22½	
3. 9	3. 10	W.S.W.	W.N.W.	45	
3. 11	3. 12	W.N.W.	N.W.	22½	
4. 5	4. 7	N.W.	W.S.W.		67½
4. 10	4. 12	W.S.W.	S.S.W.		45
4. 20	4. 22	S.S.W.	W.S.W.	45	
5. 10	5. 13	W.S.W.	W.N.W.	45	
5. 17	5. 18	W.N.W.	W.S.W.		45
7. 21	7. 22	W.S.W.	W.	22½	
8. 7	8. 8	W.	W.S.W.		22½
8. 11	8. 13	W.S.W.	N.N.W.	90	
8. 14	8. 15	N.N.W.	N.	22½	
8. 21	9. 1	N.	N.E.	45	
9. 7½	9. 12	N.E.	S.W.	180	
10. 2	10. 3	S.W.	W.S.W.	22½	
10. 6½	10. 8	W.S.W.	N.N.W.	90	
11. 6	11. 6½	N.N.W.	W.S.W.		90
11. 8½	11. 9	W.S.W.	N.	112½	
11. 16½	11. 17	N.	S.	180	
11. 19½	11. 22	S.	N.W.	135	
12. 1	12. 1½	N.W.	W.S.W.		67½

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retro-grade.
				°	°
Feb.—*cont.*					
d h	d h				
12. 8	12. 9½	W.S.W.	N.N.W.	90	
12. 22	12. 23	N.N.W.	W.S.W.		90
13. 1	13. 3	W.S.W.	N.	112½	
13. 18	14. 0	N.	N.N.W.		22½
14. 3	14. 6	N.N.W.	S.W.		112½
15. 7	15. 8	S.W.	W.N.W.	67½	
15. 12	15. 14	W.N.W.	E.N.E.	135	
16. 0	16. 1	E.N.E.	N.E.		22½
17. 2	17. 3½	N.E.	N.		45
17. 10	17. 12	N.	W.S.W.		112½
17. 15	17. 17	W.S.W.	S.S.W.		45
17. 21	18. 0	S.S.W.	W.N.W.	90	
18. 9	18. 12	W.N.W.	N.	67½	
18. 14	18. 15	N.	N.N.E.	22½	
18. 17	18. 18	N.N.E.	N.E.	22½	
18. 21	19. 1	N.E.	E.N.E.	22½	
19. 8	19. 9	E.N.E.	E.	22½	
19. 20	19. 21	E.	E.N.E.		22½
20. 0	20. 3	E.N.E.	N.N.E.		45
20. 9½	20. 10½	N.N.E.	E.S.E.	90	
20. 13½	20. 16	E.S.E.	E.		22½
20. 23	21. 2	E.	S.E.	45	
21. 8	21. 9	S.E.	S.S.E.	22½	
22. 2½	22. 3	S.S.E.	S.S.W.	45	
22. 6½	22. 7	S.S.W.	S.S.E.		45
22. 9½	22. 10	S.S.E.	S.S.W.	45	
22. 15½	22. 18½	S.S.W.	S.E.		67½
22. 21	22. 22	S.E.	E.S.E.		22½
23. 12	23. 13	E.S.E.	S.E.	22½	
23. 20	23. 20½	S.E.	S.S.E.	22½	
24. 0	24. 1	S.S.E.	E.S.E.		45
24. 12	24. 13	E.S.E.	S.W.	112½	
24. 14	24. 18	S.W.	S.		45
24. 23	25. 2	S.	E.		90
25. 14½	25. 15	E.	S.E.	45	
26. 1½	26. 4	S.E.	E.S.E.		22½
26. 17	26. 17½	E.S.E.	N.E.		67½
26. 21	26. 21½	N.E.	E.S.E.	67½	
27. 1	27. 2	E.S.E.	N.E.		67½
27. 11	27. 12	N.E.	E.	45	
27. 23	28. 1	E.	N.E.		45
28. 11½	28. 12	N.E.	N.N.E.		22½
28. 19	28. 20	N.N.E.	N.		22½
28. 23	29. 0	N.	N.N.W.		22½
29. 7	29. 8	N.N.W.	N.	22½	
29. 18	29. 20	N.	N.N.W.		22½
			Sums	2340	1507½

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*continued.*

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
				°	°
March.					
d h	d h				
1. 4	1. 4¼	N.N.W.	N.N.E.	45	
1. 15	1. 15½	N.N.E.	N.		22½
1. 19	1. 20	N.	N.N.E.	22½	
2. 0	2. 2	N.N.E.	N.E.	22½	
2. 23¼	3. 0	N.E.	E.N.E.	22½	
3. 21	3. 22	E.N.E.	N.E.		22½
4. 8	4. 9	N.E.	E.N.E.	22½	
4. 16½	4. 17	E.N.E.	N.N.E.		45
5. 3	5. 7	N.N.E.	N.N.W.		45
5. 11½	5. 12	N.N.W.	N.	22½	
5. 20	5. 21	N.	N.N.E.	22½	
6. 1	6. 4	N.N.E.	S.E.	112½	
6. 9	6. 12	S.E.	E.N.E.		67½
7. 6	7. 7	E.N.E.	E.S.E.	45	
7. 11	7. 12	E.S.E.	E.		22½
7. 17	7. 19	E.	E.N.E.		22½
7. 22	8. 0	E.N.E.	E.	22½	
8. 3	8. 5	E.	N.E.		45
8. 13	8. 14	N.E.	N.N.E.		22½
8. 18½	8. 20	N.N.E.	N.		22½
9. 0½	9. 1	N.	S.W.		135
9. 5	9. 6	S.W.	S.S.W.		22½
9. 8	9. 9	S.S.W.	S.W.	22½	
9. 13	9. 13½	S.W.	N.N.W.	112½	
9. 15	10. 5	N.N.W.	S.W.		112½
10. 16	10. 18	S.W.	N.N.W.	112½	
12. 15	12. 16	N.N.W.	W.		67½
12. 20	12. 21	W.	N.W.	45	
12. 22¼	12. 22½	N.W.	S.W.		90
13. 10	13. 12	S.W.	N.W.	90	
13. 15	13. 17	N.W.	S.E.	180	
13. 21½	13. 21¾	S.E.	N.N.E.		112½
14. 2½	14. 5	N.N.E.	N.W.		67½
14. 9	14. 9½	N.W.	S.W.		90
14. 11½	14. 12	S.W.	W.	45	
14. 13½	14. 14	W.	N.W.	45	
14. 16	14. 17	N.W.	S.W.		90
15. 1	15. 4	S.W.	S.S.W.		22½
15. 11	15. 14	S.S.W.	S.		22½
15. 20½	15. 21	S.	S.S.E.		22½
15. 23	16. 2	S.S.E.	N.W.	157½	
16. 11	16. 14	N.W.	S.W.		90
16. 18	16. 19	S.W.	S.S.W.		22½
17. 19	18. 1	S.S.W.	S.S.E.		45
18. 11	18. 14½	S.S.E.	E.		67½
20. 11	20. 12	E.	E.S.E.	22½	
21. 10	21. 11	E.S.E.	E.		22½
21. 18	21. 21	E.	N.		90
22. 12	22. 13	N.	N.N.E.	22½	
23. 7	23. 12	N.N.E.	N.E.	22½	
24. 9	24. 10	N.E.	E.N.E.	22½	
24. 13	24. 14	E.N.E.	E.S.E.	45	
25. 18	25. 19	E.S.E.	E.		22½
26. 1½	26. 2	E.	N.E.		45
26. 4½	26. 5	N.E.	S.S.E.	112½	
26. 7½	26. 9½	S.S.E.	W.S.W.	90	
26. 13	26. 15	W.S.W.	S.S.W.		45
26. 21	26. 23	S.S.W.	W.S.W.	45	
27. 3½	27. 4	W.S.W.	N.	112½	
March—*cont.*					
d h	d h				
27. 8½	27. 9	N.	N.N.E.	22½	
27. 18	27. 20	N.N.E.	N.		22½
28. 0¾	28. 2	N.	N.N.E.	22½	
28. 11	28. 12	N.N.E.	N.		22½
29. 8	29. 10	N.	N.E.	45	
31. 9	31. 10	N.E.	E.N.E.	22½	
31. 13	31. 14	E.N.E.	E.S.E.	45	
31. 18	31. 19½	E.S.E.	E.N.E.		45
31. 21	31. 21½	E.N.E.	S.S.E.	90	
31. 23	31. 23½	S.S.E.	N.E.		112½
			Sums	1912½	1845
April.					
1. 5	1. 5¼	N.E.	S.		225
1. 9	1. 9½	S.	W.S.W.	67½	
1. 11	1. 11½	W.S.W.	E.		157½
1. 22	1. 23	E.	E.N.E.		22½
2. 11½	2. 12	E.N.E.	E.	22½	
3. 1	3. 2	E.	E.N.E.		22½
3. 6	3. 8	E.N.E.	E.	22½	
4. 7	4. 8	E.	W.S.W.	157½	
4. 14	4. 15	W.S.W.	W.	22½	
4. 19	4. 22½	W.	S.W.		45
5. 2	5. 2½	S.W.	S.		45
5. 18	5. 20½	S.	N.E.		135
6. 10	6. 12½	N.E.	E.	45	
6. 21	6. 23	E.	E.N.E.		22½
7. 1	7. 2	E.N.E.	N.N.E.		45
7. 7	7. 8	N.N.E.	N.E.	22½	
7. 21	8. 0	N.E.	N.N.E.		22½
8. 10	8. 13	N.N.E.	E.N.E.	45	
8. 17	8. 21	E.N.E.	N.E.		22½
9. 6	9. 9	N.E.	E.N.E.	22½	
9. 20	9. 21	E.N.E.	N.E.		22½
10. 3	10. 7	N.E.	E.N.E.	22½	
10. 11	10. 13	E.N.E.	E.	22½	
10. 23	11. 4	E.	N.N.W.		112½
11. 9	11. 16	N.N.W.	E.S.E.	135	
11. 20	12. 1	E.S.E.	N.N.E.		90
12. 6	12. 9	N.N.E.	N.E.	22½	
12. 16	12. 20	N.E.	E.	45	
12. 23	13. 0	E.	E.N.E.		22½
13. 14½	13. 15	E.N.E.	N.E.		22½
13. 22	14. 2	N.E.	N.		45
14. 17	14. 22½	N.	S.W.	225	
15. 8	15. 9	S.W.	S.S.E.		67½
15. 10½	15. 11	S.S.E.	W.S.W.	90	
15. 13½	15. 14	W.S.W.	N.E.	157½	
16. 0	16. 7	N.E.	N.N.W.		67½
17. 12	17. 15	N.N.W.	N.N.E.	45	
17. 22	17. 23	N.N.E.	N.N.W.		45
18. 15	18. 15½	N.N.W.	E.S.E.	135	
April—*cont.*					
d h	d h				
18. 19	18. 21	E.S.E.	N.N.E.		90
18. 23½	19. 0	N.N.E.	N.E.	22½	
19. 4	19. 5	N.E.	N.N.E.		22½
19. 10	19. 13	N.N.E.	N.		22½
19. 17	19. 22	N.	S.S.W.	202½	
20. 6	20. 7	S.S.W.	S.W.	22½	
21. 1	21. 3	S.W.	W.S.W.	22½	
21. 8	21. 9½	W.S.W.	N.W.	67½	
21. 13½	21. 17	N.W.	W.S.W.		67½
22. 16	22. 21	W.S.W.	N.N.W.	90	
23. 0	23. 2	N.N.W.	S.W.		112½
23. 10	23. 11	S.W.	W.S.W.	22½	
23. 13½	23. 14	W.S.W.	W.N.W.	45	
23. 19	23. 23	W.N.W.	W.S.W.		45
24. 2	24. 3	W.S.W.	W.N.W.	45	
24. 5	24. 7	W.N.W.	N.N.W.	45	
24. 13	24. 14	N.N.W.	W.N.W.		45
24. 17	24. 18	W.N.W.	W.S.W.		45
25. 10	25. 12	W.S.W.	N.W.	67½	
25. 23	26. 2	N.W.	W.S.W.		67½
26. 7	26. 10	W.S.W.	N.N.W.	90	
26. 17½	26. 18½	N.N.W.	E.S.E.	135	
26. 20½	26. 21¼	E.S.E.	E.N.E.		45
27. 3	27. 10	E.N.E.	S.W.	157½	
27. 18½	27. 20	S.W.	W.S.W.	22½	
28. 8	28. 11	W.S.W.	N.N.W.	90	
29. 4	29. 5	N.N.W.	S.W.	247½	
29. 6	29. 7	S.W.	N.N.E.	157½	
29. 22	29. 23	N.N.E.	N.		22½
30. 23	30. 24	N.	S.W.	225	
			Sums	3105	1845
May.					
1. 8	1. 8½	S.W.	S.E.		90
1. 9½	1. 10	S.E.	N.E.	270	
1. 15	1. 18	N.E.	E.		315
2. 2	2. 3	E.	N.E.		45
3. 2	3. 4	N.E.	N.N.E.		22½
3. 10	3. 11	N.N.E.	N.		22½
3. 21	3. 22	N.	N.N.E.	22½	
4. 4	4. 6	N.N.E.	N.		22½
6. 15½	6. 16	N.	N.N.E.	22½	
7. 1	7. 2	N.N.E.	S.W.		157½
7. 15	7. 16	S.W.	S.S.W.		22½
7. 19	7. 22	S.S.W.	W.S.W.	45	
8. 1½	8. 2	W.S.W.	S.W.		22½
8. 11	8. 12	S.W.	W.S.W.	22½	
8. 14	8. 14½	W.S.W.	N.W.	67½	
8. 16	8. 16¼	N.W.	S.W.		90
9. 4	9. 5	S.W.	W.N.W.	67½	
9. 8½	9. 9½	W.N.W.	S.E.	202½	
9. 13	9. 15	S.E.	E.		45
10. 1	10. 2	E.	E.N.E.		22½
10. 12	10. 13	E.N.E.	E.	22½	

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*continued.*

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
d h	d h			°	°
May—*cont.*					
10.20	10.23	E.	N.N.E.		67½
11.11	11.12	N.N.E.	N.E.	22½	
11.21	11.23	N.E.	N.N.E.		22½
12.7	12.10	N.N.E.	N.E.	22½	
12.12	12.12½	N.E.	E.S.E.	67½	
12.20	13.0	E.S.E.	N.N.E.		90
13.2	13.3	N.N.E.	E.	67½	
13.8½	13.10	E.	N.E.		45
13.11½	13.12	N.E.	E.S.E.	67½	
13.13½	13.13¾	E.S.E.	S.S.W.	90	
13.15¼	13.16¼	S.S.W.	N.		202½
13.17½	13.18	N.	E.S.E.	112½	
13.21½	13.22	E.S.E.	S.S.E.	45	
13.22¾	14.0	S.S.E.	W.S.W.		270
14.16	14.16½	W.S.W.	N.	112½	
14.18½	14.21½	N.	N.N.W.	337½	
14.23½	15.0	N.N.W.	S.W.		112½
15.20	15.23	S.W.	W.S.W.	22½	
17.0	17.7	W.S.W.	N.W.	67½	
17.15½	17.16	N.W.	N.N.E.	67½	
17.19	18.0	N.N.E.	S.	157½	
18.5	18.7	S.	S.W.	45	
19.5	19.8	S.W.	W.S.W.	22½	
19.12¾	19.13	W.S.W.	N.W.	67½	
19.14	19.15	N.W.	W.		45
19.18	19.19	W.	W.S.W.		22½
19.22	20.1	W.S.W.	S.W.		22½
20.5	20.8	S.W.	W.S.W.	22½	
20.11	20.13	W.S.W.	W.	22½	
20.22	20.22¼	W.	N.W.	45	
21.10	21.11	N.W.	W.		45
21.15	21.16	W.	S.W.		45
22.6	22.10½	S.W.	N.E.	180	
22.13	22.14	N.E.	S.E.	90	
22.16	22.18	S.E.	S.S.W.	67½	
23.3	23.4	S.S.W.	S.W.	22½	
23.22	24.0	S.W.	S.		45
24.6	24.8	S.	S.S.W.	22½	
24.22	24.22¼	S.S.W.	S.E.		67½
25.0¼	25.2	S.E.	E.N.E.		67½
25.5½	25.9	E.N.E.	S.S.W.	135	
25.20	25.21	S.S.W.	S.W.	22½	
25.23½	26.1½	S.W.	N.E.		180
26.11	26.12	N.E.	E.S.E.	67½	
26.14	26.14½	E.S.E.	E.		22½
27.0	27.0¼	E.	W.S.W.	157½	
27.5	27.7	W.S.W.	S.W.	337½	
27.19	27.22	S.W.	E.N.E.		157½
28.2	28.4	E.N.E.	E.	22½	
28.7¼	28.7½	E.	S.	90	
28.15	28.17	S.	S.S.W.	22½	
29.2	29.3½	S.S.W.	S.		22½
29.5½	29.7	S.	S.S.W.	22½	
30.19	30.22	S.S.W.	S.E.		67½
31.7	31.9½	S.E.	S.	45	
31.16	31.18	S.	S.W.	45	
			Sums	3577½	2497½

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
d h	d h			°	°
June.					
1.17	1.22	S.W.	S.		45
2.8	2.12	S.	S.W.	45	
3.4	3.6	S.W.	W.S.W.	22½	
3.18	3.21	W.S.W.	S.W.		22½
4.0	4.2	S.W.	W.S.W.	22½	
4.12	4.13	W.S.W.	S.W.		22½
4.16	4.20	S.W.	S.		45
5.2	5.8	S.	W.S.W.	67½	
5.12	5.13¼	W.S.W.	W.	22½	
5.16	5.16½	W.	N.N.W.	67½	
5.19	5.20	N.N.W.	W.N.W.		45
5.23	6.0	W.N.W.	W.S.W.		45
6.6	6.8	W.S.W.	N.N.W.	90	
6.12	6.13	N.N.W.	N.	22½	
6.17¾	6.18	N.	E.	90	
7.7	7.9	E.	E.N.E.		22½
8.20	8.22	E.N.E.	E.	22½	
9.0	9.1	E.	E.N.E.		22½
9.3½	9.4	E.N.E.	N.N.E.		45
9.6	9.8	N.N.E.	E.N.E.	45	
9.17	9.19	E.N.E.	E.S.E.	45	
9.23¾	10.0	E.S.E.	E.		22½
10.9½	10.10	E.	S.E.	45	
10.12	10.13	S.E.	S.S.W.	67½	
10.22	11.2½	S.S.W.	W.S.W.	45	
11.21½	11.22½	W.S.W.	N.N.E.	135	
12.4	12.5	N.N.E.	N.E.	22½	
12.15	12.17	N.E.	N.		45
12.21¾	12.23	N.	N.N.W.		22½
13.5	13.6	N.N.W.	N.	22½	
13.15	13.17	N.	N.N.E.	22½	
14.0	14.1	N.N.E.	N.		22½
14.5	14.8	N.	N.N.E.	22½	
14.23	15.2	N.N.E.	N.		22½
15.15½	15.16	N.	N.N.E.	22½	
15.19	16.1	N.N.E.	S.W.	202½	
16.8	16.10	S.W.	W.S.W.	22½	
16.18½	16.22	W.S.W.	N.E.	157½	
17.2¼	17.2½	N.E.	S.W.	180	
17.4	17.4½	S.W.	W.N.W.	67½	
17.11	17.11½	W.N.W.	N.W.	22½	
17.16	17.17	N.W.	W.S.W.		67½
18.3	18.6	W.S.W.	N.W.	67½	
18.11½	18.13	N.W.	W.S.W.		67½
18.17½	18.18	W.S.W.	S.S.W.		45
18.21	18.22	S.S.W.	S.W.	22½	
21.16	21.18	S.W.	S.S.W.		22½
22.5	22.7	S.S.W.	S.W.	22½	
22.17	22.18	S.W.	S.S.W.		22½
23.8½	23.9½	S.S.W.	N.N.W.	135	
23.13	23.15	N.N.W.	W.S.W.		90
23.18	23.19	W.S.W.	W.	22½	
23.21	23.23	W.	W.S.W.		22½
24.3	24.4	W.S.W.	S.W.		22½
24.22	25.1	S.W.	S.S.W.		22½
25.3	25.4½	S.S.W.	S.W.	22½	
25.22	26.2	S.W.	W.S.W.	22½	
26.17	26.20	W.S.W.	S.W.		22½
28.7½	28.8	S.W.	N.E.	180	

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
d h	d h			°	°
June—*cont.*					
28.10¾	28.12½	N.E.	S.E.	90	
28.13½	28.14	S.E.	E.		45
29.3	29.4	E.	W.		180
29.11½	29.16	W.	N.N.W.	67½	
30.1	30.2	N.N.W.	S.W.		112½
			Sums	2272½	1192½
July.					
1.6	1.8	S.W.	W.S.W.	22½	
1.15	1.17	W.S.W.	S.S.W.		45
1.19	1.21	S.S.W.	W.S.W.	45	
1.23	2.0½	W.S.W.	S.W.		22½
2.4¼	2.5	S.W.	S.S.W.		22½
2.9	2.10	S.S.W.	S.		22½
2.16	2.20	S.	S.E.		45
3.0	3.1	S.E.	N.E.		90
3.6½	3.7	N.E.	S.E.	90	
3.10½	3.13	S.E.	S.S.W.	67½	
3.20	3.23	S.S.W.	S.W.	22½	
4.13	4.14	S.W.	W.S.W.	22½	
4.16½	4.20	W.S.W.	S.S.W.		45
5.1	5.2	S.S.W.	S.W.	22½	
6.0	6.2	S.W.	W.S.W.	22½	
6.9	6.14	W.S.W.	S.W.		22½
8.3	8.10	S.W.	W.S.W.	22½	
8.19	8.20	W.S.W.	S.W.		22½
9.17½	9.18	S.W.	S.S.W.		22½
9.22	10.2	S.S.W.	W.S.W.	45	
10.8	10.11	W.S.W.	W.N.W.	45	
10.14	10.16½	W.N.W.	N.N.W.	45	
10.21½	10.22	N.N.W.	N.E.	67½	
11.8	11.10	N.E.	E.	45	
11.17	11.19	E.	E.N.E.		22½
12.21½	13.1½	E.N.E.	S.E.	67½	
13.4½	13.6¼	S.E.	N.E.		90
13.10	13.11	N.E.	N.		45
13.20	13.22	N.	N.N.W.		22½
14.8	14.10	N.N.W.	N.	22½	
14.22	14.22½	N.	N.N.E.	22½	
15.3½	15.4	N.N.E.	S.S.E.	135	
15.23	16.0	S.S.E.	E.N.E.		90
16.4	16.5	E.N.E.	S.E.	67½	
16.11	16.11½	S.E.	S.S.E.	22½	
16.16	16.18½	S.S.E.	E.N.E.		90
16.20	16.23	E.N.E.	N.E.		22½
17.7	17.8	N.E.	N.N.E.		22½
18.0½	18.2	N.N.E.	N.		22½
18.13	18.16	N.	W.S.W.		112½
19.12	19.13	W.S.W.	S.W.		22½
19.16½	19.18	S.W.	W.S.W.	22½	
20.1	20.3	W.S.W.	N.N.W.	90	
20.5	20.7	N.N.W.	N.	22½	

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*continued.*

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
July—cont.					
d h	d h				
20. 21	20. 22	N.	N.N.W.		22½
21. 11	21. 12	N.N.W.	N.	22½	
21. 18	22. 1½	N.	W.S.W.	247½	
22. 14	22. 14½	W.S.W.	S.E.		112½
22. 19	23. 0	S.E.	S.W.	90	
23. 7	23. 8	S.W.	N.N.W.	112½	
23. 9½	23. 10	N.N.W.	S.E.		202½
23. 12½	23. 15	S.E.	N.N.E.		472½
23. 22	23. 23	N.N.E.	N.E.	22½	
24. 4	24. 5	N.E.	N.N.E.		22½
24. 12	24. 16	N.N.E.	E.	67½	
24. 19½	25. 1	E.	N.N.E.		67½
25. 7	25. 9	N.N.E.	N.E.	22½	
25. 20	25. 23	N.E.	N.N.E.		22½
26. 9	26. 10	N.N.E.	N.E.	22½	
26. 23	27. 2	N.E.	N.N.E.		22½
27. 4	27. 8	N.N.E.	N.E.	22½	
28. 15¼	28. 15½	N.E.	E.S.E.	67½	
28. 20	28. 22½	E.S.E.	N.E.		67½
29. 1	29. 2	N.E.	N.N.E.		22½
29. 9	29. 10	N.N.E.	N.		22½
29. 11½	29. 13	N.	N.E.	45	
29. 16	29. 17½	N.E.	E.N.E.	22½	
29. 19	29. 20	E.N.E.	N.N.E.		45
30. 13	30. 13½	N.N.E.	N.E.	22½	
31. 0	31. 2	N.E.	N.		45
31. 6	31. 6½	N.	N.W.		45
31. 9	31. 9½	N.W.	W.S.W.		67½
31. 14	31. 15	W.S.W.	N.N.W.	90	
31. 22½	31. 24	N.N.W.	W.		67½
			Sums	1935	2250
August.					
1. 2½	1. 3	W.	W.N.W.	22½	
1. 5	1. 6	W.N.W.	W.S.W.		45
1. 7	1. 12	W.S.W.	N.N.W.	90	
1. 19½	1. 20	N.N.W.	N.N.E.	45	
2. 2	2. 3	N.N.E.	N.		22½
2. 21	2. 22	N.	N.N.E.	22½	
3. 3¾	3. 6	N.N.E.	W.S.W.	225	
3. 10	3. 11	W.S.W.	W.	22½	
3. 23½	4. 1½	W.	N.N.W.	67½	
4. 20½	4. 22	N.N.W.	N.N.E.	45	
5. 1½	5. 2½	N.N.E.	S.W.	202½	
5. 10	5. 10½	S.W.	W.S.W.	22½	
5. 14	5. 15	W.S.W.	S.W.		22½
6. 12	6. 14	S.W.	W.	45	
6. 18	6. 22	W.	S.W.		45
7. 3	7. 4	S.W.	W.S.W.	22½	
7. 16	7. 19	W.S.W.	S.S.W.		45
8. 13	8. 17	S.S.W.	W.S.W.	45	
8. 21	8. 22½	W.S.W.	S.W.		22½

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Aug.—cont.					
d h	d h				
9. 4½	9. 5½	S.W.	N.N.W.	112½	
9. 10	9. 11	N.N.W.	N.	22½	
9. 14½	9. 16	N.	N.N.E.	22½	
10. 9	10. 10	N.N.E.	N.E.	22½	
10. 14	10. 14½	N.E.	S.E.		270
10. 22½	11. 0	S.E.	S.S.E.	22½	
11. 5	11. 6	S.S.E.	S.E.		22½
11. 8	11. 9	S.E.	S.W.	90	
11. 16	11. 17	S.W.	W.S.W.	22½	
11. 18½	11. 19	W.S.W.	S.S.W.		45
12. 6½	12. 7	S.S.W.	S.W.	22½	
12. 9½	12. 10	S.W.	S.S.W.		22½
12. 18	12. 22	S.S.W.	S.S.E.		45
13. 6	13. 7	S.S.E.	S.S.W.	45	
14. 16	14. 18½	S.S.W.	S.		22½
14. 22	15. 1	S.	S.W.	45	
16. 2	16. 4	S.W.	S.S.W.		22½
16. 7¾	16. 8	S.S.W.	S.		22½
16. 10½	16. 13½	S.	E.		90
17. 0½	17. 4	E.	S.W.	135	
17. 18	17. 19	S.W.	S.		45
17. 21½	17. 22	S.	E.N.E.	247½	
18. 5	18. 8	E.N.E.	S.E.	67½	
18. 13	18. 17½	S.E.	N.E.	270	
18. 20½	18. 20¾	N.E.	S.W.		180
18. 21	18. 21¼	S.W.	S.E.	270	
19. 0	19. 1	S.E.	W.	135	
19. 2	19. 3½	W.	S.S.E.		112½
19. 6	19. 9	S.S.E.	W.S.W.	90	
19. 11½	19. 11¾	W.S.W.	N.	112½	
19. 15	19. 15½	N.	N.N.E.	22½	
19. 18	19. 18½	N.N.E.	S.	157½	
19. 20½	19. 23½	S.	N.N.W.	157½	
20. 10	20. 10½	N.N.W.	N.W.		22½
20. 13	20. 15	N.W.	S.W.		90
20. 23	21. 1	S.W.	S.S.W.		22½
21. 5	21. 6	S.S.W.	S.S.E.		45
21. 7½	21. 10	S.S.E.	S.S.W.	45	
21. 11½	21. 12	S.S.W.	S.W.	22½	
21. 19	21. 21	S.W.	S.S.W.		22½
21. 22½	21. 23	S.S.W.	S.W.	22½	
22. 1	22. 1¼	S.W.	S.		45
22. 2¾	22. 3	S.	N.E.		135
22. 6½	22. 6¾	N.E.	N.		45
22. 9¾	22. 10	N.	S.E.	135	
22. 13	22. 13½	S.E.	E.S.E.		22½
23. 3	23. 4	E.S.E.	E.		22½
24. 2	24. 3	E.	S.W.		225
24. 7	24. 9	S.W.	W.S.W.	22½	
24. 15	24. 17	W.S.W.	S.W.		22½
24. 21	24. 22	S.W.	W.S.W.	22½	
25. 14½	25. 16	W.S.W.	W.N.W.	45	
25. 20½	25. 22	W.N.W.	W.S.W.		45
26. 7	26. 8	W.S.W.	W.	22½	
26. 10	26. 11	W.	W.S.W.		22½
26. 20	26. 21	W.S.W.	S.W.		22½
27. 4	27. 4½	S.W.	S.S.W.		22½
27. 7	27. 9	S.S.W.	S.W.	22½	
27. 13	27. 15	S.W.	S.S.W.		22½

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Aug.—cont.					
d h	d h				
27. 18	27. 20	S.S.W.	S.W.	22½	
28. 4	28. 5½	S.W.	N.N.W.		247½
28. 14	28. 15¼	N.N.W.	W.S.W.		90
28. 18	28. 19	W.S.W.	S.W.		22½
28. 21¾	28. 22	S.W.	S.		45
29. 5½	29. 5¾	S.	S.E.		45
29. 8	29. 10	S.E.	S.S.W.	67½	
29. 15	29. 16	S.S.W.	S.		22½
29. 19½	29. 21	S.	S.S.W.	22½	
30. 10	30. 12	S.S.W.	S.W.	22½	
31. 3½	31. 4½	S.W.	S.S.W.		22½
31. 7	31. 8	S.S.W.	S.W.	22½	
			Sums	3487½	2452½
September.					
1. 22	2. 2	S.W.	S.S.W.		22½
2. 4	2. 7	S.S.W.	S.W.	22½	
3. 9	3. 11	S.W.	W.S.W.	22½	
3. 13	3. 13¾	W.S.W.	N.W.	67½	
3. 18	3. 20	N.W.	W.		45
4. 2	4. 7	W.	N.N.W.	67½	
5. 3	5. 5	N.N.W.	S.S.W.		135
5. 9½	5. 11½	S.S.W.	S.W.	22½	
5. 19	5. 20	S.W.	W.		45
5. 21½	6. 0	W.	S.W.	45	
6. 4½	6. 5	S.W.	S.S.W.		22½
6. 9¾	6. 10	S.S.W.	S.W.	22½	
6. 13½	6. 14	S.W.	S.S.W.		22½
7. 7	7. 8	S.S.W.	S.W.	22½	
7. 14	7. 15	S.W.	S.S.W.		22½
7. 18½	7. 19	S.S.W.	N.W.	112½	
8. 0	8. 1	N.W.	W.		45
8. 6	8. 9	W.	N.N.W.	67½	
8. 14	8. 15	N.N.W.	N.	22½	
8. 20½	8. 21	N.	S.S.W.	202½	
8. 23¾	9. 0	S.S.W.	S.W.	22½	
9. 6	9. 9	S.W.	W.S.W.	22½	
9. 12	9. 14	W.S.W.	N.W.	67½	
9. 16½	9. 18	N.W.	W.S.W.		67½
9. 22	9. 23	W.S.W.	S.W.		22½
10. 4	10. 5	S.W.	W.S.W.	22½	
10. 18	10. 18½	W.S.W.	S.W.		22½
10. 22	10. 22¼	S.W.	N.W.	90	
11. 3½	11. 5	N.W.	S.W.		90
11. 6½	11. 7	S.W.	S.		45
11. 8½	11. 9	S.	S.W.	45	
12. 1	12. 4	S.W.	S.S.W.		22½
12. 13½	12. 14½	S.S.W.	S.		22½
12. 18	12. 19	S.	S.S.E.		22½
12. 23	13. 3	S.S.E.	S.W.	67½	

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*continued.*

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
				°	°
Sept.—*cont.*					
d h	d h				
13. 17½	13. 18	S.W.	W.S.W.	22½	
13. 20	13. 21	W.S.W.	N.W.	67½	
14. 2½	14. 5	N.W.	S.W.		90
14. 18	14. 19	S.W.	S.S.W.		22½
15. 0	15. 1	S.S.W.	S.		22½
15. 5	15. 6	S.	S.S.W.	22½	
15. 12	15. 14	S.S.W.	S.		22½
15. 18	15. 19	S.	S.S.E.		22½
16. 6	16. 9	S.S.E.	S.S.W.	45	
16. 10	16. 11	S.S.W.	S.W.	22½	
16. 13½	16. 14	S.W.	W.S.W.	22½	
16. 21	16. 23	W.S.W.	W.	22½	
17. 5	17. 6	W.	N.N.W.	67½	
17. 15¼	17. 15½	N.N.W.	S.W.		112½
17. 19	17. 20	S.W.	S.S.W.		22½
18. 10	18. 13	S.S.W.	S.W.	22½	
18. 17	18. 18	S.W.	S.S.W.		22½
18. 20	18. 21	S.S.W.	S.W.	22½	
19. 7	19. 9	S.W.	W.S.W.	22½	
19. 13	19. 15	W.S.W.	S.W.		22½
19. 17	19. 18	S.W.	S.S.W.		22½
19. 21½	19. 23	S.S.W.	S.W.	22½	
20. 2	20. 2¾	S.W.	S.S.E.	292½	
20. 4¼	20. 4½	S.S.E.	E.		67½
20. 6	20. 6½	E.	N.E.		45
20. 8½	20. 9	N.E.	E.	45	
20. 11½	20. 12	E.	E.S.E.	22½	
20. 15	20. 19	E.S.E.	S.W.	112½	
21. 2	21. 3½	S.W.	S.S.E.		67½
21. 4½	21. 5¾	S.S.E.	E.		67½
21. 8	21. 9	E.	S.E.	45	
21. 14¾	21. 15	S.E.	S.S.W.	67½	
21. 16	21. 18	S.S.W.	N.E.		157½
21. 22	21. 23	N.E.	N.N.E.		22½
22. 9	22. 10½	N.N.E.	N.E.	22½	
22. 12	22. 14	N.E.	N.		45
23. 6½	23. 6¾	N.	N.W.		45
23. 9½	23. 11½	N.W.	W.S.W.		67½
23. 17	23. 18½	W.S.W.	S.		67½
24. 1	24. 1½	S.	S.W.	45	
24. 7	24. 10	S.W.	W.	45	
24. 17½	24. 19	W.	S.W.		45
25. 12	25. 13	S.W.	S.S.W.		22½
26. 0	26. 1	S.S.W.	S.W.	22½	
26. 13	26. 14	S.W.	S.S.W.		22½
26. 22	26. 23	S.S.W.	S.W.	22½	
27. 4	27. 6	S.W.	S.S.W.		22½
27. 22	27. 22½	S.S.W.	N.W.	112½	
28. 1½	28. 4	N.W.	S.W.		90
28. 9	28. 10	S.W.	W.S.W.	22½	
28. 18	28. 19	W.S.W.	S.W.		22½
29. 4	29. 7	S.W.	S.S.W.		22½
30. 10	30. 12	S.S.W.	W.S.W.	45	
30. 18	30. 19	W.S.W.	S.S.W.		45
			Sums	2340	2002½

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
				°	°
October.					
d h	d h				
1. 0½	1. 2½	S.S.W.	S.		22½
1. 9	1. 10½	S.	W.S.W.	67½	
1. 13	1. 14	W.S.W.	S.S.W.		45
2. 3	2. 5	S.S.W.	S.S.E.		45
2. 13¾	2. 14¼	S.S.E.	W.	112½	
2. 16½	2. 17	W.	W.S.W.		22½
3. 0	3. 3	W.S.W.	S.W.		22½
3. 7	3. 9	S.W.	W.S.W.	22½	
3. 14	3. 15	W.S.W.	S.W.		22½
4. 4	4. 5	S.W.	S.S.W.		22½
4. 7	4. 8	S.S.W.	S.W.	22½	
4. 12	4. 14	S.W.	S.		45
4. 15½	4. 18	S.	N.N.E.		157½
4. 22	4. 22½	N.N.E.	N.N.W.		45
5. 7½	5. 9½	N.N.W.	S.W.	247½	
5. 16	5. 20	S.W.	S.		45
5. 23	6. 1	S.	S.E.		45
6. 8	6. 9	S.E.	N.E.		90
6. 15	6. 15¼	N.E.	S.S.W.	157½	
6. 23	7. 0	S.S.W.	S.W.	22½	
8. 5	8. 8	S.W.	W.S.W.	22½	
8. 19	8. 20	W.S.W.	S.W.		22½
9. 1	9. 2	S.W.	S.S.W.		22½
9. 9	9. 12	S.S.W.	W.S.W.	45	
10. 11	10. 12	W.S.W.	W.N.W.	45	
10. 17	10. 18½	W.N.W.	W.S.W.		45
10. 22	10. 23	W.S.W.	S.W.		22½
11. 6	11. 8	S.W.	W.S.W.	22½	
11. 10	11. 11	W.S.W.	N.W.	67½	
11. 14¾	11. 15	N.W.	N.N.W.	22½	
12. 2	12. 3	N.N.W.	N.	22½	
13. 7	13. 9	N.	N.N.E.	22½	
13. 17	13. 18	N.N.E.	N.		22½
14. 0	14. 3½	N.	N.E.	45	
14. 5	14. 6	N.E.	E.S.E.	67½	
14. 23½	15. 1	E.S.E.	S.E.	22½	
15. 3¼	15. 3½	S.E.	N.E.		90
15. 12	15. 12¼	N.E.	S.E.	90	
15. 14	15. 14½	S.E.	N.N.E.	247½	
16. 5	16. 6½	N.N.E.	N.		22½
17. 12	17. 12½	N.	N.N.E.	22½	
17. 20	17. 21	N.N.E.	N.		22½
19. 5	19. 6	N.	N.N.W.		22½
19. 8½	19. 9	N.N.W.	S.W.		112½
19. 10½	19. 11	S.W.	N.N.W.	112½	
19. 14	19. 15	N.N.W.	N.W.		22½
19. 18	19. 21	N.W.	S.W.		90
20. 11	20. 13½	S.W.	W.	45	
20. 16½	20. 19	W.	S.W.		45
20. 21½	20. 22½	S.W.	W.S.W.	22½	
21. 15½	21. 17	W.S.W.	W.N.W.	45	
21. 21	21. 22	W.N.W.	N.W.	22½	
22. 16	22. 18½	N.W.	W.S.W.		67½
23. 9	23. 10	W.S.W.	W.	22½	
23. 12	23. 12½	W.	W.N.W.	22½	
23. 14½	23. 15	W.N.W.	W.		22½
23. 17½	23. 18	W.	W.S.W.		22½
23. 23	24. 2	W.S.W.	S.W.		22½
24. 8	24. 9	S.W.	W.S.W.	22½	

Greenwich Civil Time. From	Greenwich Civil Time. To	Change of Direction. From	Change of Direction. To	Amount of Motion. Direct.	Amount of Motion. Retrograde.
				°	°
Oct.—*cont.*					
d h	d h				
24. 13	24. 15	W.S.W.	N.W.	67½	
24. 17½	24. 18	N.W.	N.N.W.	22½	
24. 22	24. 22¼	N.N.W.	S.W.	247½	
24. 23¾	25. 0	S.W.	N.E.		180
25. 14	25. 17	N.E.	N.N.E.		22½
25. 23	26. 0	N.N.E.	N.		22½
26. 7¾	26. 8	N.	W.N.W.	292½	
26. 8¾	26. 10	W.N.W.	N.E.		247½
26. 11½	26. 12	N.E.	E.S.E.	67½	
26. 14	26. 15	E.S.E.	S.E.	22½	
26. 23	27. 0	S.E.	S.S.E.	22½	
27. 10½	27. 12	S.S.E.	S.	22½	
27. 23	28. 2	S.	S.S.W.	22½	
29. 21	29. 23	S.S.W.	S.W.	22½	
30. 3	30. 4	S.W.	N.N.W.	112½	
30. 8	30. 8½	N.N.W.	N.	22½	
30. 10	30. 13	N.	E.N.E.	67½	
30. 16	30. 19	E.N.E.	N.N.E.		45
31. 0	31. 1	N.N.E.	N.		22½
31. 15	31. 17	N.	N.N.E.	22½	
			Sums	2767½	1867½
November.					
1. 8	1. 9	N.N.E.	N.		22½
1. 11	1. 13	N.	N.N.E.	22½	
2. 0	2. 3½	N.N.E.	S.E.		247½
2. 12	2. 14	S.E.	S.S.E.	22½	
2. 20	2. 21	S.S.E.	S.	22½	
2. 23½	3. 1	S.	S.W.	45	
3. 4½	3. 5½	S.W.	S.S.W.		22½
3. 8	3. 10	S.S.W.	W.S.W.	45	
3. 15	3. 18	W.S.W.	S.S.W.		45
3. 21	3. 22	S.S.W.	S.		22½
4. 2	4. 4	S.	S.S.E.		22½
4. 6	4. 7	S.S.E.	S.	22½	
4. 20	4. 21	S.	S.S.W.	22½	
5. 1	5. 1½	S.S.W.	S.W.	22½	
5. 8	5. 9	S.W.	S.S.W.		22½
5. 20½	5. 21	S.S.W.	W.S.W.	45	
5. 23	6. 0	W.S.W.	S.S.W.		45
6. 8½	6. 10	S.S.W.	W.S.W.	45	
6. 18	6. 20	W.S.W.	S.W.		22½
7. 4	7. 8	S.W.	W.S.W.	22½	
7. 13	7. 14	W.S.W.	E.S.E.	225	
7. 16	7. 16¼	E.S.E.	N.E.		67½
7. 18	7. 18½	N.E.	S.E.	90	
8. 15	8. 17	S.E.	S.S.E.	22½	
9. 4	9. 5½	S.S.E.	S.E.		22½
9. 11	9. 12	S.E.	S.S.E.	22½	
10. 23	11. 1	S.S.E.	W.		247½
11. 6	11. 6¼	W.	N.	90	
11. 10	11. 11	N.	N.E.	45	
11. 16	11. 16½	N.E.	E.N.E.	22½	
12. 0¾	12. 1	E.N.E.	N.E.		22½
12. 11½	12. 12	N.E.	S.	135	
12. 15	12. 16	S.	E.N.E.	247½	
12. 18	12. 19	E.N.E.	S.E.	67½	

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*continued.*

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Nov.—*cont.*					
d h	d h				
13. 5	13. 9	S.E.	S.	45	
14. 22	15. 1	S.	S.S.W.	22½	
15. 10¾	15. 11	S.S.W.	W.S.W.	45	
15. 13½	15. 14½	W.S.W.	S.W.		22½
15. 16½	15. 17½	S.W.	S.E.		90
15. 19½	15. 19¾	S.E.	E.N.E.		67½
15. 22¼	15. 22¼	E.N.E.	W.S.W.	180	
15. 23	16. 1	W.S.W.	E.		157½
16. 2	16. 4	E.	S.S.W.	112½	
16. 8	16. 9	S.S.W.	N.	157½	
16. 22	17. 0	N.	N.N.W.		22½
18. 4½	18. 5	N.N.W.	S.W.		112½
18. 13	18. 14½	S.W.	S.E.		90
18. 21	18. 22½	S.E.	E.N.E.		67½
19. 1	19. 2	E.N.E.	S.E.	67½	
19. 15½	19. 17½	S.E.	E.		45
20. 3	20. 5	E.	W.S.W.	157½	
20. 11½	20. 12	W.S.W.	S.W.		22½
20. 15¾	20. 16	S.W.	E.		135
21. 2	21. 3	E.	E.N.E.		22½
21. 16	21. 20	E.N.E.	S.E.	67½	
22. 2	22. 4	S.E.	E.		45
22. 7	22. 8	E.	E.S.E.	22½	
22. 12	22. 15	E.S.E.	E.N.E.		45
22. 20	22. 21½	E.N.E.	E.	22½	
23. 17½	23. 20	E.	E.S.E.	22½	
23. 23	23. 23½	E.S.E.	S.S.E.	45	
24. 8	24. 9	S.S.E.	S.W.	67½	
24. 12	24. 13	S.W.	W.S.W.	22½	
24. 18	24. 18½	W.S.W.	N.N.E.	135	
24. 22½	24. 23	N.N.E.	N.E.	22½	
25. 7	25. 9	N.E.	S.E.	90	
25. 11	25. 11½	S.E.	E.S.E.		22½
26. 10	26. 11½	E.S.E.	S.	67½	
26. 14½	26. 16½	S.	W.	90	
26. 17½	26. 18½	W.	N.W.	45	
26. 20	26. 20¾	N.W.	W.		45
27. 1½	27. 4	W.	N.	90	
27. 13	27. 13½	N.	S.W.	225	
28. 3	28. 6	S.W.	W.S.W.	22½	
28. 15	28. 16	W.S.W.	S.W.		22½
29. 17	29. 18	S.W.	W.S.W.	22½	
30. 10	30. 12	W.S.W.	W.N.W.	45	
30. 16	30. 17	W.N.W.	S.W.		67½
			Sums	3217½	1935

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
December.					
d h	d h				
1. 12	1. 13	S.W.	S.S.W.		22½
1. 15	1. 16	S.S.W.	S.W.	22½	
1. 18½	1. 19	S.W.	N.N.W.	112½	
1. 21½	1. 22½	N.N.W.	N.	22½	
2. 3	2. 5	N.	N.N.E.	22½	
2. 12	2. 13	N.N.E.	E.N.E.	45	
2. 15	2. 16	E.N.E.	E.	22½	
2. 19½	2. 20½	E.	E.S.E.	22½	
3. 7	3. 8	E.S.E.	S.S.W.	90	
3. 11	3. 14	S.S.W.	W.S.W.	45	
4. 10½	4. 12½	W.S.W.	W.N.W.	45	
4. 18	4. 19	W.N.W.	W.S.W.		45
5. 4	5. 6½	W.S.W.	W.	22½	
5. 11	5. 12½	W.	W.N.W.	22½	
5. 15½	5. 16½	W.N.W.	W.S.W.		45
5. 19	5. 20	W.S.W.	W.N.W.	45	
5. 21½	5. 23	W.N.W.	W.S.W.		45
6. 12	6. 13	W.S.W.	W.N.W.	45	
6. 16½	6. 18	W.N.W.	W.S.W.		45
6. 23	7. 4	W.S.W.	N.	112½	
8. 8	8. 8½	N.	N.N.W.		22½
8. 10¼	8. 10½	N.N.W.	S.W.		112½
8. 11½	8. 13½	S.W.	W.N.W.	67½	
8. 15½	8. 18	W.N.W.	S.W.		67½
9. 5	9. 8	S.W.	N.	135	
9. 10	9. 11	N.	N.N.W.		22½
10. 12	10. 14	N.N.W.	S.W.		112½
10. 16	10. 17	S.W.	S.		45
11. 3	11. 4	S.	S.W.	45	
11. 10	11. 12	S.W.	W.S.W.	22½	
12. 4	12. 5	W.S.W.	S.W.		22½
12. 15	12. 15¼	S.W.	N.W.	90	
12. 21	12. 22	N.W.	W.N.W.		22½
13. 0½	13. 1½	W.N.W.	W.S.W.		45
13. 6	13. 7½	W.S.W.	N.W.	67½	
13. 18	13. 19	N.W.	W.S.W.		67½
13. 22	13. 23	W.S.W.	S.W.		22½
14. 2¾	14. 3	S.W.	S.S.W.		22½
14. 12	14. 13½	S.S.W.	S.W.	22½	
14. 18	14. 19	S.W.	W.S.W.	22½	
15. 17	15. 20	W.S.W.	W.	22½	
15. 23	16. 0	W.	N.W.	45	
16. 2	16. 3	N.W.	S.W.		90
16. 6	16. 8	S.W.	S.		45
16. 10	16. 11	S.	S.S.W.	22½	
16. 13	16. 14	S.S.W.	S.W.	22½	

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Dec.—*cont.*					
d h	d h				
17. 10	17. 12	S.W.	W.S.W.	22½	
19. 13	19. 14	W.S.W.	W.	22½	
19. 18	19. 19	W.	E.N.E.		202½
19. 20½	19. 21	E.N.E.	W.S.W.	180	
20. 4	20. 7	W.S.W.	S.	292½	
20. 9	20. 10	S.	S.W.	45	
20. 12	20. 13	S.W.	S.S.W.		22½
20. 15½	20. 15¾	S.S.W.	N.E.		157½
20. 18½	20. 19	N.E.	S.S.W.	157½	
21. 1¾	21. 2	S.S.W.	N.N.E.		180
21. 4	21. 5	N.N.E.	S.S.W.	180	
21. 11	21. 11¼	S.S.W.	N.N.E.		180
21. 12	21. 13	N.N.E.	E.N.E.	45	
21. 16	21. 16¼	E.N.E.	S.E.	67½	
21. 23	22. 0	S.E.	N.E.		90
22. 5½	22. 6	N.E.	E.	45	
22. 20	22. 21	E.	E.S.E.	22½	
23. 14	23. 14½	E.S.E.	E.		22½
24. 19	24. 20	E.	E.S.E.	22½	
25. 0	25. 1	E.S.E.	E.		22½
25. 16	25. 19	E.	N.E.		45
26. 4	26. 8	N.E.	N.N.E.		22½
26. 19½	26. 20	N.N.E.	N.N.W.		45
26. 23	27. 0½	N.N.W.	S.W.		112½
27. 13	27. 14	S.W.	N.N.W.	112½	
27. 18	27. 20	N.N.W.	N.W.		22½
28. 1	28. 2	N.W.	S.W.		90
28. 19	28. 20	S.W.	N.E.		180
28. 21	28. 21¼	N.E.	N.N.W.		67½
28. 22½	28. 23½	N.N.W.	S.S.E.		180
29. 4¾	29. 5	S.S.E.	E.N.E.		90
29. 7¼	29. 7½	E.N.E.	E.S.E.	45	
29. 12	29. 13	E.S.E.	S.S.E.	45	
29. 15½	29. 15¾	S.S.E.	E.		67½
30. 0½	30. 0¾	E.	E.N.E.		22½
30. 5	30. 5¼	E.N.E.	E.	22½	
30. 8	30. 9	E.	E.N.E.		22½
30. 17½	30. 19	E.N.E.	E.	22½	
31. 7	31. 8	E.	E.S.E.	22½	
31. 14	31. 14½	E.S.E.	E.		22½
31. 16	31. 17	E.	E.N.E.		22½
31. 21	31. 23	E.N.E.	E.	22½	
			Sums	2677½	2812½

ABSTRACT of the CHANGES of the DIRECTION of the WIND—*concluded.*

EXCESS of MOTION in each MONTH.

1892.	Direct. °	Retrograde. °	1892.	Direct. °	Retrograde. °
January		22½	July		315
February	832½		August	1035	
March	67½		September	337½	
April	1260		October	900	
May	1080		November	1282½	
June	1080		December		135

The whole excess of direct motion for the year was 7402½°.

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	1892.												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	11·8	10·8	9·9	8·0	9·8	8·1	9·7	9·1	9·1	10·1	7·3	9·8	9·5
2	10·9	10·6	10·9	7·8	9·4	8·1	9·5	8·5	8·7	10·9	8·1	10·6	9·5
3	10·5	10·3	10·3	7·7	8·1	8·4	9·5	8·0	8·2	10·9	7·9	10·3	9·2
4	11·1	10·7	10·7	7·9	8·2	8·1	9·0	8·4	8·6	11·5	8·2	10·2	9·4
5	11·5	10·5	10·3	7·6	8·1	7·7	8·9	8·2	8·9	11·1	7·1	9·8	9·1
6	12·1	10·2	10·8	7·4	8·8	8·0	9·5	8·1	8·2	10·5	7·8	9·8	9·3
7	11·4	10·1	10·6	7·4	9·0	9·2	10·1	8·0	8·9	10·3	8·1	9·4	9·4
8	12·3	10·9	11·0	7·7	10·2	10·3	11·0	9·1	9·7	10·3	7·7	9·9	10·0
9	11·7	10·8	12·1	8·7	10·9	11·2	11·5	10·1	9·9	10·4	7·4	10·2	10·4
10	11·8	12·0	13·6	10·3	12·1	12·2	12·7	11·2	11·7	11·7	8·1	11·3	11·5
11	13·1	13·1	14·5	11·8	14·3	13·0	13·0	12·5	13·4	12·6	8·5	11·8	12·6
Noon.	14·1	15·4	14·8	12·7	14·8	13·8	13·7	12·9	14·3	14·2	9·1	13·0	13·6
h 13	14·5	15·3	15·0	12·6	15·3	14·4	13·9	13·2	14·3	13·9	9·4	13·0	13·7
14	13·9	14·8	14·5	13·2	14·5	14·8	14·0	12·8	14·2	14·0	9·9	12·4	13·6
15	14·1	14·0	14·5	12·7	14·8	14·9	13·7	13·5	13·6	13·9	8·9	11·6	13·4
16	12·9	13·7	14·2	13·3	14·7	14·5	13·7	13·4	12·8	13·4	8·9	12·1	13·1
17	12·5	13·2	13·6	12·8	14·6	13·5	13·2	12·4	12·0	12·2	8·8	12·0	12·6
18	12·1	13·6	13·9	12·6	14·1	13·7	12·5	11·3	10·4	11·6	8·4	12·0	12·2
19	12·3	13·3	12·3	11·2	12·5	12·9	11·9	10·8	10·3	10·6	9·2	12·1	11·6
20	11·8	13·0	11·3	9·0	10·7	11·1	12·0	10·8	10·1	10·5	8·6	11·7	10·9
21	11·7	13·0	11·6	8·1	10·3	9·7	10·9	9·9	9·2	10·7	8·7	11·4	10·4
22	11·2	12·8	10·5	7·7	10·7	8·8	10·9	9·1	9·4	10·8	8·2	10·7	10·1
23	11·9	12·5	10·0	7·9	9·6	8·5	10·9	9·4	9·5	11·4	7·6	11·0	10·0
Midnight.	11·5	11·7	9·5	7·6	8·9	8·5	10·2	9·2	9·0	11·0	7·2	10·7	9·6
Means	12·2	12·3	12·1	9·7	11·4	11·0	11·5	10·4	10·6	11·6	8·3	11·1	11·0
Greatest Hourly Measures	43	36	31	32	34	29	35	31	29	37	26	33	...
Least Hourly Measures	0	0	0	0	0	1	0	0	1	0	0	0	...

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.)

1892.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	+1047	+ 213	+ 260	+ 937	+ 272	+ 349	+ 253	+ 339	+ 594	+ 106	+ 815	+ 310
2	+1228	+ 521	+ 354	+1048	+ 111	+ 384	+ 494	+ 384	+ 287	+ 125	+ 825	+ 578
3	+ 890	+ 575	...	+1082	+ 301	+ 334	+ 288	+ 223	+ 532	+ 288	+ 404	+ 213
4	+1175	+ 850	+ 822	+ 707	+ 247	+ 510	+ 265	+ 386	+ 740	+ 138	+ 127	+ 609
5	+1130	+ 723	+1085	+ 596	+ 545	+ 87	+ 174	+ 425	+ 582	+ 288	+ 167	+ 674
6	+1010	+ 544	+ 742	+ 483	+ 666	+ 317	+ 357	+ 335	+ 618	+ 200	+ 220	+ 538
7	+1099	+ 178	...	+ 676	+ 363	+ 416	+ 212	+ 513	+ 337	+ 292	+ 631	+ 652
8	+1091	+ 210	...	+ 474	+ 446	+ 700	+ 181	+ 383	+ 634	+ 457	+ 816	+ 585
9	...	+ 155	+ 805	+ 495	+ 451	+ 568	+ 364	+ 686	+ 321	+ 175	+ 330	+ 463
10	...	...	+ 485	+ 699	+ 389	+ 616	+ 379	+ 778	+ 242	+ 363	+ 403	+ 753
11	...	+ 151	+ 717	+ 823	+ 339	+ 248	+ 336	+ 324	+ 457	+ 457	+ 246	+ 470
12	+ 836	+ 181	+ 466	+ 825	+ 529	+ 164	+ 227	+ 703	+ 294	+ 472	+ 206	+ 433
13	+ 948	+ 413	+ 737	+ 397	+ 478	+ 563	+ 401	+ 431	+ 220	+ 374	+ 105	+ 661
14	+1339	+ 172	+ 750	+ 928	+ 347	+ 688	+ 432	+ 483	+ 471	+ 260	+ 135	+ 489
15	+ 844	+ 131	− 150	+ 644	+ 546	+ 665	+ 243	+ 432	+ 433	+ 334	+ 90	+ 318
16	+ 747	+ 542	+ 415	+ 495	+ 129	+ 217	+ 416	+ 890	+ 374	+ 213	− 261	+ 439
17	+ 298	...	+ 414	+ 535	+ 478	+ 398	+ 180	+ 664	+ 502	+ 565	+ 522	+ 350
18	+ 354	+ 893	+ 643	+ 205	+ 278	+ 443	+ 131	+ 454	+ 520	+ 858	+ 806	+ 431
19	+ 709	+ 730	+ 775	+ 320	+ 125	+ 289	− 63	+ 199	+ 397	+ 630	+ 446	+ 356
20	+ 737	+ 458	+ 688	+ 224	+ 123	+ 452	+ 364	+ 341	+ 333	+ 649	+ 308	+ 355
21	+ 859	− 9	...	+ 285	+ 288	+ 626	+ 533	+ 503	...	+ 294	+ 442	+ 510
22	+ 321	+ 223	...	+ 268	+ 525	+ 459	+ 143	+ 575	...	+ 747	+ 221	+ 612
23	+ 283	+ 235	+ 540	+ 415	+ 484	+ 78	+ 205	+ 619	+ 353	+1019	+ 319	+ 694
24	+ 518	+ 184	+ 669	+ 337	+ 570	+ 629	+ 435	+ 348	+ 402	+ 919	+ 238	+ 950
25	+ 616	+ 201	+ 576	+ 23	+ 308	+ 580	+ 587	+ 321	+ 527	+ 695	+ 408	+1117
26	+ 627	+ 167	+ 342	+ 442	+ 264	+ 471	+ 475	+ 505	+ 457	+1021	+ 249	+1096
27	+ 187	+ 165	+ 231	+ 365	+ 323	+ 416	+ 361	+ 408	+ 280	+ 250	+ 392	...
28	+ 457	+ 298	+ 601	+ 329	+ 340	+ 673	+ 444	+ 400	+ 431	+ 82	+ 278	...
29	+ 236	...	+ 910	+ 799	+ 392	+ 222	+ 432	+ 320	+ 204	+ 158	+ 290	+1011
30	+ 214		+ 810	+ 477	+ 277	+ 531	+ 502	+ 377	+ 183	+ 323	+ 539	...
31	+ 193		+1082		+ 400		+ 536	+ 383		+ 231		...
Means ...	+ 714	+ 350	+ 606	+ 544	+ 366	+ 436	+ 332	+ 456	+ 419	+ 419	+ 357	+ 580

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 arbitrary: the sign + indicates positive potential.)

Hour, Greenwich Civil Time.	1892.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight.	+ 718	+ 332	+ 583	+ 716	+ 482	+ 402	+ 460	+ 594	+ 506	+ 445	+ 378	+ 528	+ 512
1h.	+ 689	+ 311	+ 538	+ 595	+ 556	+ 535	+ 446	+ 545	+ 489	+ 455	+ 352	+ 541	+ 504
2	+ 671	+ 304	+ 546	+ 746	+ 500	+ 544	+ 420	+ 499	+ 467	+ 417	+ 358	+ 538	+ 501
3	+ 643	+ 283	+ 545	+ 735	+ 501	+ 519	+ 429	+ 484	+ 414	+ 382	+ 335	+ 531	+ 483
4	+ 586	+ 283	+ 551	+ 651	+ 488	+ 510	+ 456	+ 452	+ 363	+ 363	+ 313	+ 522	+ 461
5	+ 527	+ 270	+ 606	+ 630	+ 447	+ 553	+ 489	+ 425	+ 372	+ 337	+ 314	+ 516	+ 457
6	+ 475	+ 258	+ 627	+ 720	+ 440	+ 624	+ 465	+ 431	+ 366	+ 335	+ 321	+ 516	+ 465
7	+ 480	+ 241	+ 587	+ 600	+ 424	+ 613	+ 510	+ 506	+ 400	+ 301	+ 338	+ 545	+ 462
8	+ 491	+ 219	+ 491	+ 629	+ 398	+ 518	+ 448	+ 484	+ 405	+ 283	+ 307	+ 568	+ 437
9	+ 530	+ 236	+ 442	+ 478	+ 334	+ 320	+ 354	+ 329	+ 399	+ 249	+ 300	+ 573	+ 379
10	+ 648	+ 337	+ 532	+ 414	+ 213	+ 206	+ 283	+ 443	+ 431	+ 260	+ 305	+ 617	+ 391
11	+ 720	+ 376	+ 615	+ 431	+ 132	+ 280	+ 242	+ 448	+ 374	+ 363	+ 262	+ 600	+ 404
Noon.	+ 740	+ 395	+ 578	+ 342	+ 131	+ 311	+ 305	+ 443	+ 397	+ 343	+ 345	+ 634	+ 414
13h	+ 818	+ 415	+ 583	+ 392	+ 91	+ 203	+ 138	+ 421	+ 414	+ 425	+ 390	+ 631	+ 410
14	+ 821	+ 374	+ 593	+ 374	+ 111	+ 347	+ 201	+ 383	+ 379	+ 383	+ 409	+ 641	+ 418
15	+ 804	+ 415	+ 595	+ 463	+ 197	+ 373	+ 164	+ 358	+ 392	+ 378	+ 380	+ 622	+ 428
16	+ 787	+ 415	+ 599	+ 429	+ 205	+ 284	+ 78	+ 300	+ 361	+ 476	+ 351	+ 587	+ 406
17	+ 830	+ 428	+ 684	+ 445	+ 223	+ 387	+ 219	+ 261	+ 384	+ 521	+ 370	+ 601	+ 446
18	+ 870	+ 450	+ 723	+ 396	+ 306	+ 307	+ 233	+ 295	+ 396	+ 512	+ 411	+ 617	+ 460
19	+ 863	+ 451	+ 745	+ 527	+ 376	+ 475	+ 210	+ 466	+ 476	+ 569	+ 374	+ 626	+ 513
20	+ 865	+ 407	+ 688	+ 468	+ 508	+ 474	+ 271	+ 514	+ 475	+ 563	+ 378	+ 639	+ 521
21	+ 895	+ 390	+ 705	+ 589	+ 599	+ 491	+ 284	+ 592	+ 456	+ 600	+ 423	+ 610	+ 553
22	+ 868	+ 417	+ 746	+ 641	+ 615	+ 616	+ 395	+ 645	+ 457	+ 575	+ 450	+ 574	+ 583
23	+ 798	+ 398	+ 654	+ 651	+ 497	+ 584	+ 466	+ 623	+ 477	+ 515	+ 410	+ 550	+ 552
24	+ 669	+ 340	+ 578	+ 684	+ 491	+ 400	+ 465	+ 586	+ 475	+ 458	+ 393	+ 552	+ 508
Means 0h.–23h.	+ 714	+ 350	+ 606	+ 544	+ 366	+ 436	+ 332	+ 456	+ 419	+ 419	+ 357	+ 580	+ 465
Means 1h.–24h.	+ 712	+ 351	+ 606	+ 543	+ 366	+ 436	+ 332	+ 456	+ 417	+ 419	+ 358	+ 581	+ 465
Number of Days employed.	28	26	26	30	31	30	31	31	28	31	30	27	...

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.	1892. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.
Midnight.	+ 318	+ 314	+ 449	+ 842	+ 294	+ 438	+ 568	+ 617	+ 411	+ 325	+ 259	+ 514	+ 446
$1^{h.}$	+ 402	+ 302	+ 346	+ 295	+ 520	+ 472	+ 525	+ 538	+ 386	+ 274	+ 185	+ 485	+ 394
2	+ 372	+ 286	+ 370	+ 748	+ 349	+ 511	+ 370	+ 482	+ 320	+ 195	+ 213	+ 456	+ 389
3	+ 328	+ 269	+ 361	+ 718	+ 367	+ 459	+ 401	+ 452	+ 224	+ 158	+ 225	+ 424	+ 365
4	+ 280	+ 278	+ 314	+ 445	+ 420	+ 448	+ 475	+ 410	+ 175	+ 171	+ 211	+ 412	+ 337
5	+ 230	+ 252	+ 400	+ 370	+ 278	+ 483	+ 465	+ 371	+ 229	+ 166	+ 228	+ 425	+ 325
6	+ 220	+ 218	+ 447	+ 613	+ 180	+ 553	+ 225	+ 308	+ 216	+ 164	+ 233	+ 426	+ 317
7	+ 264	+ 198	+ 426	+ 165	+ 184	+ 545	+ 418	+ 413	+ 239	+ 165	+ 245	+ 448	+ 309
8	+ 284	+ 178	+ 294	+ 471	+ 271	+ 434	+ 372	+ 422	+ 229	+ 147	+ 230	+ 495	+ 319
9	+ 336	+ 203	+ 230	+ 169	+ 241	+ 73	+ 303	+ 198	+ 278	+ 125	+ 232	+ 521	+ 242
10	+ 360	+ 286	+ 339	+ 26	+ 58	− 159	+ 203	+ 487	+ 374	+ 51	+ 243	+ 576	+ 237
11	+ 452	+ 283	+ 577	+ 80	− 74	+ 197	+ 322	+ 495	+ 304	+ 201	+ 131	+ 525	+ 291
Noon.	+ 608	+ 254	+ 293	− 46	+ 48	+ 276	+ 469	+ 478	+ 286	+ 54	+ 265	+ 564	+ 296
$13^{h.}$	+ 580	+ 255	+ 240	+ 179	− 48	− 112	− 200	+ 498	+ 333	+ 202	+ 302	+ 541	+ 231
14	+ 590	+ 167	+ 236	+ 69	+ 39	+ 278	+ 123	+ 481	+ 261	+ 206	+ 292	+ 526	+ 272
15	+ 540	+ 290	+ 190	+ 410	+ 316	+ 390	+ 29	+ 477	+ 340	+ 258	+ 263	+ 511	+ 335
16	+ 434	+ 338	+ 219	+ 303	+ 262	+ 115	− 263	+ 393	+ 355	+ 327	+ 212	+ 474	+ 264
17	+ 422	+ 374	+ 504	+ 425	+ 207	+ 381	+ 174	+ 312	+ 351	+ 280	+ 194	+ 493	+ 343
18	+ 520	+ 385	+ 569	+ 123	+ 327	+ 129	+ 91	+ 277	+ 238	+ 319	+ 236	+ 512	+ 311
19	+ 556	+ 408	+ 586	+ 582	+ 389	+ 506	− 81	+ 602	+ 377	+ 410	+ 155	+ 557	+ 421
20	+ 598	+ 361	+ 354	+ 137	+ 506	+ 382	+ 52	+ 588	+ 406	+ 371	+ 128	+ 555	+ 370
21	+ 658	+ 298	+ 381	+ 500	+ 552	+ 288	+ 9	+ 605	+ 344	+ 453	+ 213	+ 461	+ 397
22	+ 678	+ 338	+ 516	+ 465	+ 530	+ 565	+ 295	+ 623	+ 306	+ 386	+ 238	+ 310	+ 437
23	+ 672	+ 313	+ 436	+ 344	+ 253	+ 543	+ 506	+ 553	+ 395	+ 340	+ 189	+ 226	+ 397
24	+ 640	+ 252	+ 349	+ 515	+ 390	+ 99	+ 559	+ 521	+ 409	+ 285	+ 174	+ 289	+ 374
Means $0^{h.}$–$23^{h.}$	+ 446	+ 285	+ 378	+ 351	+ 270	+ 341	+ 244	+ 462	+ 307	+ 239	+ 222	+ 477	+ 335
Means $1^{h.}$–$24^{h.}$	+ 459	+ 283	+ 374	+ 338	+ 274	+ 327	+ 243	+ 458	+ 307	+ 238	+ 218	+ 467	+ 332
Number of Days employed.	5	13	7	8	9	11	8	13	10	12	13	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.	1892.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight.	+ 798	+ 358	+ 673	+ 755	+ 622	+ 604	+ 454	+ 591	+ 595	+ 660	+ 417	+ 561	+ 591
$1^{h.}$	+ 756	+ 370	+ 631	+ 721	+ 584	+ 582	+ 438	+ 563	+ 581	+ 776	+ 393	+ 587	+ 582
2	+ 752	+ 380	+ 648	+ 757	+ 563	+ 589	+ 456	+ 512	+ 582	+ 768	+ 339	+ 604	+ 579
3	+ 755	+ 346	+ 654	+ 761	+ 563	+ 578	+ 454	+ 504	+ 550	+ 719	+ 298	+ 619	+ 567
4	+ 694	+ 350	+ 675	+ 753	+ 514	+ 553	+ 452	+ 479	+ 495	+ 686	+ 293	+ 606	+ 546
5	+ 621	+ 336	+ 721	+ 749	+ 509	+ 586	+ 497	+ 468	+ 479	+ 641	+ 324	+ 583	+ 543
6	+ 567	+ 338	+ 736	+ 778	+ 536	+ 647	+ 540	+ 540	+ 475	+ 683	+ 328	+ 581	+ 562
7	+ 562	+ 298	+ 685	+ 776	+ 500	+ 627	+ 521	+ 601	+ 503	+ 699	+ 342	+ 616	+ 561
8	+ 546	+ 238	+ 601	+ 704	+ 421	+ 546	+ 463	+ 546	+ 503	+ 631	+ 311	+ 630	+ 512
9	+ 577	+ 216	+ 558	+ 598	+ 349	+ 447	+ 371	+ 433	+ 453	+ 489	+ 288	+ 627	+ 450
10	+ 724	+ 386	+ 632	+ 535	+ 267	+ 405	+ 290	+ 421	+ 453	+ 492	+ 294	+ 674	+ 464
11	+ 794	+ 516	+ 647	+ 530	+ 197	+ 348	+ 208	+ 452	+ 395	+ 637	+ 321	+ 678	+ 477
Noon.	+ 843	+ 586	+ 696	+ 482	+ 170	+ 309	+ 236	+ 441	+ 424	+ 777	+ 400	+ 687	+ 504
$13^{h.}$	+ 861	+ 668	+ 738	+ 472	+ 117	+ 351	+ 233	+ 420	+ 438	+ 776	+ 421	+ 679	+ 514
14	+ 864	+ 724	+ 747	+ 494	+ 110	+ 370	+ 208	+ 383	+ 451	+ 772	+ 466	+ 701	+ 524
15	+ 870	+ 742	+ 750	+ 482	+ 122	+ 351	+ 197	+ 352	+ 403	+ 791	+ 468	+ 693	+ 518
16	+ 880	+ 668	+ 738	+ 468	+ 162	+ 360	+ 198	+ 307	+ 352	+ 836	+ 459	+ 663	+ 508
17	+ 931	+ 638	+ 764	+ 439	+ 213	+ 393	+ 238	+ 294	+ 396	+ 814	+ 501	+ 678	+ 525
18	+ 939	+ 746	+ 829	+ 497	+ 285	+ 443	+ 271	+ 347	+ 475	+ 749	+ 552	+ 695	+ 569
19	+ 917	+ 784	+ 866	+ 503	+ 372	+ 501	+ 283	+ 410	+ 523	+ 773	+ 533	+ 686	+ 596
20	+ 892	+ 724	+ 887	+ 595	+ 522	+ 551	+ 324	+ 484	+ 509	+ 767	+ 508	+ 705	+ 622
21	+ 910	+ 724	+ 916	+ 636	+ 632	+ 632	+ 390	+ 571	+ 501	+ 764	+ 484	+ 698	+ 655
22	+ 877	+ 766	+ 915	+ 712	+ 663	+ 655	+ 453	+ 657	+ 518	+ 763	+ 554	+ 709	+ 687
23	+ 792	+ 776	+ 858	+ 700	+ 614	+ 589	+ 453	+ 696	+ 516	+ 756	+ 558	+ 714	+ 669
24	+ 698	+ 720	+ 829	+ 652	+ 588	+ 530	+ 429	+ 668	+ 520	+ 739	+ 498	+ 681	+ 629
Means $0^{h.}$–$23^{h.}$	+ 780	+ 528	+ 732	+ 621	+ 400	+ 501	+ 359	+ 478	+ 482	+ 717	+ 411	+ 653	+ 555
Means $1^{h.}$–$24^{h.}$	+ 776	+ 543	+ 738	+ 616	+ 399	+ 498	+ 358	+ 481	+ 479	+ 721	+ 414	+ 658	+ 557
Number of Days employed.	14	5	16	19	19	15	18	14	15	9	9	16	...

AMOUNT of RAIN COLLECTED in EACH MONTH of the YEAR 1892.

MONTH, 1892.	Number of Rainy Days.	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.		
		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	11	0·098	0·106	0·258	0·319	0·391	0·384	0·401	0·402
February	19	0·995	1·032	1·270	1·385	1·552	1·688	1·637	1·668
March	12	0·407	0·397	0·681	0·906	1·060	1·089	1·090	1·110
April	10	0·445	0·469	0·843	1·190	1·405	1·421	1·415	1·443
May	11	1·241	1·278	1·442	1·555	1·653	1·656	1·642	1·654
June	14	1·516	1·546	1·936	2·169	2·243	2·268	2·211	2·249
July	12	0·888	0·849	1·291	1·488	1·533	1·536	1·541	1·575
August	16	2·121	2·126	2·716	2·982	3·046	3·026	3·029	3·121
September	14	1·451	1·395	1·714	1·923	2·064	2·010	2·012	2·057
October	22	2·345	2·442	3·201	3·758	3·993	3·879	3·915	3·952
November	18	1·496	1·554	1·920	2·186	2·291	2·212	2·284	2·296
December	11	0·544	0·493	0·843	0·978	1·121	1·144	1·177	1·211
Sums	170	13·547	13·687	18·115	20·839	22·352	22·313	22·354	22·738
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. 0. 5
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. 155. 3	ft. in. 155. 3	ft. in. 155. 3

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

LUMINOUS METEORS.

1892.

Month and Day, 1892.		Greenwich Civil Time.	Observer.	Apparent Size 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.	No. for Reference.
		h m s				s		°	
August	5	23. 50. 0	B.	3	...	...	...	...	1
	”	23. 55. 0	B.	1–2	...	...	...	...	2
August	11	3. 10. 0	B.	> 1	...	...	...	...	3
	”	22. 15. 0	B.	1	...	...	...	...	4
	”	22. 29. 50	E.	> 1	Bluish-white	0·3	...	...	5
	”	22. 40. 0	B.	1–2	...	...	...	...	6
August	12	22. 50½.	C.	1	Yellowish	0·7	None	8	7
	”	23. 36. 29	M.	2	Bluish-white	0·5	None	6	8
August	13	0. 3. 17	C.	> 1	Yellowish	1·0	Bright: remained visible for about 7 secs.	10	9
	”	0. 17. 31	M. & C.	2	Bluish-white	0·3	None	5	10
	”	0. 28. 25	M.	2	Bluish-white	0·4	None	8	11
	”	0. 57. 31	C.	2	Yellowish	0·3	None	6	12
	”	1. 3. 24	M.	1	Bluish-white	0·5	Slight	10	13
	”	1. 6. 14	C.	2	Bluish-white	0·7	None	8	14
November	14	23. 57. 56	A.	3	Bluish-white	0·2	None	5	15

No for Reference.	Path of Meteor through the Stars.
1	Starting from a point about midway between γ Persei and θ Persei, kept a course pointing directly from ε Cassiopeiæ, and disappeared just after crossing a line joining α Persei and β Persei.
2	Started from a point almost due East at an altitude of 60° and disappeared in direction of the zenith. No bright stars near enough for reference.
3	Due East: fell vertically from altitude of about 50° to 30°.
4	From a point 15° vertically above Mars to a point 10° West of Mars.
5	Shot from a point a few degrees to the left of α Persei in direction of a line joining α Persei and a point 2° or 3° below γ Andromedæ, moving to the left.
6	From a point midway between η Ursæ Majoris and Arcturus to a point 2° or 3° below Arcturus.
7	From a point 2° to right of ρ Persei fell towards the horizon, describing a slightly curved path.
8	From a little to right of ε Persei described a path parallel to a line joining β and ε Persei.
9	From a point near ι Draconis moved towards β Boötis.
10	From near ζ Herculis fell downwards.
11	From near δ Herculis fell vertically downwards.
12	From a point a little to left of ζ Persei fell vertically downwards.
13	From near γ Lyræ moved towards μ Herculis.
14	From near δ Persei fell almost vertically downwards.
15	From a little to West of the Pleiades to a little to East of that group.